MEMORANDUM

TO:	Everyone who receives *Environmental Resource Permit Information Manual Volume IV* (formerly known as *Management and Storage of Surface Waters Permit Information Manual - Volume IV*)
FROM:	Environmental Resource Regulation Division
DATE:	2000
SUBJECT:	Receipt of Additions/Revisions to *Volume IV*

In conjunction with issuing this "blue cover" *Volume IV*, the Division is also purging the **existing** revisions/additions mailing list generated from about 1987 through the present as part of the various "green cover" editions.

Therefore, if you have not previously submitted a request to receive revisions/additions to this "blue cover" book - even though you may have done so for the previous "green cover" editions - you must submit the form below in order to receive updates. If you have already submitted the "blue cover" request form, it will not be necessary to send a second one. Any revisions and/or additions you receive will be prepared in a "loose-leaf" style for easy incorporation into your *Volume IV*.

RETURN TO:

South Florida Water Management District
Environmental Resource Regulation Division
Regulatory Information Management Department
P.O. Box 24680, 3301 Gun Club Road
West Palm Beach, FL 33416-4680

Please send a copy of all additions and/or revisions of *Volume IV* to:

_____

_____

_____

_____

☐ If you have comments, or suggestions on how this manual can be improved, please check the box, and write your constructive impressions and ideas on the back of this form or on separate, attached sheets.

PRINTING HISTORY

FIRST EDITION PRINTED: June 1987

First Revision: November 1987. Major revisions: deleted from 40E-4 requirement of assurance of consistency with other public agencies' requirements; added to 40E-40 requirements for incidental site work: provided corrected freeboard equation in Major Impoundment design example; provided more legible copies of three pages in Major Impoundment design example.

Second Revision: March 1994. Major revisions: added Chapter 40E-1 which includes commonly used forms; updated version of 40E-4; updated 40E-40 to include No Notice General Permit for Construction, Alteration or Operation of Surface Water Management Systems; updated version of 40E-41 to include ability to issue General Permits in special basins; added Appendix 8 - Mitigation Banking; updated Index to reflect the above changes. Addition/revision of the following design aid pages as result of new information or clarification of existing information:

Page C-II-2: Clarification of SCS peak factors applicable to the South Florida Water Management District

Pages C-II-5 and C-II-5(a): Clarification of use of sheetflow runoff curves for irregular and high retardance basins

Page C-III-2: Addition of soil storage values for flatwoods and depressional soils based on recently received SCS information

Page D-F-7: Addition of Floodplain Encroachment Example Problem

SECOND EDITION

ORIGINAL PRINTING: 2000. Major revisions: updated the entire document to include revisions brought about by the merger of the surface water management and the dredge and fill permitting programs to create the Environmental Resource Permit (ERP) program.

DECEMBER 2001 Major items: • Service Center Map with Orlando S.C. revised; • Title 28 with title headers and pagination footers; • Chapter 40E-0 with 06/00 amendments; Chapter 40E-1 with 06/00 amendments; Chapter 40E-4 with 09/01 amendments; • Chapter 40E-40 with 05/00 amendments; • Chapter 40E-41 with 10/01 amendments; • Chapter 40E-400 with 09/01 amendments; • Chapter 62-302 with 04/01 amendments; • *Basis of Review—January 2001*; • Delegation Agreement among DEP, the District, and Broward County, effective 05/22/2001; • Operating Agreement between the District and DEP, effective 10/27/1998; • "Water Storage" pages E-1 and E-2, to correct an entry in the "Soil Storage" table on page E-2.

PRINTING HISTORY (Continued)

DECEMBER 2002 Major items: • Introduction with water preserve area basins added at two places in text; • Service Center Map with several revisions; • Chapter 40E-0 with 06/02 amendments; • Chapter 40E-1 with 08/02 amendments; • Chapter 40E-4 with 06/02 amendments; • Chapter 40E-40 with 06/02 amendments; • Chapter 40E-400 with 06/02 amendments; • Chapter 62-302 with 05/02 amendments; • *Basis of Review — June 2002*;. New forms 1105 and 1106 added; • New Broward County conservation easement form added; • New Affidavit for Operating Entity Documents added; • Permit Applicant Operating Entity Checklist with 05/01 revisions; • Subsections 62-4.242(1) and (2) with 05/02 amendments; • Section 62-302.300 with 05/02 amendments.

- Ralph L. Fanson, P.E.
  January 2003

DECEMBER 2003 Major items: • All text starting with front sheet through and including the *Basis of Review* in word-searchable format; • Preface with origins of regulatory volumes added; • Service Center Map with Lower West Coast Service Center revised; • Chapter 40E-1 with 09/03 amendments; • Chapter 40E-4 with 09/03 amendments; • Chapter 40E-40 with 04/03 amendments; • Chapter 40E-41 with improved-quality figures 1-6; • Chapter 40E-400 with 04/03 amendments; • Chapter 62-302 with 12/03 amendments; • *Basis of Review – September 2003*; • Figure F-4 text clarified; • Section 62-4.242 with 05/02 amendments; • Design examples in word-searchable format and with Routing Model Cascade 2001 printouts; • Pages XD-5 and XD-7 modified for clarification of weir crest elevation guidance.

- Ralph L. Fanson, P.E.
  January 2004

ENVIRONMENTAL RESOURCE

PERMIT INFORMATION MANUAL

VOLUME IV

2000

Environmental Resource Regulation Division
South Florida Water Management District
Post Office Box 24680
3301 Gun Club Road
West Palm Beach, Florida 33416-4680

PREFACE

By the late 1970's, the South Florida Water Management District (SFMWD) was actively pursuing the regulatory duties mandated to it in Chapter 373, Florida Statutes (F.S.) (The Florida Water Resources Act of 1972). To provide information about the actual practice of those duties, in 1980 the District proposed to develop a series of formal information manuals, shown in the list which follows. Several of these manuals are no longer provided or in use, and the information below is for historical information purposes only.

Volume I, General and Procedural Information

This manual provided a basic review of the District's regulatory activities, including types of permits required and permit procedures; and referenced the other volumes for detailed information. Probably because all the information in this manual was redundant to the other volumes, only one edition was published – in late 1981.

Volume II, District Rules, Regulations, and Legislation

This manual contained a reprint of Chapter 373, F.S., and the rules of either Chapter 16K, Florida Administrative Code (F.A.C.) (the January 1980 edition); or Chapter 40E, F.A.C. (the September 1981 edition) which were pertinent to the District's regulatory operations. Again, probably because all the information in this manual was redundant to the other volumes, publication of *Volume II* ended with the September 1981 edition.

Volume III, Permitting Uses of Water

This manual was the result of the combining of three earlier manuals, each for a specific type of water use: IIIA for public water supply, IIIB for mining (also dewatering), and IIIC for industrial. *Volume III* contained information and criteria for preparation and evaluation of water use permit applications. The manual has been published in various editions. The present (December 2003) one is *Management of Water Use Permit Information Manual Volume III* revised September 2003.

Volume IV, Management and Storage of Surface Waters

This manual contained information and criteria for the preparation and evaluation of permit applications for management and storage of surface waters (surface water management permits). Early editions included the basis of review; SFWMD Project discharge design limitations; pertinent chapters of 16K or 40E, F.A.C.; and an example design. This present *Environmental Resource Permit Information Manual Volume IV* is the latest edition.

Volume V, Criteria Manual for Utilization of Project Works and Lands

This manual provided criteria for preparation and evaluation of applications for use of District works and lands, including connection of drainage works, bridge design, and permissible right-of-way uses. *SFWMD Volume V Permit Information Manual Criteria Manual for Use of Works of the District September 15, 1999,* is the latest edition.

Volume VI

The January 1980 *Volume II* list of District information manuals includes mention of a *Volume VI, Real Property Acquisition and Disposal*. A similar list in the September 1981 *Volume II* contains a reference to *Volume VI, Agricultural Operations*. As of this writing, the author has been unable to find either a copy of any *Volume VI* or any person who remembers that such a manual was produced.

- R.L.F.
December 2003

ABOUT THIS MANUAL

This Manual is a compilation of information which will be useful to anyone who has an interest in the Environmental Resource Permitting Program of the South Florida Water Management District. The last comprehensive revisions to *Volume IV* were completed in the mid-1980's. Since then, several factors which influence the design, review, construction, and operation and maintenance of surface water management systems have changed substantially.

First, knowledge of District rules and criteria has grown greatly among many of those who are frequently involved with permitting. Second, the use of sophisticated computer programs to assist in just about all aspects of project design and review is commonplace. Third, there has emerged a growing amount of quantified information about how the environmental aspects of a design should be considered. Fourth, knowledge about the water quantity and quality aspects of a project has continued to expand. Finally, there is the accumulated knowledge which comes from an additional decade of permitting activities.

Additionally, it became increasingly apparent that issuing separate permits - such as "dredge and fill" and "surface water management" - for closely related activities was inefficient. As a result of legislative action, the District adopted reorganized rules and amendments designed to clarify, merge and streamline agency regulations related to environmental resource permitting (ERP). In 1995, the District began issuing ERPs, which replaced “dredge and fill” and “surface water management” permits.

This Manual begins with the pertinent chapters of the Florida Administrative Code (F.A.C.) where all District ERP permitting regulations are codified. The Code Chapters are followed by the *Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District* (often referred to as “The Basis” or “The Basis of Review”). The Basis - incorporated by reference in Chapter 40E-4, F.A.C. - contains the technical criteria by which an application for an ERP will be reviewed, with the primary goal of meeting District water resource objectives as set forth in Chapter 373, Florida Statutes (F.S.).

The third part of this Manual is devoted to “Regulatory Topics”: discussions and examples of how the District has applied F.S. laws, F.A.C. rules, and Basis criteria to certain situations.

Part four is a compilation of various technical design aids which may assist professionals in the design of typical surface water management systems in south Florida. Those readers who compare these aids with those in earlier editions will note that certain nomographs and derivations of equations have been deleted (in the belief that such subjects are now well understood or at least accepted), environmental materials have been added and there is more discussion of the application of computers to project design.

After the design aids, the design examples comprise the fifth part. Each example is intended to provide guidance on how the previously-presented rules, criteria, and aids may be employed in the design of a particular type of surface water management system.

The sixth and last section of the Manual contains some helpful information relating to post-permit activities: the maintenance of surface water management systems and the monitoring of wetlands systems.

The design aids, regulatory topics and design examples in this manual are intended to provide general information only; specific projects may require additional or different design considerations in order to address site specific factors. These sections of the Manual do not constitute additional rule criteria.

TABLE OF CONTENTS

Page

About this Manual

Introduction and Chapters of the Florida Administrative Code

Introduction 1
Summary of Environmental Resource Permits by Thresholds and Applicable Laws 8
The Uniform Rules of Procedure Chapters of Title 28 ..... 28-i
Chapter 40E-0 Exceptions to the Uniform Rules of Procedure 0-i
Chapter 40E-1 General and Procedural 1-i
Chapter 40E-4 Environmental Resource Permits 4-i
Chapter 40E-40 Environmental Resource Standard General Permits 40-i
Chapter 40E-41 Surface Water Management Basin and Related Criteria 41-i
Chapter 40E-400 No Notice and Noticed General Environmental Resource Permits 400-i

Selected Materials from Chapter 403, Florida Statutes; and from Title 62, Florida Administrative Code

The “Mangrove Trimming and Preservation Act” Sections of Chapter 403, Florida Statutes, Environmental Control 403-i
Chapter 62-112 Project Certification Procedures for Coordinated Agency Review in the Florida Keys Area of Critical State Concern 112-1
Chapter 62-302 Surface Water Quality Standards 302-1
Chapter 62-340 Delineation of the Landward Extent of Wetlands and Surface Waters 340-1

Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District

Summary of Amendments i
Table of Contents xi
1.0 Introduction 1
2.0 Definitions 3
3.0 General Review Requirements 7
4.0 Environmental Criteria 9
5.0 Water Quality Criteria 69

TABLE OF CONTENTS (continued)

Page

6.0 Water Quantity Criteria 77
7.0 Water Management System Design and Construction Criteria 82
8.0 Required Design Information and Assumptions 86
9.0 Operating Entity Requirements 90
10.0 Surface Water Management System Certification and Operation 94
Appendix 2 Allowable Discharge Formulas for South Florida Water Management District Canals
Appendix 3 Urban Retention/Detention
Appendix 6 Above Ground Impoundments

Permit Application Submittal Aids

Environmental Resource Permit Application Supplement ..... PAS-i

Environmental Resource Permit Application Supplement Quick Reference Checklist!!! 1

Regulatory Topics

Delegation Agreement Among The Florida Department of Environmental Protection, The South Florida Water Management District, and Broward County T1-1

Financial Responsibility Mechanisms T2-1

Overview of Conservation Easements T3-1

Grandfathering Determinations Pursuant to Sections 373.414(11)-(14), Florida Statutes T4-1

Legal/Institutional Permitting Criteria and Post-Permit Submittals T5-1

Operating Agreement Concerning Regulation Under Part IV, Chapter 373, F.S., Between South Florida Water Management District and Department of Environmental Protection T6-1

TABLE OF CONTENTS (continued)

Page

Overview of the Statutory Exemption for the Maintenance of Works T7-1

State Water Quality Certification T8-1

Coastal Zone Consistency Determinations T8-1

Design Aids

Surface Water Management Design Aids A-1

Drainage Basin Maps ..... B-i

Rainfall C-1

Determination of Seasonal High Water Table (SHWT) CA-1

Runoff D-1

Water Storage E-1

Exfiltration Trenches F-1

Water Quality ..... FA-i

Subsections 62-4.242(1) and (2), F.A.C. FA4-1

Section 62-302.300, F.A.C FA302-1

Discharges G-1

Hydrographs H-1

Flood Routing I-1

Environmental Design Aids J-1

Wetland Boundary Determinations K-1

TABLE OF CONTENTS (continued)

Page

Elimination or Reduction of Wetland Impacts L-1

(Reserved) M-1

Separation of Excavations from Wetlands N-1

Protection of Wetland Hydroperiods O-1

Water Quality Inputs and Treatments for Wetland Protection P-1

Project Design Examples

Project Design Examples ..... X-i

Agricultural Projects XA-1

Agricultural Site XB-1

Agricultural Site with Major Impoundment XC-1

Exfiltration Trench XD-1

Flood Plain Storage Compensation ..... XE-i

Industrial Site XF-1

Multi-Family Residential Site XG-1

Distance from Public Water Supply Wells XH-1

Post-Permit Considerations

Post-Permit Considerations PA-1

Maintenance of Surface Water Management Systems PB-1

(Reserved) PC-1

TABLE OF CONTENTS (continued)

Page

Management and Maintenance of Environmental Areas PD-1

Introduction to *Environmental Monitoring Report Guidelines* PE-1

Environmental Monitoring Report Guidelines

Index

TABLE OF CONTENTS (continued)

FIGURES

No. Page*

Introduction and Chapters of the Florida Administrative Code

1-1 Boundaries of the Five Water Management Districts and the Two S.F.W.M.D. Basins 6
1-2 South Florida Water Management District Area Service Centers 7
41-1 Western Canal 9 Basin Boundary f.41-15
41-2 Typical Development Schemes f.41-15
41-3 Plate 1 of 5 Kissimmee River Flood Plain Pool A f.41-15
41-3 Plate 2 of 5 Kissimmee River Flood Plain Pool B f.41-15
41-3 Plate 3 of 5 Kissimmee River Flood Plain Pool C f.41-15
41-3 Plate 4 of 5 Kissimmee River Flood Plain Pool D f.41-15
41-3 Plate 5 of 5 Kissimmee River Flood Plain Pool E f.41-15
41-4 Boundary of Kissimmee River Basin f.41-15
41-5 C-51 Basin f.41-15
41-6 C-51 Basin f.41-15
41-7 C-51 Basin f.41-15
41-8 Discharge Coefficients for the Sub-basins of the C-51 Basin in Palm Beach County, Florida f.41-15
41-9 Peak Flood Stage (Ft. NGVD) During a 1-in-100 Year Storm Event and Minimum Floor Elevation, Prior to Completion of S-319 ..... f.41-15
1 Water Preserve Area and Water Preserve Area Basin Boundaries .. f.41-15
2 Water Preserve Area and Water Preserve Area Basin Boundaries .. f.41-15
3 Water Preserve Area and Water Preserve Area Basin Boundaries .. f.41-15
4 Water Preserve Area and Water Preserve Area Basin Boundaries .. f.41-15
5 Water Preserve Area and Water Preserve Area Basin Boundaries .. f.41-15
6 Water Preserve Area and Water Preserve Area Basin Boundaries .. f.41-15

Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District

4.2.8-1 Drainage Basins Within the District 29
4.3-1 Incentive Graph 48
4.4-1 Regional Watershed Map 65

*"f." = "follows"

TABLE OF CONTENTS (continued)

FIGURES (continued)

No. Page

Design Aids

B-1 Drainage Basins for Eastern Broward County, FL B-1
B-2 Drainage Basins for Western Broward County, FL B-2
B-3 Drainage Basins for Areas of Charlotte County, FL Within the S.F.W.M.D. B-3
B-4 Drainage Basins for Eastern Collier County, FL B-4
B-5 Drainage Basins for Western Collier County, FL B-5
B-6 Drainage Basins for Glades County, FL B-6
B-7 Drainage Basins for Hendry County, FL B-7
B-8 Drainage Basins for Areas of Highlands County, FL Within the S.F.W.M.D. B-8
B-9 Drainage Basins for Lee County, FL B-9
B-10 Drainage Basins for Martin County, FL B-10
B-11 Drainage Basins for Northern Miami-Dade County, FL B-11
B-12 Drainage Basins for Southern Miami-Dade County, FL B-12
B-13 Drainage Basins for Areas of Mainland Monroe County, FL B-13
B-14 Drainage Basins for Areas of Okeechobee County, FL Within the S. F. W. M. D. B-14
B-15 Drainage Basins for Areas of Orange County, FL Within the S.F.W.M.D. B-15
B-16 Drainage Basins for Areas of Northern Osceola County, FL Within the S.F.W.M.D. B-16
B-17 Drainage Basins for Areas of Southern Osceola County, FL Within the S.F.W.M.D. B-17
B-18 Drainage Basins for Eastern Palm Beach County, FL B-18
B-19 Drainage Basins for Western Palm Beach County, FL B-19
B-20 Drainage Basins for Areas of Polk County, FL Within the S.F.W.M.D. B-20
B-21 Drainage Basins for St. Lucie County, FL B-21
C-1 5-Year 1-Hour Rainfall (Inches) in Alabama, Florida, Georgia and South Carolina C-3
C-2 1-Day Rainfall: 3-Year Return Period C-4
C-3 1-Day Rainfall: 5-Year Return Period C-5
C-4 1-Day Rainfall: 10-Year Return Period C-6
C-5 1-Day Rainfall: 25-Year Return Period C-7

TABLE OF CONTENTS (continued)

FIGURES (continued)

No.		Page
C-6	1-Day Rainfall: 100-Year Return Period	C-8
C-7	3-Day Rainfall: 10-Year Return Period	C-9
C-8	3-Day Rainfall: 25-Year Return Period	C-10
C-9	3-Day Rainfall: 100-Year Return Period	C-11
D-1	1 of 2 Hydrology: Solution of Runoff Equation	D-3
D-1	2 of 2 Hydrology: Solution of Runoff Equation	D-4
D-2	Sheetflow Curves, P = 7", DWT = 2 Ft. or Less	D-7
D-3	Sheetflow Curves, P = 8", DWT = 2 Ft. or Less	D-8
D-4	Sheetflow Curves, P = 9", DWT = 2 Ft. or Less	D-9
D-5	Sheetflow Curves, P = 10", DWT = 2 Ft. or Less	D-10
D-6	Sheetflow Curves, P = 11", DWT = 2 Ft. or Less	D-11
D-7	Sheetflow Curves, P = 7", DWT = 3 Ft.	D-12
D-8	Sheetflow Curves, P = 8", DWT = 3 Ft.	D-13
D-9	Sheetflow Curves, P = 9", DWT = 3 Ft.	D-14
D-10	Sheetflow Curves, P = 10", DWT = 3 Ft.	D-15
D-11	Sheetflow Curves, P = 11", DWT = 3 Ft.	D-16
D-12	Sheetflow Curves, P = 7", DWT = 4 Ft.	D-17
D-13	Sheetflow Curves, P = 8", DWT = 4 Ft.	D-18
D-14	Sheetflow Curves, P = 9", DWT = 4 Ft.	D-19
D-15	Sheetflow Curves, P = 10", DWT = 4 Ft.	D-20
D-16	Sheetflow Curves, P = 11", DWT = 4 Ft.	D-21
D-17	% Ponded Area	D-22
E-1	Cumulative Soil Moisture Storage	E-3
E-2	Surface Storage Computation Scheme	E-5
E-3	Typical Stage-Storage Graph	E-6
F-1	Usual Open-Hole Test	F-3
F-2	Falling-Head Open-Hole Test	F-5
F-3	D.O.T. Standard Test	F-7
F-4	Typical Exfiltration Trench	F-12
G-1	Coefficient for Weirs	G-2
G-2	Required V-Notch Size, θ	G-4
H-1	Example Hydrograph	H-4
I-1	Inflow and Outlfow Hydrographs	I-2
L-1	Typical Environmental Impacts Associated with This Project	L-2
L-2	Project Redesigned to Avoid All Wetland Impacts	L-3
L-3	Types of Modifications Which Meet the Criteria of the *Basis of Review for Environmental Resource Permit Applications,* Section 4.2.1	L-4

TABLE OF CONTENTS (continued)

FIGURES (continued)

No.		Page
L-4	Types of Modifications Which Meet the Criteria of the *Basis of Review for Environmental Resource Permit Applications,* Section 4.2.1	L-5
L-5	Types of Modifications Which Meet the Criteria of the *Basis of Review for Environmental Resource Permit Applications*, Section 4.2.1	L-6
N-1	Hydraulic Gradient Created Between Wetland and Water Management Facility	N-3
N-2	Case Examples of Hydraulic Gradients	N-4
O-1	Depiction of Normal Pool and Seasonal High Water Elevation in a Cypress Swamp	O-3
O-2	Typical Cross Section of Cypress Wetland	O-4
O-3	Typical Cross Section of Wetland Impacted by a Canal	O-6
O-4	Typical Discharge/Overflow Structures for Wetland Impoundments	O-7
P-1	Typical Wetland Preserve Cross Section with Water Quality Swale and Berm	P-2

Project Design Examples

XB-1	Agricultural Site	XB-1
XB-2	Overflow Structure	XB-12
XC-1	Agricultural Site with Major Impoundment	XC-1
XC-2	Overflow Structure	XC-13
XD-1	Cross Section of Proposed Exfiltration Trench	XD-6
XE-1	Undeveloped Site	XE-1
XE-2	Developed Site	XE-2
XE-3	Undeveloped Site	XE-3
XE-4	Developed Site	XE-4
XE-5	Undeveloped Site	XE-5
XE-6	Developed Site (Initial Layout)	XE-6
XF-1	Site Plan View	XF-1
XF-2	Industrial Site Stage-Storage Curve	XF-8
XG-1	Site Plan View	XG-2
XG-2	Multi-Family Residential Site Stage-Storage Curve	XG-8
XG-3	Multi-Family Residential Site Outfall Structure	XG-12

TABLE OF CONTENTS (continued)

FIGURES (continued)

No. Page

Post-Permit Considerations

PD-1 Post Construction Measures to Prevent Impacts to Wetlands PD-3
1+ Site Location Map ..... 5+
2+ Detailed Site Map ..... 5+
3+ Typical Wetland Area Monitoring Layout ..... 6+
4+ Wetland Plan View Showing Location of Transect Through Wetland Areas to be Monitored ..... 7+
5+ Transect-Elevation Cross-Section Relative to Control Elevation of Wetlands ..... 8+
6+ Annual Stage/Rainfall Hydrograph ..... 11+

"+" = In *Environmental Monitoring Report Guidelines*

TABLE OF CONTENTS (continued)

TABLES

No.		Page
Introduction and Chapters of the Florida Administrative Code		
--	Summary of Environmental Resource Permits by Thresholds and Applicable Laws	8
40E-1.607(1)	Permit Application Processing Fees for Water Use Permit Applications	1-20
40E-1.607(2)	Permit Application Processing Fees for Water Well Construction Permit Applications	1-22
40E-1.607(3)(a)	Permit Application Processing Fees for Environmental Resource Permit Applications	1-22
40E-1.607(3)(b)	Permit Application Processing Fees for Projects Grandfathered [etc.]	1-25
40E-1.607(4)	Permit Application Processing Fees for Proprietary Authorizations Under Chapters 253 and 258, F.S. [etc.]	1-27
40E-1.607(5)	Determination Petition Processing Fees for Formal Determination of Wetlands and Other Surface Waters	1-27
62-302.530	Criteria for Surface Water Quality Classifications	302-31
Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District		
4.2.7-1	Listed Wildlife Species That Are Aquatic or Wetland Dependent and That Use Upland Habitats for Nesting or Denning	27
Design Aids		
CA-1	Seasonal High Water Table Indicators	CA-6
F-1	Broward County – Usual Open-Hole Test	F-9
H-1	SBUH Method	H-3

INTRODUCTION

AND CHAPTERS OF THE FLORIDA ADMINISTRATIVE CODE

INTRODUCTION

A. HISTORY OF THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT

South Florida's extremes of hurricane, flood and drought combined with efforts to populate this anew frontier led the U.S. Congress in 1948 to launch the Central and Southern Florida Flood Control Project for purposes of flood control and water conservation. In 1949, the Florida legislature created the Central and Southern Florida Flood Control District (FCD) to act as the local sponsor for the project — operating and maintaining the water control network funded by property taxes levied within the District boundaries.

Throughout its history, this regional water resource agency evolved and grew in response to population growth and development. The Florida Water Resources Act of 1972, Chapter 373, Florida Statutes (F.S.), divided the state into five water management districts and greatly expanded the duties of the existing FCD. This included greater emphasis on water quality and environmental protection. The FCD was renamed the South Florida Water Management District in 1976, and new boundaries were drawn to encompass the region's primary watersheds.

The District has evolved into a multi-faceted agency responsible for most water resource issues — from providing flood protection and water supply protection to people living in cities and on farms, to restoring and managing natural ecosystems.

B. REGULATORY POWERS

The Water Resources Act, Chapter 373, F.S., governs the regulation of all "waters in the state" unless exempted by law. Waters in the state include all water on or beneath the surface of the ground or in the atmosphere.

The Act declares it to be the policy of the Legislature:

> *(a) To provide for the management of water and related land resources;*
> *(b) To promote the conservation, development, and proper utilization of surface and ground water;*
> *(c) To develop and regulate dams, impoundments, reservoirs, and other works and to provide water storage for beneficial purposes;*
> *(d) To prevent damage from floods, soil erosion, and excessive drainage;*
> *(e) To minimize degradation of water resources caused by the discharge of storm waste;*
> *(f) To preserve natural resources, fish, and wildlife;*
> *(g) To promote the public policy set forth in s. 403.021, F.S.;*
> *(h) To promote recreational development, protect public lands, and assist in maintaining the navigability of rivers and harbors; and*
> *(i) Otherwise to promote the health, safety, and general welfare of the people of this state.*

The Act provides for the establishment of permit programs for the regulation of consumptive use of water, well construction, surface water management systems, artificial recharge and utilization of works or land of the District.

Chapter 373, F.S., was significantly amended in 1993. Broadly stated, the Florida Environmental Reorganization Act of 1993 amended Chapter 373 by consolidating wetland resource, mangrove alteration, and surface water management permits into a single regulatory approval referred to as an "environmental resource permit" (ERP). Since the rules implementing this legislation became effective on October 3, 1995, a single permit issued by a single agency is required for development activities that, under the past regulatory structure, might have required separate permits from DEP and a water management district. This was accomplished by repealing most of the Warren S. Henderson Wetlands Protection Act in Part VIII of Chapter 403, F.S., while re-enacting and codifying its key provisions, with some amendments, in Part IV of Chapter 373, F.S.

Additionally, in October of 1995, the District began to process applications for the use of sovereign submerged lands when a proprietary authorization is required in conjunction with an ERP permit. In the interest of further streamlining the permitting process, this function was delegated to the water management districts by the Governor and Cabinet sitting as the Board of Trustees of the Internal Improvement Trust Fund. The proprietary authorization for the use of sovereign submerged lands is governed by Chapters 253 and 258, F.S., and the rules adopted thereunder.

The regulations which implement the District's permitting responsibilities are adopted by rule and codified at Title 40E of the Florida Administrative Code (F.A.C.).

C. THE GOVERNING BOARD

The District is governed by a nine-member board, appointed by the Governor, responsible for the overall administration of District programs, development of a water use plan, and implementation of the regulatory programs authorized by the various acts, which empower the District. Board members, who serve without compensation, are appointed from specific geographical areas within District boundaries.

The District is also divided into two basins (Big Cypress Basin and Okeechobee Basin), which are governed by basin boards. The primary functions of the basin boards are to plan and approve construction of primary water resource development projects and to plan secondary water control facilities for guidance of local government and private local owners.

D. PERMITTING OF SURFACE WATER MANAGEMENT SYSTEMS

1. Statutory Provisions (Part IV, Chapter 373, F.S.)

Generally, environmental resource permits are required by the water management districts for construction, alteration, operation, maintenance, repair and abandonment of surface water management systems. Surface water management systems are defined as a stormwater management system, dam, impoundment, reservoir, appurtenant work

or works, or any combination thereof. The term “works” is defined in 373.403(5), F.S.: “’Works’ means all artificial structures, including, but not limited to, ditches, canals, conduits, channels, culverts, pipes, and other construction that connects to, draws water from, drains water into, or is placed in or across the waters in the state.” The terms “surface water management system” or “system” include areas of dredging or filling as defined by 373.403(13) and (14), F.S., respectively.

An applicant for an environmental resource permit must show that the proposed activities are consistent with the goals and policies expressed in 373.016 (Declaration and Policy) F.S. and 373.036 (State Water Use Plan) F.S.; that the construction or alteration of the surface water management system will not be harmful to the water resources of the District (373.413, F.S.); that the operation and maintenance of the system will not be inconsistent with the overall objectives of the District or harmful to the water resources of the District and that additional criteria for activities in surface waters and wetlands are met (373.414, F.S.).

2. Uniform Rules of Procedure (Title 28, F.A.C.)

Chapters 28-101 through 28-110, F.A.C., describe how agencies, including water management districts, shall: schedule and conduct meetings, hearings, and workshops; file notices of protests and formal written protests; file and process petitions for declaratory statements; describe agency organization and operations; establish procedures for dealing with petitions and variances; conduct rulemaking; determine the substantial interests of a party; issue licenses (permits); and apply for exceptions from the Uniform Rules of Procedure.

3. Rules of the South Florida Water Management District (Title 40E, F.A.C.)

Chapter 40E-0 contains the Uniform Rules of Procedure exceptions which have been granted to the District. The exceptions apply to such matters as considering emergency petitions, processing and considering permit applications, employing District resources in an emergency, authorizing regulated activities in an emergency before a permit can be issued, defining point of entry into certain proceedings, and establishing exceptions and variances for activities which might require one or more District permits.

Chapter 40E-1 contains information about the South Florida Water Management District required by Subsection 120.53(1), F.S., such as general information about the District organization, records, and final orders; meetings, hearings, and workshops; the rulemaking process; declaratory statements; decisions determining substantial interests; permits; and compliance and enforcement. Since this document is contained in whole in this Manual, the description here of Chapter 40E-1 will be limited to Part VI, Permits.

Generally, an individual or general environmental resource permit must be obtained either prior to construction, alteration, operation, maintenance, repair, or abandonment of any surface water management system, dam, impoundment, reservoir, appurtenant work or works; or prior to the establishment and operation of a mitigation bank. Also, a conceptual environmental resource permit (which does not authorize construction or opera-

tion) may be obtained for proposed surface water management systems or mitigation banks.

Part VI contains detailed descriptions both of the processes by which various categories of permit applications are processed by the District, and the procedures for notifying interested persons and the public in general about the receipt by the District of certain permit applications and the agency's proposed actions on certain applications.

Section 40E-1.607, F.AC., is a detailed list of permit application processing fees. In other sections, processes for denying, suspending, revoking, modifying, renewing, and transferring permits are described. Certain activities in the Florida Keys Area of Critical State Concern must be reviewed in special processes, which are listed. The various District forms, which relate to the permitting process are listed, as are the locations of District Service Centers at which the forms can be obtained.

Chapter 40E-4, F.A.C., describes the requirements for Individual Environmental Resource Permits for construction, alteration, or operation of surface water management systems. Chapter 40E-40, F.A.C., describes the requirements for Environmental Resource Standard General Permits, which are issued by District staff. (See 40E-4.021(18), F.A.C.) Generally, activities which either do not qualify for a no-notice and a noticed general environmental resource permit; and which involve activities in less than one acre of wetlands or other surface waters, on a project less than 100 acres in size and with less than ten boat slips; or which meet the criteria for incidental site activities; may qualify for an Environmental Resource Standard General Permit.

Projects which exceed the general permit thresholds require an individual permit. Individual permits are issued by the Governing Board upon application and compliance with Part IV of Chapter 373, F.S., and Title 40E, F.A.C. Documents which contain specific criteria for evaluating projects are listed in 40E-4.091, F.A.C. Further, additional criteria may be applicable if the project is to be located within an area in which the District has adopted basin rules. (See Chapter 40E-41, F.A.C., for additional criteria applicable in the Western C-9 Basin, the Kissimmee River Basin, the C-51 Basin, and Water Preserve Area Basins in Palm Beach and Broward counties.)

Applications for incidental site activities are processed as described in Section 40E-40.042, F.A.C. All other standard general permits are subject to much the same rules and criteria as are in effect for individual permits. However, agency action shall be taken within 60 days after the application for a standard general permit is declared complete, and issuance occurs at the staff level.

Chapter 40E-400, F.A.C., describes activities for which general permits are issued by rule after notice to the agency ("Noticed General Environmental Resource Permits"). In order to obtain a noticed general permit, applicants file a short application form and certain basic plans and technical data. A "No Notice General Environmental Resource Permit" applies to small upland projects; certain types of roadway work; and some projects, which have received the approval of Miami-Dade County or Collier County.

With one exception (described next), unless the District notifies the applicant within 30 days of application receipt that the proposed activities do not qualify for a noticed general permit, the activities may then proceed. Only in the case of those activities defined in Section 40E-400.475 General Permit for Minor Activities, F.A.C., is the District required to notify the applicant within 30 days of application receipt whether the proposed activities qualify for the general permit.

Modifications, suspensions, or revocations of noticed general permits occur in accordance with the provisions of Chapter 373, F.S., and Chapter 40E-400, F.A.C.

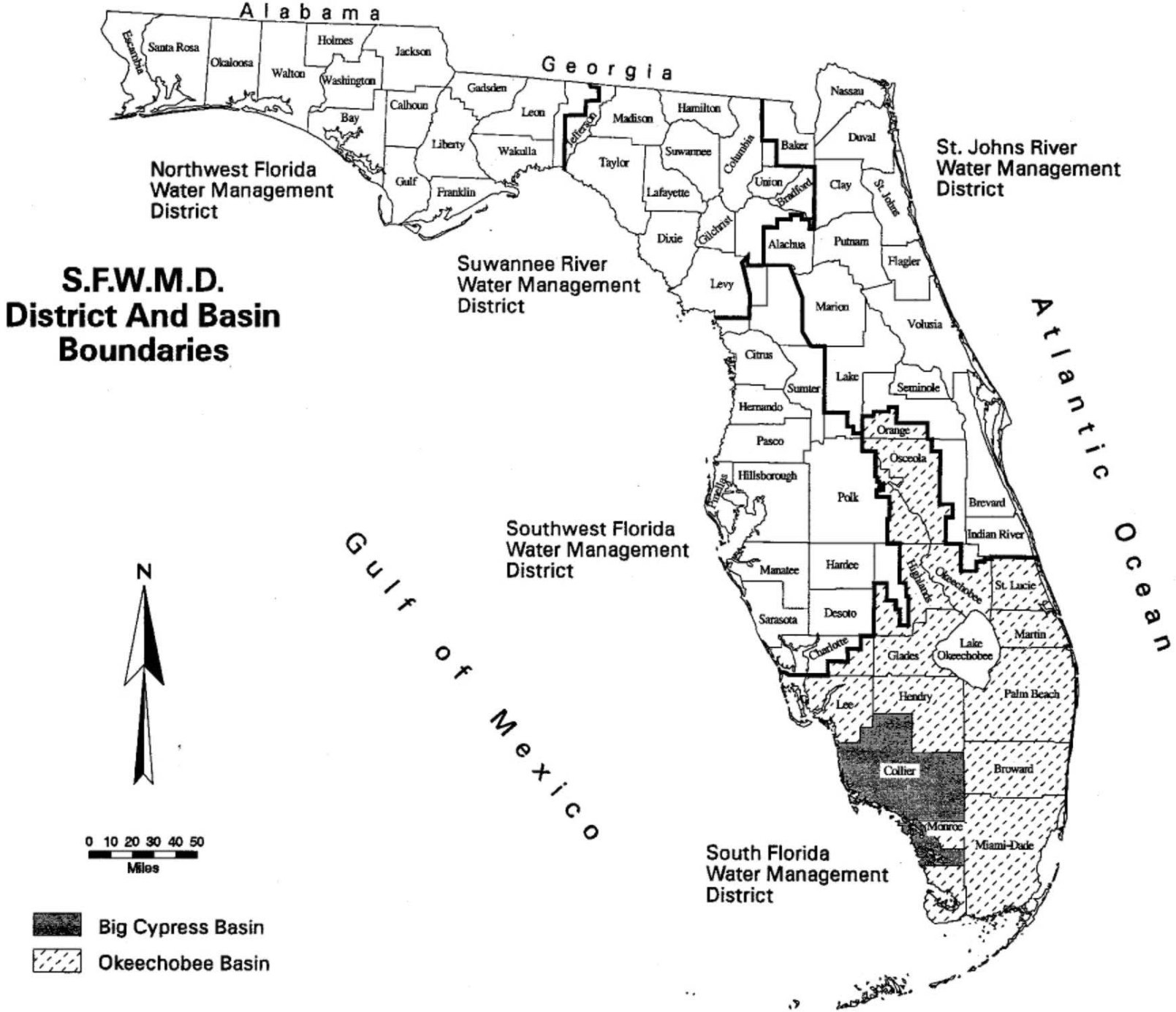

S.F.W.M.D.
District And Basin
Boundaries
Alabama
Georgia
Escambia
Santa Rosa
Okaloosa
Walton
Holmes
Washington
Jackson
Bay
Calhoun
Liberty
Gulf
Franklin
Gadsden
Wakulla
Leon
Jefferson
Madison
Taylor
Hamilton
Suwannee
Lafayette
Columbia
Dixie
Gilchrist
Levy
Baker
Union
Bradford
Alachua
Nassau
Duval
Clay
St. Johns
Putnam
Flagler
Marion
Volusia
Citrus
Sumter
Lake
Seminole
Hernando
Orange
Pasco
Osceola
Hillsborough
Polk
Brevard
Indian River
Manatee
Hardee
Highlands
Okeechobee
St. Lucie
Sarasota
Desoto
Martin
Charlotte
Glades
Lake Okeechobee
Lee
Hendry
Palm Beach
Collier
Broward
Monroe
Miami-Dade
Northwest Florida
Water Management
District
Suwannee River
Water Management
District
St. Johns River
Water Management
District
Southwest Florida
Water Management
District
South Florida
Water Management
District
Gulf of Mexico
Atlantic Ocean
N
0 10 20 30 40 50
Miles
Big Cypress Basin
Okeechobee Basin

Figure 1-1

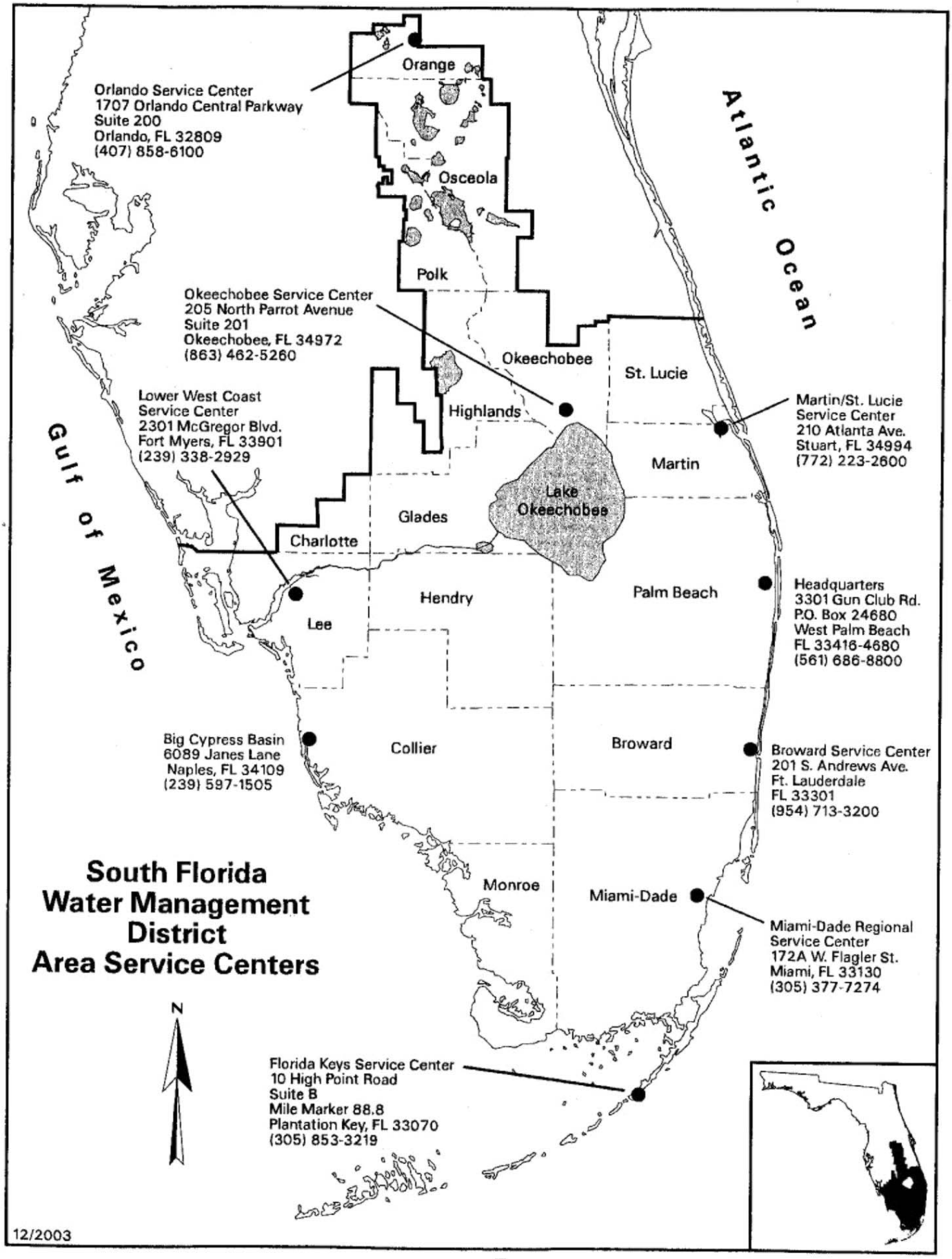

Orlando Service Center
1707 Orlando Central Parkway
Suite 200
Orlando, FL 32809
(407) 858-6100
Okeechobee Service Center
205 North Parrot Avenue
Suite 201
Okeechobee, FL 34972
(863) 462-5260
Lower West Coast
Service Center
2301 McGregor Blvd.
Fort Myers, FL 33901
(239) 338-2929
Martin/St. Lucie
Service Center
210 Atlanta Ave.
Stuart, FL 34994
(772) 223-2600
Headquarters
3301 Gun Club Rd.
P.O. Box 24680
West Palm Beach
FL 33416-4680
(561) 686-8800
Big Cypress Basin
6089 Janes Lane
Naples, FL 34109
(239) 597-1505
Broward Service Center
201 S. Andrews Ave.
Ft. Lauderdale
FL 33301
(954) 713-3200
Miami-Dade Regional
Service Center
172A W. Flagler St.
Miami, FL 33130
(305) 377-7274
Florida Keys Service Center
10 High Point Road
Suite B
Mile Marker 88.8
Plantation Key, FL 33070
(305) 853-3219
Orange
Osceola
Polk
Okeechobee
St. Lucie
Martin
Highlands
Lake Okeechobee
Glades
Charlotte
Hendry
Lee
Palm Beach
Collier
Broward
Monroe
Miami-Dade
Atlantic Ocean
Gulf of Mexico
N
South Florida
Water Management
District
Area Service Centers
12/2003

Figure 1-2

SUMMARY OF ENVIRONMENTAL RESOURCE PERMITS BY THRESHOLDS AND APPLICABLE LAWS

Chapter 40E-4, F.A.C.
Environmental Resource Permits

Conceptual Approval Permit*	Individual Permit*
Phase developments Mitigation banks (optional)	Projects with: ≥100 acres project areas, or ≥10 boat slips, or ≥1 acre wetlands or surface water construction/alteration. Projects which do not qualify for general permits. Mitigation banks.

Chapter 40E-40, F.A.C.
Environmental Resource Standard General** Permits

Standard General Permit	For incidental site activities on projects with:
Projects which do not qualify for a No-Notice or a Noticed General Environmental Resource Permit, and with: <100 acres project area, and <10 new boat slips, and <1 acre wetland/surface water impact.	Complete Environmental Resource Permit application, and preliminary staff recommendation of approval, and plans or description and location of proposed activities, and system must meet criteria and permit thresholds.

Chapter 40E-41, F.A.C.
Surface Water Management Basin & Related Criteria

This chapter does not authorize any specific permits. However, these rules establish additional surface water management criteria for specified basins which insure that developments in the basins incorporate appropriate water quantity and water quality control measures to minimize adverse impacts to the water resources of the District. A formal delineation of the boundaries of each basin is included in the rule. The following basins are affected:

1. Western C-9 Basin
2. Kissimmee River Basin
3. C-51 Basin
4. Water Preserve Area Basins in Palm Beach and Broward counties

*Individual permits — Agency action by the Governing Board
**General permits & authorizations — Issued by the District staff

Chapter 40E-400, F.A.C.
No-Notice and Noticed General Environmental Resource Permits

General Environmental Resource Permits for those activities which have been determined to have minimal adverse impacts to the water resources of the District, both individually and cumulatively.

No-Notice General Permit	Noticed General Permit
Refer to Sections 400.315-400.316, F.A.C.	Refer to Sections 400.417-400.500, F.A.C.

Chapter 40E-4, F.A.C.
Formal Determinations of Wetlands and Other Surface Waters

Any person with a legal or equitable interest in real property may petition the District for a formal determination of the landward boundaries of wetlands and other surface waters.

*Individual permits — Agency action by the Governing Board

**General permits & authorizations — Issued by the District staff

Chapters 28-101 through 28-110, F.A.C.
The Uniform Rules of Procedure

The Uniform Rules of Procedure Chapters of Title 28

On July 1, 1998, pursuant to Section 120.54(5), F.S., the District repealed many procedural rules in Chapter 40E-1, F.A.C., and concurrently began complying with the Uniform Rules of Procedure in Title 28, F.A.C. The Rules, and the exceptions which are in Chapter 40E-0, F.A.C. (see the text of Chapter 40E-0, F.A.C., elsewhere in this Manual), establish how to:

- schedule and conduct public meetings, hearings, and workshops;
- file notices of protests and formal written protests;
- file and process petitions for declaratory statements;
- describe an agency's organization and operations;
- establish procedures for dealing with petitions for variances and waivers;
- conduct rulemaking;
- determine the substantial interests of a party;
- issue licenses; and
- apply for exceptions from the Uniform Rules of Procedure.

CHAPTER 28-101 ORGANIZATION

28-101.001 Statement of Agency Organization and Operation.

(1) The agency head shall maintain a current Statement of Agency Organization and Operation. The statement shall describe the organization of the agency and outline the general course of the agency's operations. The purpose of the statement is:

(a) To inform the public, in a complete and concise manner, of the nature of the agency's business, operations, delegation of authority, internal organization and other related matters;

(b) To provide assistance to the public when dealing with the agency; and

(c) To expedite the processing of agency matters on behalf of the public.

(2) The Statement of Agency Organization and Operation shall:

(a) Describe the agency head and his or her duties, as well as state the method of selection or appointment of the agency head, and the length of his or her term.

(b) Describe the organizational units and sub-units within the agency, including their assigned functions, duties, responsibilities, statutory authority, and statutes and rules they are charged with implementing. The designation of units and sub-units shall be consistent with Section 20.04, F.S., or as otherwise provided by law.

(c) Describe the manner by which publications, documents, forms, applications for licenses, permits and other similar certifications or rights granted by the agency, or other information, may be obtained.

(d) Identify the agency clerk by name, position, address, and telephone number; and set out his or her duties and responsibilities.

(e) State whether documents can be filed by electronic transmission, including applicable telephone numbers, and set forth the acceptable nature and scope of such filings, including the following:

1. That a party who files a document by electronic transmission represents that the original physically signed document will be retained by that party for the duration of the proceeding and of any subsequent appeal or subsequent proceeding in that cause, and that the party shall produce it upon the request of other parties.

2. That a party who elects to file a document by electronic transmission shall be responsible for any delay, disruption, or interruption of the electronic signals and accepts the full risk that the document may not be properly filed with the clerk as a result.

3. That the filing date for an electronically transmitted document shall be the date the agency clerk receives the complete document.

(f) Identify the name and address of the appropriate contact person for obtaining information about variances from or waivers of agency rules, and indicate how to file a petition for variance or waiver.

(3) The agency head shall provide a copy of its Statement of Agency Organization and Operation to any person upon request.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5)(b)5. FS. History–New 4-1-97.

CHAPTER 28-102 AGENDA AND SCHEDULING OF MEETINGS AND WORKSHOPS

28-102.001 Notice of Public Meeting, Hearing, or Workshop.
28-102.002 Agenda of Meetings, Hearings, and Workshops.
28-102.003 Emergency Meetings.

28-102.001 Notice of Public Meeting, Hearing, or Workshop.

(1) Except where otherwise provided, the agency shall give at least seven days notice of any public meeting, hearing, or workshop by publication in the Florida Administrative Weekly. Provisions regarding notices of rulemaking hearings are found in Rule 28-103.001, F.A.C. Provisions regarding notices of hearings in proceedings for determining substantial interests are found in Rules 28-106.208 and 28-106.302, F.A.C.

(2) The agency shall utilize the following form in providing notice of the public meeting, hearing, or workshop.

NOTICE OF PUBLIC MEETING, HEARING, OR WORKSHOP

The (name of the agency) announces a public meeting, hearing, or workshop to which all persons are invited.

DATE AND TIME:_____

PLACE:_____

PURPOSE:_____

A copy of the agenda may be obtained by writing to (name of the agency) at (headquarters address) or by calling (name) at (phone #).

Pursuant to the provisions of the Americans with Disabilities Act, any person requiring special accommodations to participate in this workshop/hearing/meeting is asked to advise the agency at least 48 hours before the workshop/hearing/meeting by contacting (name) at (telephone number). If you are hearing or speech impaired, please contact the agency by calling (telephone number of TDD).

Specific Authority 120.54(5) FS. Law Implemented 120.525 FS. History–New 4-1-97.

28-102.002 Agenda of Meetings, Hearings, and Workshops.

(1)(a) The agenda shall state with specificity the items which will be considered at a meeting, hearing, or workshop. All matters involving the exercise of agency discretion and policy-making shall be listed and summarized on the agenda. Matters which are solely ministerial, or internal administrative matters which do not affect the interests of the public generally, may be included on the agenda.

(b) The agency shall utilize the following form, or substantially similar form in preparing its agenda:

NAME OF AGENCY TIME, DATE & PLACE OF MEETING THIS MEETING IS OPEN TO THE PUBLIC

1. Call to Order.

2. Review of Minutes.

3. Old Business: Specific listing of all matters involving agency discretion or policy-making with brief summary of each.

4. New Business: Specific listing of all matters involving agency discretion or policy-making with brief summary of each.

5. Other Business: Specific listing of all matters involving agency discretion or policy-making with brief summary of each.

(2) The person designated to preside may make specific changes in the agenda after it has been made available for distribution, only for "good cause" shown.

Specific Authority 120.54(5) FS. Law Implemented 120.525 FS. History–New 4-1-97.

28-102.003 Emergency Meetings.

(1) The agency may hold an emergency meeting notwithstanding the provisions of Rules 28-102.001 and 28-102.002, F.A.C., for the purpose of acting upon emergency matters affecting the public health, safety or welfare.

(2) Whenever an emergency meeting is scheduled to be held, the agency shall give notice of the meeting by any procedure that is fair under the circumstances, such as notifying at least one major newspaper of general circulation in the area where the meeting will take place, and the agency may also notify all major wire services of the time, date, place, and purpose of the meeting.

(3) Following an emergency meeting, the agency shall publish in the appropriate publication prescribed by Section 120.54(3), F.S., notice of the time, date and place of the meeting, a statement setting forth the reasons why an emergency meeting was necessary and a statement setting forth the action taken at the meeting. This notice is in addition to the notice requirements of Section 120.525(3)(c), F.S.

Specific Authority 120.54(5) FS. Law Implemented 120.525(3), 120.54(5)(b)1. FS. History–New 4-1-97.

CHAPTER 28-103 RULEMAKING

28-103.001 Advance Notice of Agency Rulemaking Proceedings.
28-103.002 Rule Development Workshops.
28-103.003 Negotiated Rulemaking.
28-103.004 Public Hearing.
28-103.005 Evidentiary Proceeding During Rulemaking.
28-103.006 Petitions to Initiate Rulemaking.

28-103.001 Advance Notice of Agency Rulemaking Proceedings.

Any person may file a written request with the agency to be given advance notice of agency proceedings to adopt, amend, or repeal a rule, as provided in Section 120.54(3)(a)3., F.S. The written request may specify that advance notice is requested of all agency rulemaking proceedings, or of only those agency rulemaking proceedings involving specific subjects.

Specific Authority 120.54(5) FS. Law Implemented 120.54(2)(a), (3)(a) FS. History–New 4-1-97.

28-103.002 Rule Development Workshops.

(1) Whenever requested in writing by any affected person, the agency must either conduct a rule development workshop prior to proposing rules for adoption or the agency head must explain in writing why a workshop is unnecessary. When rule development workshops are conducted in various regions of the state, they may be conducted either in person or through communications media technology as set out in Chapter 28-109, F.A.C.

(2) The agency should consider conducting a rule development workshop whenever a workshop would help the agency understand and address concerns of affected persons. The agency should consider the following factors in determining whether to conduct a rule development workshop:

(a) The complexity or controversial nature of issues being addressed.

(b) Whether rules being considered for adoption have an impact on regulated interests.

(c) Whether rules being considered for adoption involve people with competing interests.

(d) Whether rules being considered for adoption relate to emerging policies for which investigation of the factual basis for regulatory alternatives is required.

Specific Authority 120.54(5) FS. Law Implemented 120.54(2)(c), (5) FS. History–New 4-1-97.

28-103.003 Negotiated Rulemaking.

(1) The agency may develop rules through negotiated rulemaking. Negotiated rulemaking is a process that uses a committee of designated representatives to draft a mutually acceptable proposed rule. The agency should consider the following factors in determining whether to use negotiated rulemaking:

(a) Whether there is a need for a rule;

(b) Whether there are identifiable multiple interests that will be affected by the rule;

(c) Whether a balanced committee of interested persons who are willing to negotiate in good faith and who can represent identified interests can be assembled;

(d) Whether there is a reasonable likelihood that a committee can reach a consensus within a fixed period of time;

(e) Whether negotiated rulemaking processes will unreasonably delay implementing legislation;

(f) Whether the agency has resources, including technical assistance, to commit to support negotiated rulemaking;

(g) Whether the agency will use the consensus of the committee as the basis for proposing a rule, consistent with its statutory responsibilities.

(2) When the agency chooses to use negotiated rulemaking, it shall publish a notice in the Florida Administrative Weekly. The notice shall include:

(a) An announcement that the agency intends to convene a negotiated rulemaking proceeding;

(b) A description of the subject and scope of the rule to be developed;

(c) In addition to the requirements of Section 120.54(2)(d)2., F.S., a list of the rulemaking committee members, including their addresses and business telephone numbers;

(d) A schedule for completing the work of the committee;

(e) A statement of how persons who believe that their interests are not adequately represented may apply to participate on the committee.

(3) The agency shall respond in writing to requests for membership setting forth reasons for granting or denying the requests.

(4) The negotiating committee shall be chaired by a neutral facilitator or mediator. The facilitator/mediator shall serve subject to the approval of the committee.

(5) The negotiating committee shall report the results of its deliberations to the agency within the time frame specified in the notice of negotiated rulemaking.

Specific Authority 120.54(5) FS. Law Implemented 120.54(2)(d) FS. History–New 4-1-97.

28-103.004 Public Hearing.

(1) The notice of intent to adopt, amend, or repeal a rule may provide that a public hearing will be held.

(2) A request for a public hearing, pursuant to Section 120.54(3)(c)1., F.S., shall be in writing and shall specify how the person requesting the public hearing would be affected by the proposed rule. The request shall be submitted to the agency within 21 days after notice of intent to adopt, amend, or repeal the rule is published as required by law, in accordance with the procedure for submitting requests for public hearing stated in the notice of intent to adopt, amend, or repeal the rule.

(3) The agency may conduct a public hearing. The agency must conduct a public hearing if the proposed rule does not relate exclusively to practice or procedure, and if an affected person timely submits a written request.

(4) If the notice of intent to adopt, amend, or repeal a rule did not notice a public hearing and the agency determines to hold a public hearing, the agency shall publish notice of a public hearing in the same manner as is required for publication of a notice of rulemaking at least 7 days before the scheduled public hearing. The notice shall specify the date, time, and location of the public hearing, and the name, address, and telephone number of the agency contact person who can provide information about the public hearing.

(5) The purpose of a public hearing is to provide affected persons and other members of the public a reasonable opportunity for presentation of evidence, argument and oral statements, within reasonable conditions and limitations imposed by the agency to avoid duplication, irrelevant comments, unnecessary delay, or disruption of the proceeding.

(6) The agency head, any member thereof, or any person designated by the agency head may preside at the public hearing. The agency must ensure that the persons responsible for preparing the proposed rule are available to explain the agency's proposal and to respond to questions or comments regarding the proposed rule.

(7) Written statements may be submitted by any person within a specified period of time prior to or following the public hearing. All timely submitted written statements shall be considered by the agency and made a part of the rulemaking record.

Specific Authority 120.54(5) FS. Law Implemented 120.525, 120.54(3)(c) FS. History–New 4-1-97.

28-103.005 Evidentiary Proceeding During Rulemaking.

(1) At any time before the conclusion of a public hearing conducted under the provisions of Section 120.54(3), F.S., any person who asserts that his or her substantial interests will be affected in the proceedings, and who demonstrates that the rulemaking proceed-

ings do not provide an adequate opportunity to protect his or her substantial interests, may request that the rulemaking proceedings be conducted under the provisions of Sections 120.569 and 120.57, F.S., to provide an adequate opportunity to protect his or her substantial interests.

(2) The agency shall determine the merits of the request and grant or deny it.

(3) If the agency grants the request, the rulemaking proceeding shall be suspended until the evidentiary proceeding has been concluded. The agency shall not file the proposed rule for adoption until the request has been denied, or until the issues raised in the request have been resolved by the agency.

(4) Unless the agency rejects the request, the agency shall publish notice in the same manner as is required for the publication of a notice of rulemaking that a request for evidentiary proceeding has been submitted. The notice shall contain sufficient information to advise substantially affected persons of the proceeding.

(5) The agency may determine that the rulemaking proceeding be conducted under the provisions of Sections 120.569 and 120.57, F.S., even in the absence of a specific request.

(6) The agency head or a member thereof may conduct the proceeding or it may request that the Division of Administrative Hearings assign an administrative law judge to conduct the proceeding. If the agency requests that the Division of Administrative Hearings assign an administrative law judge to conduct the proceeding, the request shall be made within 15 days of the decision to proceed under Sections 120.569 and 120.57, F.S.

Specific Authority 120.54(5) FS. Law Implemented 120.54(3)(c)2. FS. History–New 4-1-97, Amended 3-18-98.

28-103.006 Petitions to Initiate Rulemaking.

(1) Petitions to initiate rulemaking pursuant to Section 120.54(7), F.S., include all petitions to adopt, amend, or repeal a rule.

All petitions to initiate rulemaking must contain the name, address, and telephone number of the petitioner, the specific rule or action requested, the reasons for the rule or action requested, and the facts showing that the petitioner is regulated by the agency or has a substantial interest in the rule or action requested.

(2) Petitions to initiate rulemaking shall be filed with the agency clerk.

Specific Authority 120.54(5) FS. Law Implemented 120.54(7) FS. History–New 4-1-97.

CHAPTER 28-104 VARIANCE OR WAIVER

28-104.001 Purpose; Construction.
28-104.002 Petition for Variance or Waiver.
28-104.003 Comments on Petition.
28-104.004 Petition for Emergency Variance or Waiver.
28-104.005 Time for Consideration of Emergency Petition.
28-104.0051 Revocation of Emergency or Temporary Variance or Waiver.
28-104.006 Request for Information.

28-104.001 Purpose; Construction.

(1) The purpose of this chapter is to implement the provisions of Section 120.542, F.S., by setting forth the uniform procedures for granting or denying petitions for variances from and waivers of agency rules.

(2) This chapter should be read in conjunction with the provisions of Sections 120.52(18), 120.52(19), and 120.542, F.S.

Specific Authority 120.54(5)(b)6., 120.542(3) FS. Law Implemented 120.542(3) FS. History–New 4-1-97.

28-104.002 Petition for Variance or Waiver.

(1) A petition for a variance from or waiver of an agency rule shall be filed with the clerk of the agency that adopted the rule, with a copy to the Joint Administrative Procedures Committee, Room 120, The Holland Building, Tallahassee, Florida 32399-1300.

(2) The petition must include the following information:

(a) The caption shall read:

Petition for (Variance from) or (Waiver of) Rule (Citation)

(b) The name, address, telephone number, and any facsimile number of the petitioner;

(c) The name, address, telephone number, and any facsimile number of the attorney or qualified representative of the petitioner (if any);

(d) The applicable rule or portion of the rule;

(e) The citation to the statute the rule is implementing;

(f) The type of action requested;

(g) The specific facts that demonstrate a substantial hardship or a violation of principles of fairness that would justify a waiver or variance for the petitioner;

(h) The reason why the variance or the waiver requested would serve the purposes of the underlying statute; and

(i) A statement whether the variance or waiver is permanent or temporary. If the variance or waiver is temporary, the petition shall include the dates indicating the duration of the requested variance or waiver.

(3) The petition for a variance or waiver may be withdrawn by the applicant at any time before final agency action.

(4) Upon receipt of a petition for variance or waiver, the agency shall furnish a copy of the petition to any other agency responsible for implementing the rule.

Specific Authority 120.54(5)(b)6., 120.542(3) FS. Law Implemented 120.542(5) FS. History–New 4-1-97, Amended 3-18-98.

28-104.003 Comments on Petition.

(1) Any interested person or other agency may submit written comments on the petition for a variance or waiver within 14 days after the notice required by Section 120.542(6), F.S. The agency shall state in any order whether comments were received by the agency.

(2) The agency shall maintain the comments as part of the record.

(3) The right to comment pursuant to this section does not alone confer party status in any proceeding arising from a petition for variance or waiver.

Specific Authority 120.54(5)(b)6., 120.542(3) FS. Law Implemented 120.542(6), 120.542(8) FS. History–New 4-1-97.

28-104.004 Petition for Emergency Variance or Waiver.

(1) A person requesting an emergency variance from or waiver of an agency rule shall so state in the caption to the petition.

(2) In addition to the other requirements of Section 120.542(5), F.S., and this chapter, the petition shall specify:

(a) The specific facts that make the situation an emergency; and

(b) The specific facts to show that the petitioner will suffer an immediate adverse effect unless the variance or waiver is issued more expeditiously than the time frames provided in Section 120.542, F.S.

Specific Authority 120.54(5)(b)6., 120.542(3) FS. Law Implemented 120.542(3), (5) FS. History–New 4-1-97.

28-104.005 Time for Consideration of Emergency Petition.

(1) The agency shall grant or deny a petition for emergency variance or waiver within 30 days of its receipt by the agency. If such petition is not granted or denied within this time

limit, the petition shall be deemed approved unless the time limit is waived by the petitioner.

(2) The agency shall issue a written order granting or denying the petition. The order shall state the facts and reasons supporting the agency's action. The agency may deny a petition based on its decision that the situation is not an emergency. The petition shall then be reviewed by the agency on a non-emergency basis as set forth in Section 120.542(7), F.S.

(3) The duration of an emergency variance or waiver shall be determined by the agency. The agency may also consider a petition requesting the same or similar variance or waiver on a non-emergency basis.

Specific Authority 120.54(5)(b)6., 120.542(3) FS. Law Implemented 120.542(3) FS. History–New 4-1-97.

28-104.0051 Revocation of Emergency or Temporary Variance or Waiver.

(1) Upon receipt of evidence sufficient to show that the recipient of an order granting an emergency or temporary variance or waiver is not in compliance with the requirements of that order, the agency shall issue an order to show cause why the emergency variance or waiver should not be revoked.

(2) The recipient of an emergency or temporary variance or waiver shall respond to the order to show cause why the emergency variance or waiver should not be revoked within 15 days of the mailing date of the order to show cause. Failure to timely respond shall result in a final order revoking the emergency or temporary variance or waiver.

Specific Authority 120.54(5)(b)6. FS. Law Implemented 120.542(1), (3) FS. History–New 3-18-98.

28-104.006 Request for Information.

(1) When a person inquires of the agency about the possibility of relief from any rule requirements or the remedies available pursuant to Section 120.542, F.S., the agency shall provide the information required by Section 120.542(4), F.S., within 15 days of the inquiry.

(2) In its response to a request for information, the agency shall indicate the name and address of the appropriate contact person for additional information and shall indicate how a petition for variance or waiver is filed with the agency.

Specific Authority 120.54(5)(b)6., 120.542(3) FS. Law Implemented 120.542(4) FS. History–New 4-1-97.

CHAPTER 28-105 DECLARATORY STATEMENTS

28-105.001 Purpose and Use of Declaratory Statement.
28-105.002 The Petition.
28-105.003 Agency Disposition.

28-105.001 Purpose and Use of Declaratory Statement.

A declaratory statement is a means for resolving a controversy or answering questions or doubts concerning the applicability of statutory provisions, rules, or orders over which the agency has authority. A petition for declaratory statement may be used only to resolve questions or doubts as to how the statutes, rules, or orders may apply to the petitioner's particular circumstances. A declaratory statement is not the appropriate means for determining the conduct of another person or for obtaining a policy statement of general applicability from an agency. A petition for declaratory statement must describe the potential impact of statutes, rules, or orders upon the petitioner's interests.

Specific Authority 120.54(5) FS. Law Implemented 120.565 FS. History–New 4-1-97.

28-105.002 The Petition.

A petition seeking a declaratory statement shall be filed with the clerk of the agency that has the authority to interpret the statute, rule, or order at issue and shall provide the following information:

(1) The caption shall read: Petition for Declaratory Statement Before (Name of Agency)

(2) The name, address, telephone number, and any facsimile number of the petitioner.

(3) The name, address, telephone number, and any facsimile number of the attorney or qualified representative (if any) of the petitioner.

(4) The statutory provision(s), agency rule(s), or agency order(s) on which the declaratory statement is sought.

(5) A description of how the statutes, rules, or orders may substantially affect the petitioner in the petitioner's particular set of circumstances.

(6) The signature of the petitioner or of petitioner's attorney of qualified representive.

(7) The date.

Specific Authority 120.54(5) FS. Law Implemented 120.565 FS. History–New 4-1-97, Amended 3-18-98.

28-105.003 Agency Disposition.

The agency may hold a hearing to consider a petition for declaratory statement. If the agency is headed by a collegial body, it shall take action on a petition for declaratory

statement only at a duly noticed public meeting. If a hearing is held, it shall be conducted in accordance with Sections 120.569 and 120.57(2), F.S. The agency may rely on the statements of fact set out in the petition without taking any position with regard to the validity of the facts. Within 90 days of the filing of the petition, the agency shall render a final order denying the petition or issuing a declaratory statement.

Specific Authority 120.54(5) FS. Law Implemented 120.565 FS. History–New 4-1-97.

CHAPTER 28-106 DECISIONS DETERMINING SUBSTANTIAL INTERESTS

PART I GENERAL PROVISIONS
28-106.101 Scope of this Chapter.
28-106.102 Presiding Officer.
28-106.103 Computation of Time.
28-106.104 Filing.
28-106.105 Appearances.
28-106.106 Who May Appear; Criteria for Qualified Representatives.
28-106.107 Standards of Conduct for Qualified Representatives.
28-106.108 Consolidation.
28-106.109 Notice to Interested Parties.
28-106.110 Service of Papers.
28-106.111 Point of Entry into Proceedings and Mediation.
PART II HEARINGS INVOLVING DISPUTED ISSUES OF MATERIAL FACT
28-106.201 Initiation of Proceedings.
28-106.202 Amendment of Petitions.
28-106.203 Answer.
28-106.204 Motions.
28-106.205 Intervention.
28-106.206 Discovery.
28-106.207 Venue.
28-106.208 Notice of Hearing.
28-106.209 Prehearing Conferences.
28-106.210 Continuances.
28-106.211 Conduct of Proceedings.
28-106.212 Subpoenas.
28-106.213 Evidence.
28-106.214 Recordation.
28-106.215 Post-Hearing Submittals.
28-106.216 Entry of Recommended Order.
28-106.217 Exceptions and Responses.
PART III PROCEEDINGS AND HEARINGS NOT INVOLVING DISPUTED ISSUES OF MATERIAL FACT
28-106.301 Initiation of Proceedings.
28-106.302 Notice of Proceeding.
28-106.303 Motions.
28-106.304 Continuances.
28-106.305 Conduct of Proceedings.
28-106.306 Recordation.
28-106.307 Post-Hearing Submittals.
PART IV MEDIATION
28-106.401 Scope.
28-106.402 Contents of Request for Mediation.
28-106.403 Allocation of Costs and Fees.
28-106.404 Contents of Agreement to Mediate.
28-106.405 Standards of Conduct for Mediators.

PART I GENERAL PROVISIONS

28-106.101 Scope of this Chapter.

This chapter shall apply in all proceedings in which the substantial interests of a party are determined by the agency and shall be construed to secure the just, speedy, and inexpensive determination of every proceeding. This chapter applies to all proceedings under Chapter 120 except as follows:

(1) Where the agency has adopted rules covering the subject matter pursuant to Section 120.54(5)(a)2., F.S.;

(2) Agency investigations or determinations of probable cause preliminary to agency action; and

(3) Mediation conducted pursuant to Section 120.573, F.S. The notice provisions in Rule 28-106.111 and Part IV, F.A.C., of this subchapter apply to such mediation.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.102 Presiding Officer.

“Presiding officer” means an agency head, or member thereof, who conducts a hearing or proceeding on behalf of the agency, an administrative law judge assigned by the Division of Administrative Hearings, or any other person authorized by law to conduct administrative hearings or proceedings who is qualified to resolve the legal issues and procedural questions which may arise.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.103 Computation of Time.

In computing any period of time allowed by this chapter, by order of a presiding officer, or by any applicable statute, the day of the act from which the period of time begins to run shall not be included. The last day of the period shall be included unless it is a Saturday, Sunday, or legal holiday, in which event the period shall run until the end of the next day which is not a Saturday, Sunday, or legal holiday. When the period of time allowed is less than 7 days, intermediate Saturdays, Sundays, and legal holidays shall be excluded in the computation. As used in these rules, legal holiday means those days designated in Section 110.117, F.S. Except as provided in Rule 28-106.217, F.A.C., five days shall be added to the time limits when service has been made by U.S. mail. One business day shall be added when service is made by overnight courier. No additional time shall be added if service is made by hand, facsimile telephone transmission, or other electronic transmission or when the period of time begins pursuant to a type of notice described in Rule 28-106.111, F.A.C.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.104 Filing.

(1) In construing these rules or any order of a presiding officer, filing shall mean received by the office of the agency clerk during normal business hours or by the presiding officer during the course of a hearing.

(2) All pleadings filed with the agency shall contain the following:

(a) The style of the proceeding involved;

(b) The docket, case or file number, if any;

(c) The name of the party on whose behalf the pleading is filed;

(d) The name, address, and telephone number of the person filing the pleading;

(e) The signature of the person filing the pleading; and

(f) A certificate of service that copies have been furnished to all other parties as required by subsection (4) of this rule.

(3) Any document received by the office of the agency clerk after 5:00 p.m. shall be filed as of 8:00 a.m. on the next regular business day.

(4) Whenever a party files a pleading or other document with the agency, that party shall serve copies of the pleading or other document upon all other parties to the proceeding. A certificate of service shall accompany each pleading or other document filed with the agency.

(5) All papers filed shall be styled to indicate clearly the subject matter of the paper and the party requesting relief.

(6) All original pleadings shall be on white paper measuring 8 1/2 by 11 inches, with margins of no less than one inch.

Originals shall be printed or typewritten.

(7) A party who files a document by electronic transmission represents that the original physically signed document will be retained by that party for the duration of that proceeding and of any subsequent appeal or subsequent proceeding in that cause. The party shall produce it upon the request of any other party or the agency clerk.

(8) Any party who elects to file any document by electronic transmission shall be responsible for any delay, disruption, or interruption of the electronic signals and accepts the full risk that the document may not be properly filed with the clerk as a result.

(9) The filing date for an electronically transmitted document shall be the date the agency clerk receives the complete document.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.105 Appearances.

(1) Counsel or qualified representatives who file a request for a hearing involving disputed issues of material fact with the agency have entered an appearance in the proceeding and shall be deemed counsel or qualified representative of record. All others who seek to appear shall file a notice of appearance as soon as possible.

(2) Service on counsel of record or on a qualified representative shall be the equivalent of service on the party represented.

(3) On written motion served on the party represented and all other parties of record, the presiding officer shall grant counsel of record and qualified representatives leave to withdraw for good cause shown.

(4) A qualified representative who has filed an initial pleading or notice of appearance for a party shall be deemed the qualified representative of record until the presiding officer makes the determination required by Rule 28-106.106, F.A.C.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.106 Who May Appear; Criteria for Qualified Representatives.

(1) Any party who appears in any agency proceeding has the right, at his or her own expense, to be represented by counsel or by a qualified representative. Counsel means a member of The Florida Bar or a law student certified pursuant to Chapter 11 of the Rules Regulating The Florida Bar.

(2)(a) A party seeking representation by a qualified representative shall file a written request with the presiding officer as soon as practicable. The request shall identify the name, address and telephone number of the representative and shall state that the party is aware of the services which the representative can provide, and is aware that the party can be represented by an attorney at the party's own expense and has chosen otherwise.

(b) The presiding officer shall assure that the representative is qualified to appear in the administrative proceeding and capable of representing the rights and interests of the party. The presiding officer may consider a representative's sworn affidavit setting forth the representative's qualifications.

(c) The presiding officer shall determine the qualifications of the representative within a reasonable time after the request required by paragraph (a) is filed.

(3) The presiding officer shall authorize the representative to appear if the presiding officer is satisfied that the representative has the necessary qualifications to responsibly represent the party's interests in a manner which will not impair the fairness of the proceeding or the correctness of the action to be taken.

(4) The presiding officer shall make a determination of the qualifications of the representative in light of the nature of the proceedings and the applicable law. The presiding officer shall consider:

(a) The representative's knowledge of jurisdiction;

(b) The representative's knowledge of the Florida Rules of Civil Procedure relating to discovery in an administrative proceeding;

(c) The representative's knowledge regarding the rules of evidence, including the concept of hearsay in an administrative proceeding;

(d) The representative's knowledge regarding the factual and legal issues involved in the proceedings; and

(e) The representative's knowledge of and compliance with the Standards of Conduct for Qualified Representatives, Rule 28-106.107, F.A.C.

(5) If the presiding officer determines a representative is not qualified, the reasons for the decision shall be in writing and included in the record.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.107 Standards of Conduct for Qualified Representatives.

The following standards of conduct are mandatory for all qualified representatives.

(1) A representative shall exercise due diligence to insure that any motion or pleading is filed and argued in good faith.

(2) A representative shall advise the client to obey the law.

(3) A representative shall not:

(a) Engage in conduct involving dishonesty, fraud, deceit, or misrepresentation;

(b) Engage in conduct that is prejudicial to the administration of justice;

(c) Handle a matter which the representative knows or should know that he or she is not competent to handle;

(d) Handle a legal or factual matter without adequate preparation;

(e) Communicate, or cause another to communicate, as to the merits of the proceeding with the presiding officer except on the record or in writing with a copy promptly delivered to the opposing party; or

(f) Communicate with an adverse party regarding matters at issue in the administrative proceeding where the representative knows that the adverse party is represented by an attorney or other qualified representative.

(4) Failure to comply with these provisions shall authorize the presiding officer to disqualify the representative appearing in the administrative proceeding.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.108 Consolidation.

If there are separate matters which involve similar issues of law or fact, or identical parties, the matters may be consolidated if it appears that consolidation would promote the just, speedy, and inexpensive resolution of the proceedings, and would not unduly prejudice the rights of a party.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.109 Notice to Interested Parties.

If it appears that the determination of the rights of parties in a proceeding will necessarily involve a determination of the substantial interests of persons who are not parties, the presiding officer may enter an order requiring that the absent person be notified of the proceeding and be given an opportunity to be joined as a party of record.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.110 Service of Papers.

Unless the presiding officer otherwise orders, every pleading and every other paper filed in a proceeding, except applications for witness subpoenas, shall be served on each party or the party’s representative at the last address of record.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.111 Point of Entry into Proceedings and Mediation.

(1) The notice of agency decision shall contain the information required by Section 120.569(1), F.S. The notice shall also advise whether mediation under Section 120.573, F.S., is available as an alternative remedy, and if available, that pursuit of mediation will

not adversely affect the right to administrative proceedings in the event mediation does not result in a settlement.

(2) Unless otherwise provided by law, persons seeking a hearing on an agency decision which does or may determine their substantial interests shall file a petition for hearing with the agency within 21 days of receipt of written notice of the decision.

(3) An agency may, for good cause shown, grant a request for an extension of time for filing an initial pleading. Requests for extension of time must be filed with the agency prior to the applicable deadline. Such requests for extensions of time shall contain a certificate that the moving party has consulted with all other parties, if any, concerning the extension and that the agency and any other parties agree to said extension. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

(4) Any person who receives written notice of an agency decision and who fails to file a written request for a hearing within 21 days waives the right to request a hearing on such matters.

(5) The agency may publish, and any person who has timely requested mediation may, at the person's own expense, cause the agency to publish, a notice of the existence of the mediation proceeding in the *Florida Administrative Weekly* or in a newspaper of general circulation in the affected area. The mediation notice can be included in the notice of intended agency action.

(a) The notice of the mediation proceeding shall include:

1. A statement that the mediation could result in a settlement adopted by final agency action;

2. A statement that the final action arising from mediation may be different from the intended action set forth in the notice which resulted in a timely request for mediation;

3. A statement that any person whose substantial interests may be affected by the outcome of the mediation shall within 21 days of the notice of mediation proceeding file a request with the agency to participate in the mediation; and

4. An explanation of the procedures for filing such a request.

(b) The notice shall also advise that in the absence of a timely request to participate in the mediation, any person whose

substantial interests are or may be affected by the result of the mediation waives any right to participate in the mediation, and that waiver of participation in the mediation is also a waiver of that person's ability to challenge the mediated final agency action pursuant to Chapter 120, F.S.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57, 120.573 FS. History–New 4-1-97, Amended 3-18-98.

PART II HEARINGS INVOLVING DISPUTED ISSUES OF MATERIAL FACT

28-106.201 Initiation of Proceedings.

(1) Unless otherwise provided by statute, initiation of proceedings shall be made by written petition to the agency responsible for rendering final agency action. The term "petition" includes any document that requests an evidentiary proceeding and asserts the existence of a disputed issue of material fact. Each petition shall be legible and on 8 1/2 by 11 inch white paper. Unless printed, the impression shall be on one side of the paper only and lines shall be double-spaced.

(2) All petitions filed under these rules shall contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action;

(f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

(3) Upon receipt of a petition involving disputed issues of material fact, the agency shall grant or deny the petition, and if granted shall, unless otherwise provided by law, refer the matter to the Division of Administrative Hearings with a request that an administrative law judge be assigned to conduct the hearing. The request shall be accompanied by a copy of the petition and a copy of the notice of agency action.

(4) A petition shall be dismissed if it is not in substantial compliance with subsection (2) of this rule or it has been untimely filed. Dismissal of a petition shall, at least once, be without prejudice to petitioner's filing a timely amended petition curing the defect, unless it conclusively appears from the face of the petition that the defect cannot be cured.

(5) The agency shall promptly give written notice to all parties of the action taken on the petition, shall state with particularity its reasons if the petition is not granted, and shall state the deadline for filing an amended petition if applicable.

Specific Authority 120.54(3), (5) FS. Law Implemented 120.54(5), 120.569, 120.57 FS. History–New 4-1-97, Amended 9-17-98.

28-106.202 Amendment of Petitions.

The petitioner may amend the petition prior to the designation of the presiding officer by filing and serving an amended petition in the manner prescribed for filing and serving an original petition. The petitioner may amend the petition after the designation of the presiding officer only upon order of the presiding officer.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.203 Answer.

A respondent may file an answer to the petition.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.204 Motions.

(1) All requests for relief shall be by motion. All motions shall be in writing unless made on the record during a hearing, and shall fully state the action requested and the grounds relied upon. The original written motion shall be filed with the presiding officer. When time allows, the other parties may, within 7 days of service of a written motion, file a response in opposition. Written motions will normally be disposed of after the response period has expired, based on the motion, together with any supporting or opposing memoranda. The presiding officer shall conduct such proceedings and enter such orders as are deemed necessary to dispose of issues raised by the motion.

(2) Unless otherwise provided by law, motions to dismiss the petition shall be filed no later than 20 days after service of the petition on the party.

(3) Motions, other than a motion to dismiss, shall include a statement that the movant has conferred with all other parties of record and shall state as to each party whether the party has any objection to the motion.

(4) Any party may move for summary final order whenever there is no genuine issue as to any material fact. The motion may be accompanied by supporting affidavits. All other parties may, within seven days of service, file a response in opposition, with or without supporting affidavits. A party moving for summary final order later than twelve days before the final hearing waives any objection to the continuance of the final hearing.

(5) Motions for extension of time shall be filed prior to the expiration of the deadline sought to be extended and shall state good cause for the request.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.205 Intervention.

Persons other than the original parties to a pending proceeding whose substantial interest may be determined in the proceeding and who desire to become parties may petition the presiding officer for leave to intervene. Except for good cause shown, petitions for leave to intervene must be filed at least 20 days before the final hearing. The petition shall conform to subsection 28-106.201(2), F.A.C., and shall include allegations sufficient to demonstrate that the intervenor is entitled to participate in the proceeding as a matter of constitutional or statutory right or pursuant to agency rule, or that the substantial interests of the intervenor are subject to determination or will be affected through the proceeding. The presiding officer may impose terms and conditions on the intervenor to limit prejudice to other parties.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.206 Discovery.

After commencement of a proceeding, parties may obtain discovery through the means and in the manner provided in Rules 1.280 through 1.400, Florida Rules of Civil Procedure. The presiding officer may issue appropriate orders to effectuate the purposes of discovery and to prevent delay, including the imposition of sanctions in accordance with the Florida Rules of Civil Procedure, except contempt.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.207 Venue.

(1) Whenever practicable and permitted by statute or rule, hearings shall be held in the area of residence of the non-governmental parties affected by agency action, or at the place most convenient to all parties as determined by the presiding officer.

(2) Failure to respond timely to any order requiring or allowing the parties to suggest an appropriate locality for final hearing may constitute a waiver of venue.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.208 Notice of Hearing.

The presiding officer shall set the time and place for all hearings and shall serve written notice on all parties at their address of record. No less than 14 days notice shall be given for the hearing on the merits of the petition unless otherwise agreed by the parties or unless otherwise provided by law.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.209 Prehearing Conferences.

At any time after a matter has been filed with the agency, the presiding officer may direct the parties to confer for the purpose of clarifying and simplifying issues, discussing the possibilities of settlement, examining documents and other exhibits, exchanging names and addresses of witnesses, resolving other procedural matters, and entering into a pre-hearing stipulation.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.210 Continuances.

The presiding officer may grant a continuance of a hearing for good cause shown. Except in cases of emergency, requests for continuance must be made at least five days prior to the date noticed for the hearing.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.211 Conduct of Proceedings.

The presiding officer before whom a case is pending may issue any orders necessary to effectuate discovery, to prevent delay, and to promote the just, speedy, and inexpensive determination of all aspects of the case, including bifurcating the proceeding.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.212 Subpoenas.

(1) Upon the request of any party, a presiding officer shall issue subpoenas for the attendance of witnesses for deposition or at the hearing. The requesting party shall specify whether the witness is also requested to bring documents.

(2) A subpoena may be served by any person specified by law to serve process or by any person who is not a party and who is 18 years of age or older. Service shall be made by delivering a copy to the person named in the subpoena. Proof of service shall be made by affidavit of the person making service if not served by a person specified by law to serve process.

(3) Any motion to quash or limit the subpoena shall be filed with the presiding officer and shall state the grounds relied upon.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.213 Evidence.

(1) Oral evidence shall be taken only on oath or affirmation.

(2) Each party shall have the right to impeach any witness regardless of which party called the witness to testify.

(3) Hearsay evidence, whether received in evidence over objection or not, may be used to supplement or explain other evidence, but shall not be sufficient in itself to support a finding unless the evidence falls within an exception to the hearsay rule as found in Chapter 90, F.S.

(4) The rules of privilege apply to the same extent as in civil actions under Florida law.

(5) If requested and if the necessary equipment is reasonably available, testimony may be taken by means of video teleconference or by telephone.

(a) If a party cross-examining the witness desires to have the witness review documents or other items not reasonably available for the witness to review at that time, then the party shall be given a reasonable opportunity to complete the cross-examination at a later time or date for the purpose of making those documents or other items available to the witness.

(b) For any testimony taken by means of video teleconference or telephone, a notary public must be physically present with the witness to administer the oath. The notary public shall provide a written certification to be filed with the presiding officer confirming the identity of the witness, and confirming the affirmation or oath by the witness. It shall be the responsibility of the party calling the witness to secure the services of a notary public.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.214 Recordation.

(1) Responsibility for preserving the testimony at final hearings shall be that of the agency transmitting the petition to the Division of Administrative Hearings pursuant to Sections 120.569 and 120.57, F.S., the agency whose rule is being challenged, or the agency whose action initiated the proceeding. Proceedings shall be recorded by a certified court reporter or by recording instruments.

(2) No later than 10 days prior to the final hearing, the agency shall notify the parties of the method by which the agency will record the testimony at the final hearing. Any party to a hearing may, at its own expense, provide a certified court reporter if the agency does not. The presiding officer may provide a certified court reporter. At hearings reported by a court reporter, any party who wishes a transcript of the testimony shall order the same at its own expense. If a court reporter records the proceedings, the recordation shall become the official transcript.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97, Amended 3-18-98.

28-106.215 Post-Hearing Submittals.

All parties may submit proposed findings of fact, conclusions of law, orders, and memoranda on the issues within a time designated by the presiding officer. Unless authorized by the presiding officer, proposed orders shall be limited to 40 pages.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.216 Entry of Recommended Order.

(1) If a hearing is conducted by other than the agency head, or member thereof, the presiding officer shall, within 30 days after the hearing or receipt of the hearing transcript, whichever is later, file a recommended order which shall include a caption, time and place of hearing, appearances entered at the hearing, statement of the issues, findings of fact and conclusions of law, separately stated, and recommendation for final agency action.

(2) By agreeing to a deadline for filing post-hearing submissions that is more than 10 days after the conclusion of the hearing or the filing of the hearing transcript, whichever is later, a party waives the provisions of subsection (1) above.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.217 Exceptions and Responses.

(1) Parties may file exceptions to findings of fact and conclusions of law contained in recommended orders with the agency responsible for rendering final agency action within 15 days of entry of the recommended order except in proceedings conducted pursuant to Section 120.57(3), F.S.

(2) Any party may file responses to another party’s exceptions within 10 days from the date the exceptions were served.

(3) Notwithstanding Rule 28-106.103, F.A.C., no additional time shall be added to the time limits for filing exceptions or responses to exceptions when service has been made by mail.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

PART III PROCEEDINGS AND HEARINGS NOT INVOLVING DISPUTED ISSUES OF MATERIAL FACT

28-106.301 Initiation of Proceedings.

(1) Initiation of a proceeding shall be made by written petition to the agency responsible for rendering final agency action. The term “petition” includes any document which requests a proceeding. Each petition shall be legible and on 8 1/2 by 11 inch white paper or on a form provided by the agency. Unless printed, the impression shall be on one side of the paper only and lines shall be doubled-spaced.

(2) All petitions filed under these rules shall contain:

(a) The name and address of each agency affected and each agency’s file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner’s representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner’s substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency’s proposed action;

(e) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency’s proposed action; and

(f) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency’s proposed action.

(3) If the petition does not set forth disputed issues of material fact, the agency shall refer the matter to the presiding officer designated by the agency with a request that the matter be scheduled for a proceeding not involving disputed issues of material fact.

The request shall be accompanied by a copy of the petition and a copy of the notice of agency action.

(4) A petition shall be dismissed if it is not in substantial compliance with subsection (2) of this rule or it has been untimely filed. Dismissal of a petition shall, at least once, be

without prejudice to petitioner's filing a timely amended petition curing the defect, unless it conclusively appears from the face of the petition that the defect cannot be cured.

(5) The agency shall promptly give written notice to all parties of the action taken on the petition, shall state with particularity its reasons if the petition is not granted, and shall state the deadline for filing an amended petition if applicable.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5), 120.569, 120.57 FS. History–New 4-1-97, Amended 9-17-98.

28-106.302 Notice of Proceeding.

(1) The agency shall serve written notice on all parties at their address of record, allowing at least 14 days from the date of the notice for the parties to provide any documents, memorandum of law, or other written material in support of or opposition to the agency action or refusal to act or in aggravation or mitigation of any penalty which may be imposed. If only written evidence is submitted, the notice shall provide that all other parties shall have 14 days to respond in writing to that written evidence.

(2) The agency may schedule a hearing on the matter for the purpose of taking oral evidence or argument. If it does so, the agency shall serve written notice at least 14 days prior to the hearing, setting forth the place, date, and time of the hearing.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97, Amended 3-18-98.

28-106.303 Motions.

(1) All requests for relief shall be by motion. All motions shall be in writing unless made on the record during a hearing and shall fully state the action requested and the grounds relied upon. The original motion shall be filed with the presiding officer. When time allows, the other parties may, within seven days of service of a written motion, file a response in opposition. Written motions will normally be disposed of after the response period has expired, based on the motion, together with any supporting or opposing memoranda. The presiding officer shall conduct proceedings and enter such orders as are deemed necessary to dispose of issues raised by the motion.

(2) Motions, other than a motion to dismiss, shall include a statement that the movant has conferred with all other parties of record and shall state whether any party has an objection to the motion.

(3) Motions for extension of time shall be filed prior to the expiration of the deadline sought to be extended and shall state good cause for the request.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.304 Continuances.

The presiding officer may grant a continuance of a hearing for good cause shown. Except in cases of emergency, requests for continuance must be made at least five days prior to the date noticed for the hearing.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.305 Conduct of Proceedings.

(1) The presiding officer before whom a case is pending may issue any orders necessary to effectuate discovery, to prevent delay, and to promote the just, speedy, and inexpensive determination of all aspects of the case, including bifurcating the proceeding.

(2) If during the course of the proceeding a disputed issue of material fact arises, then, unless waived by all parties, the proceeding under this Part shall be terminated and a proceeding under Part II shall be conducted.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

28-106.306 Recordation.

(1) Responsibility for preserving the testimony at final hearings shall be that of the agency responsible for taking final agency action. Proceedings shall be recorded by a certified court reporter or by recording instruments.

(2) Any party to a hearing may, at its own expense, provide a certified court reporter if the agency does not. The presiding officer may provide a certified court reporter. At hearings reported by a court reporter, any party who wishes a transcript of the testimony shall order the same at its own expense. If a court reporter records the proceedings, the recordation shall become the official transcript.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97, Amended 3-18-98.

28-106.307 Post-Hearing Submittals.

The presiding officer may permit all parties to submit proposed findings of fact, conclusions of law, orders, and memoranda on the issues within a time designated by the presiding officer. Unless authorized by the presiding officer, proposed orders shall be limited to 40 pages.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57 FS. History–New 4-1-97.

PART IV MEDIATION

28-106.401 Scope.

This rule applies to all mediation proceedings conducted pursuant to Section 120.573, F.S.

(1) Except for the initial agreement to mediate, which must be made within 10 days after the time period stated in the announcement for election of an administrative remedy under Sections 120.569 and 120.57, F.S., any time frames may be extended by written agreement of the parties.

(2) Participation in the mediation does not confer or limit standing in any subsequent judicial or administrative proceeding. However, non-participation may limit standing as provided in Rule 28-106.111, F.A.C.

Specific Authority 120.54(5) FS. Law Implemented 120.573 FS. History–New 4-1-97, Amended 3-18-98.

28-106.402 Contents of Request for Mediation.

The request for mediation shall contain:

(1) The name, address, and telephone number of the person requesting mediation and that person's representative, if any;

(2) A statement of the preliminary agency action;

(3) An explanation of how the person's substantial interests will be affected by the agency determination; and

(4) A statement of the relief sought.

Specific Authority 120.54(5) FS. Law Implemented 120.573 FS. History–New 4-1-97.

28-106.403 Allocation of Costs and Fees.

The costs of mediation, including the mediator's fees and other shared costs, shall be split equally or as otherwise agreed by the parties. The cost allocation shall be specified in the agreement to mediate. Mediators shall be compensated at a rate agreed upon by the parties and the mediator.

Specific Authority 120.54(5) FS. Law Implemented 120.573 FS. History–New 4-1-97.

28-106.404 Contents of Agreement to Mediate.

The agreement to mediate shall set forth:

(1) The names, addresses, and telephone numbers of any persons who may attend the mediation;

(2) The name, address, and telephone number of the mediator agreed to by the parties;

(3) How the costs and fees associated with mediation will be allocated;

(4) The agreement of the parties regarding the confidentiality of discussions and documents introduced during mediation to theextent authorized by law;

(5) The date, time, and place of the first mediation session;

(6) The name of the party's representative who shall have authority to settle or recommend settlement; and

(7) The signatures of the parties.

Specific Authority 120.54(5) FS. Law Implemented 120.573 FS. History–New 4-1-97.

28-106.405 Standards of Conduct for Mediators.

(1) Mediators shall adhere to the highest standards of integrity, impartiality, and professional competence.

(2) On commencement of the mediation session, a mediator shall inform all parties that the process is consensual in nature, that the mediator is an impartial facilitator, and that the mediator may not impose or force any settlement on the parties.

(3) A mediator shall:

(a) Perform the mediation services in a timely and expeditious fashion, avoiding delays wherever possible;

(b) Be impartial and advise all parties of any circumstances bearing on possible bias, prejudice, or impartiality; and

(c) Withdraw from mediation if the mediator believes the mediator can no longer be impartial.

(4) A mediator shall not:

(a) Coerce or unfairly influence a party into a settlement agreement and shall not make substantive decisions for any party to a mediation process;

(b) Intentionally or knowingly misrepresent material facts or circumstances in the course of conducting a mediation; or

(c) Give or accept a gift, request, favor, loan, or any other item of value to or from a party, attorney, or any other person involved in, or associated with any person involved in, the mediation process.

Specific Authority 120.54(5) FS. Law Implemented 120.573 FS. History–New 4-1-97.

CHAPTER 28-107 LICENSING

28-107.001 General.
28-107.002 Application for License.
28-107.003 Denial of License.
28-107.004 Suspension, Revocation, Annulment, or Withdrawal.
28-107.005 Emergency Action.

28-107.001 General.

All agency action regarding licensure shall be governed by Sections 120.569, 120.57, and 120.60, F.S.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57, 120.60 FS. History–New 4-1-97.

28-107.002 Application for License.

(1) Unless otherwise provided by law, the agency shall initiate action on an application for license in accordance with the provisions of Section 120.60(1), F.S.

(2) The agency shall inform the applicant in writing if it determines the application is incomplete, and shall specify why the application is incomplete. Upon the return of a completed application, a supplemental application, or the requested information, the agency shall reinitiate action under the provisions of Section 120.60(1), F.S.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57, 120.60 FS. History–New 4-1-97.

28-107.003 Denial of License.

(1) Unless the agency has already held a hearing on the application for a license, the agency shall inform the person submitting an application of the right to a hearing on the denial of the application.

(2) The agency shall set forth in writing the grounds or basis for denial of a license.

(3) Any hearing of the denial of a license shall be conducted in accordance with Sections 120.569, 120.57, or 120.574, F.S., and, unless otherwise provided by law, the applicant shall have the burden of establishing entitlement to the license.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57, 120.574, 120.60 FS. History–New 4-1-97.

28-107.004 Suspension, Revocation, Annulment, or Withdrawal.

(1) Prior to the entry of a final order to suspend, revoke, annul, or withdraw a license, the agency shall serve upon the licensee an administrative complaint in the manner set out in Section 120.60(5), F.S.

(2) The agency shall issue an administrative complaint which shall contain:

(a) The statutory provision(s) or section(s) of the Florida Administrative Code alleged to have been violated.

(b) The facts or conduct relied on to establish the violation, and

(c) A statement that the licensee has the right to request a hearing to be conducted in accordance with Sections 120.569 and 120.57, F.S., to be represented by counsel or other qualified representative, to present evidence and argument, to call and cross-examine witnesses, and to have subpoena and subpoena duces tecum issued on his or her behalf if a hearing is requested.

(3) Requests for hearing filed in accordance with this rule shall include:

(a) The name and address of the party making the request, for purposes of service;

(b) A statement that the party is requesting a hearing involving disputed issues of material fact, or a hearing not involving disputed issues of material fact; and

(c) A reference to the notice, order to show cause, administrative complaint, or other communication that the party has received from the agency.

(4) The agency complaint shall be considered to be the petition, and the agency shall have the burden of proving that grounds exist which warrant the action proposed to be taken against the licensee.

(5) Following receipt of a recommended order, the agency attorney or qualified representative who acts on behalf of the agency in the conduct of the hearing will not serve as legal advisor to the agency head during subsequent proceedings which result in the issuance of the final order.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57, 120.60 FS. History–New 4-1-97.

28-107.005 Emergency Action.

(1) If the agency finds that immediate serious danger to the public health, safety, or welfare requires emergency action, the agency shall summarily suspend, limit, or restrict a license.

(2) The 14-day notice requirement of Section 120.569(2)(b), F.S., does not apply and shall not be construed to prevent a hearing at the earliest time practicable upon request of an aggrieved party.

(3) Unless othewise provided by law, within 20 days after emergency action taken pursuant to paragraph (1) of this rule, the agency shall initiate a formal suspension or revocation proceeding in compliance with Sections 120.569, 120.57, and 120.60, F.S.

Specific Authority 120.54(5) FS. Law Implemented 120.569, 120.57, 120.60(6) FS. History–New 4-1-97.

CHAPTER 28-108 EXCEPTION TO UNIFORM RULES OF PROCEDURE

28-108.001 Petition for Exception to Uniform Rules of Procedure.
28-108.002 Final Disposition on Petition for Exception.

28-108.001 Petition for Exception to Uniform Rules of Procedure.

(1) The agency head shall file a petition with the Administration Commission for an exception to the Uniform Rules of Procedure for all of the agency's procedural rules which fall within the subject matter or scope of any of the individual Uniform Rules of Procedure, Chapters 28-101 through 28-110, F.A.C.

(2) The petition shall include reasons for the exception as outlined in Section 120.54(5)(a), F.S., citation to the particular Uniform Rule of Procedure for which each exception is sought, and specific citation to the provisions of existing agency rule for which an exception is sought, or if a proposed rule or proposed rule amendment, attachment of the proposed rule language as an exhibit to the petition.

(3) The agency shall publish notice of the petition in the next available edition of the Florida Administrative Weekly, after consultation with the agency clerk of the Administration Commission. The notice shall include the name of the agency seeking an exception, the uniform rule of procedure from which the exception is sought, citations to the existing rule or a summary of the proposed rule for which the exception is sought, a summary of the stated grounds for the exception, and the date the matter is expected to be heard by the Administration Commission.

(4) The Administration Commission shall provide interested persons with the opportunity to file written statements or make oral presentations in support of or in opposition to the exception.

Specific Authority 120.54(5) FS. Law Implemented 120.54 FS. History–New 4-1-97, Amended 9-9-98.

28-108.002 Final Disposition on Petition for Exception.

The Administration Commission shall publish, at the agency's expense, notice in the next available edition of the Florida Administrative Weekly of the disposition of the petition, and shall transmit a copy of the notice to the Joint Administrative Procedures Committee, the Department of State, and any person who requests a copy.

Specific Authority 120.54(5) FS. Law Implemented 120.54 FS. History–New 4-1-97.

CHAPTER 28-109 CONDUCTING PROCEEDINGS BY COMMUNICATIONS MEDIA TECHNOLOGY

28-109.001 General.
28-109.002 Definitions as Used in this Rule Chapter.
28-109.003 Application and Construction.
28-109.004 Government in the Sunshine.
28-109.005 Notice.
28-109.006 Evidence, Testimony, and Argument.

28-109.001 General.

This chapter implements the provisions of Section 120.54(5)(b)2., F.S., by providing general procedures to be followed when the agency desires to conduct a proceeding by means of communications media technology or to provide public access to a proceeding by the use of communications media technology.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5)(b)2. FS. History–New 4-1-97.

28-109.002 Definitions as Used in this Rule Chapter.

(1) "Access point" means a designated place where a person interested in attending a communications media technology proceeding may go for the purpose of attending the proceeding.

(2) "Attend" means having access to the communications media technology network being used to conduct a proceeding, or being used to take evidence, testimony, or argument relative to issues being considered at a proceeding.

(3) "Communications media technology" (CMT) means the electronic transmission of printed matter, audio, full-motion video, freeze frame video, compressed video, and digital video by any method available.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5)(b)2. FS. History–New 4-1-97.

28-109.003 Application and Construction.

(1) The agency may conduct a proceeding by using CMT and may provide CMT access to a proceeding for purposes of taking evidence, testimony, or argument.

(2) A proceeding is not a CMT proceeding merely because it is broadcast over a communications network.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5)(b)2. FS. History–New 4-1-97.

28-109.004 Government in the Sunshine.

(1) Nothing in this rule chapter shall be construed to permit the agency to conduct any proceeding otherwise subject to the provisions of Section 286.011, F.S., exclusively by means of CMT without making provision for the attendance of any member of the public who desires to attend.

(2) No proceeding otherwise subject to Section 286.011, F.S., shall be conducted exclusively by means of CMT if the available technology is insufficient to permit all interested persons to attend. If during the course of a CMT proceeding technical problems develop with the communications network that prevent interested persons from attending, the agency may terminate the proceeding until the problems have been corrected.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5)(b)2. FS. History–New 4-1-97.

28-109.005 Notice.

When the agency chooses to conduct a CMT proceeding, it shall provide notice in the same manner as required for a regular proceeding, except in the case of an emergency meeting which shall be noticed as provided in Rule 28-102.003, F.A.C., and shall plainly state that such proceeding is to be conducted utilizing CMT and identify the specific type of CMT to be used. The notice shall describe how interested persons may attend and shall include the address or addresses of all access points, specifically designating those which are in locations normally open to the public. If, for example, a CMT proceeding is to be conducted by utilizing a telephone conference hookup, the notice shall so state and shall provide the address of each access point where an interested person may go for the purpose of attending the proceeding. The notice shall also contain an address and telephone number where an interested person may write or call for additional information and shall provide an address and designated person to whom a person may submit written or other physical evidence which he or she intends to offer into evidence.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5)(b)2. FS. History–New 4-1-97.

28-109.006 Evidence, Testimony, and Argument.

(1) Any evidence, testimony, and argument which is introduced utilizing CMT shall be afforded equal consideration as if it were introduced by its proponent in person, but shall be subject to the same objections as if it were made in person.

(2) In situations where sworn testimony is required by the agency, persons offering such testimony shall be responsible for making appropriate arrangements for offering sworn testimony.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5)(b)2. FS. History–New 4-1-97.

CHAPTER 28-110 BID PROTESTS

28-110.001 Purpose and Scope.
28-110.002 Definitions.
28-110.003 Notice of Protest.
28-110.004 Formal Written Protest.
28-110.005 Bond.

28-110.001 Purpose and Scope.

(1) This chapter supplements the statutes on protests that arise from the contract procurement process under Chapters 24, 255, 287, 334 through 349, Sections 282.303 through 282.313, F.S., and other statutes applicable to agencies as defined in Section 120.52(1), F.S.

(2) Policies and procedures are established primarily by Section 120.57(3), F.S. Interested persons must follow the requirements of those statutes as well as these rules. Other statutes may apply to specific circumstances.

Specific Authority 120.54(5)(a), (b) FS. Law Implemented 120.57(3) FS. History–New 4-1-97.

28-110.002 Definitions.

For purposes of this subchapter, the following terms mean:

(1) “Contract procurement process” has the same meaning as “contract bidding process” as used in Section 120.57(3), F.S. This phase includes procurements by invitation to bid (ITB), request for proposal (RFP), single source approval and negotiation approval.

(2) “Decision or intended decision” means:

(a) The contents of an ITB or an RFP or other specifications, including addenda;

(b) A determination that a specified procurement can be made only from a single source;

(c) Approval of procurement by negotiation;

(d) Rejection of a bid or proposal, or all bids or proposals, or a request to approve a single source or negotiation; or

(e) Intention to award a contract as indicated by a posted bid or proposal tabulation or other written notice.

(3) For purposes of this chapter, “electronic transmissions” permitted by Rule 28-106.104, F.A.C., are limited to facsimile transmissions which appear legibly on paper at the place of filing.

Specific Authority 120.54(5)(a), (b) FS. Law Implemented 120.57(3) FS. History–New 4-1-97.

28-110.003 Notice of Protest.

(1) A notice of protest shall be addressed to the office that issued the ITB or RFP or made any other decision that is intended to be protested; shall identify the procurement by number and title or any other language that will enable the agency to identify it; and shall state that the person intends to protest the decision. If a bond is required, it should not be filed with the notice unless otherwise provided by law.

(2) The notice must be actually received by the agency before the 72-hour period expires. The notice should be filed at the place designated by the procurement solicitation or, if no such place is designated, the notice should be filed either with the office that issued the solicitation or with the agency clerk.

(3) A notice of protest should not be filed before the 72-hour period begins. The 72-hour period begins upon receipt of a copy

of the ITB or RFP; when notice of a single source approval or disapproval or negotiation approval or disapproval is posted, or otherwise received if not posted; when a bid or proposal tabulation is posted; or when notice is otherwise received if not posted.

(4) The 72-hour period is not extended by service of the notice of protest by mail.

Specific Authority 120.54(5)(a), (b) FS. Law Implemented 120.57(3) FS. History–New 4-1-97.

28-110.004 Formal Written Protest.

(1) The “formal written protest” required by Section 120.57(3)(b), F.S., is a petition that states with particularity the facts and law upon which the protest is based, contains the information specified in subsection 28-106.201(2), F.A.C., and is substantially in the form set out in subsection (2) below. If the formal written protest is filed in proper form within the 72-hour period for filing a notice of protest, the formal written protest will also constitute the notice of protest, and all time limits applicable to a notice of protest are waived and time limits relative to formal written protests apply.

(2) Form of Petition.

STATE OF FLORIDA
DEPARTMENT OF _____
XYZ CORPORATION,
a corporation organized
under the laws of Florida,
Case No.:_____
Petitioner,

vs.

STATE OF FLORIDA
DEPARTMENT OF _____
Respondent.
_____/

PETITION

XYZ Corporation, a corporation organized under the laws of Florida, brings this petition against State of Florida Department of _____ and alleges:

1. This is a bid protest under Section 120.57(3), Florida Statutes.

2. Respondent issued an invitation to bid (ITB) entitled Bid No. _____.

3. Petitioner submitted the low bid but Respondent rejected its bid for the stated reason that _____.

4. The stated reason for rejection is erroneous because _____.

5. (Additional relevant facts, if any)

6. The facts that are in dispute between Petitioner and Respondent are: _____

7. A copy of the bid tabulation is attached.

8. (Applicable points of law.)

Petitioner requests a hearing involving disputed issues of material fact and an order awarding the contract to Petitioner (or other relief).

(Note: If the relevant facts are not in dispute the petition should so allege and request a hearing not involving disputed issues of material fact. The above allegations are illustrative. They should be altered to suit varying circumstances).

(3) The time allowed for filing a petition or a bond is not extended by mailing either document.

Specific Authority 120.54(5)(a), (b) FS. Law Implemented 120.57(3) FS. History–New 4-1-97.

28-110.005 Bond.

(1) Bid protest bonds are required by Section 287.042(2)(c), F.S., for procurements under Chapter 287 (commodities, contractual services, professional services and insurance) and by Section 255.25(3)(c), F.S., for procurements of leases of space in privately owned buildings. Bonds are not required for protests involving building construction projects undertaken pursuant to Chapter 255, except that Section 255.0516, F.S., authorizes school boards, community college boards of trustees and the Board of Regents to

require bonds under some circumstances. Bonds are required also by Section 337.11(5)(a), F.S., for certain procurements by the Department of Transportation.

(2) Bonds required by Section 337.11(5)(a), F.S., must be filed with the notice of protest. Other bonds are not to be filed with the notice of protest, but must be filed with the formal written protest or within the 10-day period allowed for filing the formal written protest. The bond must accompany a protest filed pursuant to Section 24.109(2)(a), F.S. A bond can be in substantially the following form:

STATE OF FLORIDA ADMINISTRATION COMMISSION PROCUREMENT PROTEST BOND

Bond Number: _____

Contract Number: _____

KNOW ALL PERSONS BY THESE PRESENTS:

That we, _____ a (mark one) [ ] corporation, [ ] partnership, [ ] proprietorship, organized and existing under the laws of the State of _____, and having its principal place of business at _____, as PRINCIPAL;

and _____, a surety company, organized under the laws of the State of _____, and duly authorized to do business in the State of Florida, whose principal place of business is, as SURETY, are held and firmly bound unto the STATE OF FLORIDA, (Agency), as OBLIGEE, in the amount of $_____ for the payment of which sum we, as Principal and Surety, bind ourselves, our heirs, personal representatives, successors and assigns, jointly and severally.

THIS BOND is issued under the provisions of Section 287.042(2)(c), Florida Statutes. The above-named Principal has initiated an administrative protest regarding the Obligee's decision or intended decision pertaining to (mark one) [ ] Bid Number _____ [ ] an agency's request for approval of an exceptional purchase of _____ submitted by _____. Said protest is conditioned upon the posting of a bond at the time of filing the formal written protest.

NOW, THEREFORE, the condition of this Bond is that if the Principal, after the administrative hearing process and/or any appellate court proceedings regarding the protest, shall satisfy all costs and charges allowed by final order and/or judgment, and interest thereon, in the event the Obligee prevails, then the obligation shall be null and void; otherwise it shall remain in full force and effect.

The Obligee may bring an action in a court of competent jurisdiction on this bond for the amount of such liability, including all costs and attorneys' fees.

PRINCIPAL: _____

BY: _____

Title: _____ (CORPORATE SEAL)

ATTEST:_____

_____

SURETY: _____

BY: _____

Title: _____ (CORPORATE SEAL)

Florida Resident Agent: _____

(Note: Power of Attorney showing authority of Surety's agent or Attorney in Fact must be attached).

Bonds must be countersigned by a Florida resident agent. Section 287.042(2)(c), F.S., authorizes a cashier's check or money order in lieu of a bond, for procurements governed by Chapter 287, F.S.

(3) When a bond is required, a notice of decision or intended decision shall contain this statement: "Failure to file a protest within the time prescribed in Section 120.57(3), Florida Statutes, or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120, Florida Statutes." If the notice advises of the bond requirement but a bond or statutorily authorized alternate is not posted when required, the agency shall summarily dismiss the petition.

(4) If, at the conclusion of the proceeding and any appellate proceedings, the petitioner prevails, the agency shall return the bond, cashier's check or money order to the petitioner. If the agency prevails but the petitioner is not ordered to pay costs, the agency shall return the bond or alternate security to the petitioner. If the petitioner is ordered to pay costs, the agency shall return the bond or alternate security as provided by Sections 255.25(3)(c), 287.042(2)(c) or 337.11(5)(b), F.S. The entire bond may be forfeited if circumstances warrant under Section 337.11(5)(a), F.S.

Specific Authority 120.54(5)(a), (b) FS. Law Implemented 120.57(3), 624.425(1) FS. History–New 4-1-97, Joint Administrative Procedures

Committee Objection Filed – See FAW Vol. 24, No. 20, May 15, 1998.

Chapter 40E-0, F.A.C.
Exceptions to the
Uniform Rules of Procedure

Chapter 40E-0 Exceptions to the Uniform Rules of Procedure

This chapter contains rules for which the South Florida Water Management District has been granted specific exceptions to Title 28, F.A.C., Uniform Rules of Procedure. Each rule listed in this chapter is also listed within its corresponding, substantive rule chapter within Title 40E, F.A.C. The exceptions cover such matters as:

- considering emergency petitions,
- processing and considering permit applications,
- employing District resources in an emergency,
- authorizing regulated activities in an emergency before a permit can be issued,
- defining point of entry into certain proceedings, and
- establishing exceptions and variances for activities which might require one or more District permits.

Rules of the South Florida Water Management District

EXCEPTIONS TO THE UNIFORM RULES OF PROCEDURE Chapter 40E-0, F.A.C.

Amended June 26, 2002

Rules of the South Florida Water Management District

CHAPTER 40E-0 EXCEPTIONS TO THE UNIFORM RULES OF PROCEDURE

40E-0.101 Scope.

40E-0.102 Time for Consideration of Emergency Petition for Variance or Waiver.

40E-0.103 Procedures for Processing Permit Applications.

40E-0.105 Consideration of Intended Agency Decision on Permit Applications.

40E-0.107 Emergency Action.

40E-0.108 Emergency Authorization.

40E-0.109 Point of Entry Into Proceedings and Mediation.

40E-0.111 Exceptions and Variances for Well Construction Permits.

40E-0.113 Variances from Specified Review Criteria for Environmental Resource Permits.

40E-0.115 Variances from Water Use Restrictions.

40E-0.101 Scope.

This chapter contains rules for which the South Florida Water Management District has been granted specific exceptions to Title 28, F.A.C, Uniform Rules of Procedure, by the Administration Commission pursuant to Section 120.54(5), F.S. Each rule listed in this chapter is also listed within its corresponding, substantive rule chapter within Title 40E, F.A.C.

Specific Authority 120.54(5) F.S. Law Implemented 120.54(5) History—New 7-2-98.

40E-0.102 Time for Consideration of Emergency Petition for Variance or Waiver.

Notwithstanding Rule 28-104.005, F.A.C., when a petition for an emergency variance or waiver requires action by the Governing Board, the Board shall grant or deny a petition for emergency variance or waiver within 30 days of its receipt or at the next regularly scheduled meeting for which notice may be properly given.

Specific Authority 120.54(5) F.S. Law Implemented 120.54(5) F.S. History—New 7-2-98.

40E-0.103 Procedures for Processing Permit Applications.

(1) In implementing the requirements in Rule 28-107.002, F.A.C., the following procedures apply to permit application review:

(a) Within 30 days of receipt of an application or notice of intent, the District shall review the application to determine whether all information needed to evaluate the application has been submitted. The District shall notify the applicant of the date on which the application is declared complete.

(b) If the District determines that the application is incomplete, the District shall request the information needed to complete the application within 30 days of its receipt. For individual permits and standard general permits, the applicant shall have 90 days from receipt of a timely request for additional information to submit that information to the District.

(c) The District may request information needed to clarify any additional information submitted by the applicant, or to answer new questions raised by or related to the additional information within 30 days of its receipt. The applicant shall have 30 days from receipt of such a request in which to provide the necessary information. If the application is still incomplete after such information is submitted, the District shall notify the applicant within 30 days. The applicant shall have an additional 30 days to complete the application.

(d) Failure of an applicant to provide the timely requested information within these timeframes shall be considered grounds for denial of the application. Denial of an application for lack of completeness is without prejudice to the applicant's right to file a new application on the same subject matter. The District shall grant an extension upon a showing of a good faith effort by the applicant to comply with the timelines set forth herein. Unless an extension of time has been granted by the District, any application which remains incomplete 240 days after the original submittal date of an individual permit application or 90 days after the original submittal date of a notice of intent for general permit, shall be denied without prejudice.

(e) If the applicant submits information, either in response to or independent of a request by the District, which incorporates or results in a substantial modification in the proposed activity for which the applicant seeks a permit, the application will be considered an amended application. For purposes of this subsection, the term "substantial modification" shall mean a modification reasonably expected to result in water resource or environmental impacts which differ from those expected from the original application and require detailed review. Review timelines of the permit application or notice of intent will be reinitiated under this section.

(2) Upon a determination by the District that the activity requested in the notice of intent for any general permit requires an individual permit, the notice of intent shall be processed as an application for an individual permit, unless the permit applicant withdraws the application. If the application is processed as an individual permit, the permit applicant will be required to submit payment equal to the difference between the applicable fee for the individual permit and the fee previously submitted.

(3)(a) Agency action on individual permits and conceptual approvals shall occur within 90 days of receipt of a complete application, including receipt of all requested information and correction of any error or omission of which the applicant was timely notified.

(b) An authorization to proceed for standard general permits in Chapter 40E-20 shall occur within 60 days of receipt of a complete notice of intent, including receipt of all requested information and correction of any error or omission of which the applicant was timely notified.

(c) Agency action on a standard general permit application in Chapter 40E-40 shall occur within 60 days of receipt of a complete application, including receipt of all requested information and correction of any error or omission of which the applicant was timely notified.

(d) An authorization to proceed for general permits in Chapter 40E-30 shall be issued within 30 days of receipt of a complete notice of intent, including receipt of all requested information and correction of any error or omission of which the applicant was timely notified.

(e) Noticed general permits under Chapter 40E-400 may be utilized by the applicant 30 days after the District receives the notice of intent, unless a notice that the project does not qualify for the noticed general permit is mailed by the District within 30 days, in accordance with Rule 40E-400.211. If notice that the proposed project does not qualify for the noticed general permit is mailed by the District to the applicant, the review process under subsection (1) shall be initiated or the applicant shall be required to apply for the appropriate permit if the requested activity is not covered by the noticed general permit rule.

Specific Authority 120.54(5), 120.60 F.S. Law Implemented 120.54(5), 120.60 F.S. History—New 7-2-98, Amended 6/12/00.

40E-0.105 Consideration of Intended Agency Decision on Permit Applications.

(1) After the application for a permit is declared by staff to be complete, if a governing board hearing on the permit application is required, the District shall prepare a Staff Review Summary, which shall contain its recommendations regarding the subject application and which shall constitute intended agency decision. A notice of intended agency decision together with the Staff Review Summary shall be furnished to the applicant and any persons requesting the same pursuant to Rule 40E-1.6058, F.A.C., as applicable. The notice shall state the District Staff's recommendation that the Governing Board approve, deny, or approve with conditions the permit application and the reasons therefore.

(2) The Governing Board shall consider the application for a conceptual approval, individual environmental resource, individual surface water management, or individual water use permit application at its next available regularly scheduled regulatory meeting following the mailing of notice of intended agency decision, unless an administrative hearing is requested and granted pursuant to Section 120.569, F.S.

(3) In no case shall agency action be taken later than 90 days after the application for a conceptual approval, individual environmental resource permit, or individual water use permit is declared complete unless waived by the applicant or stayed by the filing of a petition for an administrative hearing. The permit applicant may voluntarily waive the timeline for governing board action on the permit application in Section 120.60, F.S., in order to resolve any outstanding issues, including third party objections, regarding the project.

(4) Because the Governing Board may take a final agency action which materially differs from the noticed intended agency action, applicants and other interested persons should be prepared to defend their position regarding the permit application when it is considered by the Governing Board. If the Governing Board takes final agency action which materially differs from the intended agency decision, the District shall mail a notice of the final agency action to all persons who were notified of the intended agency decision.

Specific Authority 120.54(5), 120.60 F.S. Law Implemented 120.54(5), 120.60 F.S. History—New 7-2-98, Amended 6/12/00.

40E-0.107 Emergency Action.

(1) An emergency exists when immediate action is necessary to protect public health, safety or welfare; the health of animals, fish or aquatic life; the works of the District; a public water supply, or recreational, commercial, industrial, agricultural or other reasonable uses of land and water resources.

(2) The Executive Director may employ the resources of the District to take whatever remedial action necessary to alleviate the emergency condition without the issuance of an emergency order, or in the event an emergency order has been issued, after the expiration of the requisite time for compliance with that order. (3) The procedures under this rule are provided in addition to the procedures set forth in Rule 28-107.005, F.A.C.

Specific Authority 120.54(5), 120.60, 373.439 F.S. Law Implemented 120.54(5), 120.60, 373.439 F.S. History—New 7-2-98.

40E-0.108 Emergency Authorization.

(1) Permission to initiate activities regulated under Chapter 373, F.S., prior to the issuance of a permit or authorization of use may be applied for, in writing, when emergency conditions justify. However, no such permission shall be granted unless the proposed use is already under consideration for a permit under District rules. Mere carelessness or lack of planning on the part of the applicant shall not be sufficient grounds to warrant the granting of an emergency authorization.

(2) The Executive Director may grant an emergency authorization pursuant to section 373.119(2), F.S. The emergency authorization shall be presented to the Governing Board for concurrence at its next regularly scheduled meeting. Failure to receive the Governing Board's concurrence shall automatically invalidate the emergency authorization.

Specific Authority 120.54(5), 120.60, 373.439 F.S. Law Implemented 120.54(5), 120.60, 373.439 F.S. History—New 7-2-98, Amended 6/12/00.

40E-0.109 Point of Entry Into Proceedings and Mediation. Point of entry into proceedings determining substantial interests are governed by Rule 28-106.111, F.A.C., and this section.

(1)(a) "Receipt of written notice of agency decision" as set forth in Rule 28-106.111, F.A.C., means receipt of either written notice through mail or posting that the District has or intends to take final agency action, or publication of notice that the District has or intends to take final agency action.

(b) If notice is published pursuant to this chapter, publication shall constitute constructive notice to all persons. Until notice is published, the point of entry to request a formal or informal administrative proceeding shall remain open unless actual notice is received.

(2) If the Board takes action which substantially differs from the notice of intended agency decision, the applicant or persons who may be substantially affected shall have an additional point of entry pursuant to Section 28-106.111, F.A.C., unless otherwise provided by law. The Board action is considered to substantially differ from the notice of intended agency decision when the potential impact on water resources has changed.

(3) Notwithstanding Rule 28-106.111, intended agency decisions or agency decisions regarding consolidated applications for Environmental Resource Permits and Use of Sovereign Submerged Lands pursuant to Section 373.427, F.S., shall provide a 14 day point of entry to file petitions for administrative hearing under Rule 28-106.111, F.A.C.

Specific Authority 120.54(5), 120.60 F.S. Law Implemented 120.54(5), 120.60 F.S. History—New 7-2-98, Amended 6/12/00.

40E-0.111 Exemptions and Variances for Well Construction Permits.

(1) The board finds that compliance with all the requirements of Part I of Chapter 40E-3 may result in an undue hardship for the construction, repair or abandonment of certain wells.

(2) Any affected person may request an exemption from any or all of these rules for an individual well by making written request which must include those specific requirements for which an exemption is requested, any alternate or substitute methods or conditions considered appropriate, and reasons why the exemption is considered necessary.

(3) The District shall grant the exemption by way of a variance if the proposal is in accordance with accepted public health and sanitary engineering principles and practices and will not adversely affect the water resource. The variance shall be the minimum necessary to ameliorate the hardship.

(4) If the request is for a variance from the requirement of obtaining a water use permit, the applicant must demonstrate that an application has been filed and a compelling

necessity exists to commence the construction, repair or modification of a well while an application for a water use permit is pending. Issuance of the variance will not be evidence of any entitlement to the water use permit.

(5) Upon issuance of a variance the District shall impose such special conditions as may be necessary to protect the intent and purpose of Part III, Chapter 373, Florida Statutes and this chapter.

(6) The variance under this rule is provided in addition to the variance and waiver procedures set forth in Rule 28-104, F.A.C., which implements Section 120.542, F.S.

Specific Authority 120.54(5), 373.044, 373.113, 373.171 F.S. Law Implemented 120.54(5), 373.303, 373.308, 373.313, 373.316, 373.326 F.S. History-New 9-2-98, Amended 6/12/00.

40E-0.113 Variances from Specified Review Criteria for Environmental Resource Permits.

(1) The Governing Board is authorized to grant a variance from the provisions of Section 373.414, F.S., subsection 40E-4.301(1)(e) or Rule 40E-4.302, F.A.C., pursuant to Section 403.201, F.S. The variance under this rule is provided in addition to the variance and waiver procedures set forth in Rule 28-104, F.A.C., which implements Section 120.542, F.S.

(2) A person seeking a variance must demonstrate that any hardship asserted as a basis of the need for a variance is peculiar to the affected property and not selfimposed and that the grant of a variance will be consistent with the general intent and purpose of this chapter.

(3) Any person seeking a variance shall file a petition for a variance that contains the following information:

(a) The petitioner's name and signature.

(b) The statute or rule from which the variance is sought.

(c) Facts showing that a variance should be granted for one of the reasons set forth in section 403.201, F.S.

(d) The time period for which the variance is sought, not to exceed the time

period permitted by law, including the reasons and facts supporting the time period.

(e) The requirements which the petitioner can meet including the date or time when the requirements will be met.

(f) The steps or measures the petitioner is taking to meet the requirement from which the variance is sought. If the request is pursuant to subsection 40E-4.311(1) above, the petitioner shall include a schedule when compliance will be achieved.

(g) The social, economic and environmental impacts on the applicant, residents of the area and of the state if the variance is granted.

(h) The social, economic and environmental impacts on the applicant, residents of the area and of the state if the variance is denied.

(4) The District shall review the application within a reasonable period of time after receipt to determine if the application is complete. If the application is determined to be incomplete, the applicant shall be afforded an opportunity to supply additional information before the District evaluates the merits of the request.

(5) The District shall grant or deny a petition for variance or waiver within 90 days after receipt of the original petition, the last item of timely requested additional material, or the petitioner's written request to finish processing the petition.

(6) The District shall prepare a notice of proposed agency action regarding the petition for a variance. The District shall publish this notice one time in the Florida Administrative Weekly, and one time in a newspaper of general circulation, as defined in Section 50.031, F.S., in the county in which the property for which the variance is sought is located.

(7) Renewals of variances shall be applied for in the same manner as the initial variance.

Specific Authority 373.044, 373.113, 373.171, 373.414(17) F.S. Law Implemented 403.201 F.S. History-New 9-2-98, Amended 6-12-00, 6-26-02.

40E-0.115 Variances from Water Use Restrictions.

(1) All users requesting relief from the provisions of Chapter 40E-21, F.A.C. shall file an application for variance but must conform to water use restrictions until the Executive Director grants a temporary variance or the Board grants the variance.

(2) Criteria for Issuance - No application for variance shall be granted unless the applicant provides reasonable assurances that the variance will not otherwise be harmful to the water resources of the District and affirmatively demonstrates that one or more of the following circumstances exists:

(a) The variance is essential to protect health or safety, or

(b) Compliance with the particular rule or order from which a variance is sought will require measures which, because of their extent or cost, cannot be accomplished within the anticipated duration of the shortage, or

(c) Alternative restrictions which achieve the same level of demand reduction as the restrictions from which a variance is sought are available and are binding and enforceable, or

(d) The applicant is a public or private utility that demonstrates that special circumstances exist which necessitate the issuance of a variance, or

(e) The applicant's source of water includes an approved aquifer storage and recovery installation or a water reclamation project.

(3) Limiting Conditions - Variances granted shall be subject to the following conditions:

(a) The variance granted shall be the minimum necessary to alleviate the circumstance for which the variance was requested under subsection (2).

(b) All variances shall expire upon a declaration by the Board that a water shortage no longer exists or when a more restrictive water shortage declaration is made, unless the Board specifies that the variance shall be in effect for a longer period of time, provided however that variance conditions which require the applicant to modify water use facilities shall remain in full force and effect until such modifications have been completed. However, when a new application for variance is filed within seven working days of the effective date of a more restrictive water shortage declaration, the existing variance shall remain in effect until final agency action on the application.

(c) Variances granted under paragraph (2)(b) may prescribe a timetable for compliance with the restrictions from which a variance was sought.

(4) Applications for Variance - The application shall contain the following:

(a) the applicant's name, address, telephone number and location of the property for which relief is requested.

(b) the specific rule, order, water shortage phase or restriction from which the applicant is requesting relief,

(c) a detailed statement of the facts which the applicant believes demonstrate that the request qualifies for a variance under subsection (2), including reports by qualified technical experts,

(d) a description of the relief desired,

(e) the period of time for which the variance is sought, including the reasons and facts in support thereof,

(f) the damage or harm resulting or which may result to the applicant from compliance with the rule or order,

(g) if the variance is sought under paragraph (2)(b), information identifying the restrictions which currently can be met, a description of the measures which would be necessary to meet all restrictions and the date when these measures could be completed,

(h) if the applicant is the owner or operator of a golf course whose need for a variance arises from the operational inability of its irrigation system or works to meet the front

nine-back nine requirement in 40E-21, Part V, the applicant shall submit a map showing the proposed alternative division of the course in-half and an explanation of the applicant's proposed irrigation scheme,

(i) For applications for variance from restrictions on irrigation, a general description of the irrigation system, including pump or water system output and irrigated area, and

(j) any other information, the applicant believes is material.

(5) Procedures

(a) Within ten working days after receipt of a complete application for variance, which contains the information listed in subsection 40E-21.275(4), the staff shall recommend to the Executive Director whether the application complies with the provisions of subsections (2) through (4). The recommendation shall be in writing and shall constitute proposed agency action. The District shall set forth in writing the grounds or basis for denial of the variance and inform the applicant of the right to a hearing on the denial of the application by filing a petition. A copy of the recommendation shall be forwarded to the applicant. Any petition for hearing on an application for variance shall be considered a petition for informal proceedings in accordance with section 40E-1.571(2).

(b) The Executive Director or his designee shall review the application and the staff recommendation. Applications which do not require immediate action or which do not comply with the provisions of subsections (2) through (4) may be deferred for Board action. Applications which require immediate action and which comply with the provisions of subsections (2) through (4) may be temporarily granted by the Executive Director or his designee. Temporary variances granted by the Executive Director or his designee shall be presented to the Board for concurrence, rejection or modification.

(c) The Board shall consider all deferred applications as well as those temporarily granted by the Executive Director or his designee, at its next regularly scheduled meeting. The Board may grant, or deny the deferred applications and may concur in, reject or modify those variances temporarily granted by the Executive Director or his designee. All Board action denying applications for variances shall be by written order and copies shall be furnished to the applicant and the appropriate law enforcement officials. An applicant whose variance has been granted shall be furnished an appropriate notice of water shortage variance and any attachments which shall be prominently displayed at the applicant's place of use.

(d) The Board may revoke or modify a variance when it determines that the continued utilization of the variance is inconsistent with the objectives of the District.

(6) The variance under this rule is provided in addition to the variance and waiver procedures set forth in Rule 28-104, F.A.C., which implements Section 120.542, F.S.

Specific Authority 120.54(5), 373.044, 373.113 F.S. Law Implemented 120.54(5), 373.175, 373.246 F.S. History—New 9-2-98, Amended 6/12/00.

Chapter 40E-1, F.A.C.
General and Procedural

Chapter 40E-1 General and Procedural

[Note: The text on this page and the next provides a brief overview of the provisions of part of Chapter 40E-1, Florida Administrative Code (F.A.C.). The overview text is intended only to provide a basic understanding of the Chapter, and should not be used in place of the duly-adopted rule language or in a manner which is inconsistent with Chapter 40E-1, F.A.C.]

This Chapter provides information about the District's permitting, and compliance and enforcement.

While there are many instances where each of the above subjects affects environmental resource permitting, the remaining discussion of Chapter 40E-1 will emphasize the matters which relate to environmental resource permits which are located in "Part VI Permits".

An **individual or general environmental resource permit**, or (for certain grandfathered activities) an individual or general surface water management permit or a wetland resource permit, must be obtained prior to constructing, altering, operating, maintaining, repairing, or abandoning any surface water management system, dam, impoundment, reservoir, and appurtenant works involving dredging and filling; and prior to establishing and operating a mitigation bank. A **conceptual environmental resource permit** (which does not authorize construction or operation) may be obtained for proposed surface water management systems or mitigation banks. The District is authorized to issue permits for other activities, listed in Section 40E-1.602.

Applicants for Environmental Resource Permits shall file their applications at the appropriate District Service Center: for the counties of Broward, Highlands, Martin, Miami-Dade, Monroe, Okeechobee, Palm Beach and St. Lucie - at the West Palm Beach Service Center; for the counties of Charlotte, Collier, Glades, Hendry and Lee - at the Fort Myers Service Center; for the counties of Orange, Osceola, and Polk - the Orlando Service Center.

Applications shall be filed using the appropriate form, accompanied by the correct fee and all required information. A permit application will not be deemed complete until the correct number of copies and sufficient responses to all requests for additional information are submitted.

The District has 30 days to determine whether all information necessary both to evaluate the application and to make the application complete has been received. The District shall notify the applicant as to when the application is complete.

If the District notifies the applicant that the application is incomplete, the applicant has 90 days in which to respond. Failure to respond in a timely manner may lead to District denial without prejudice of the application. Chapter 40E-1 contains descriptions of numerous situations which involve the input of other agencies and the activities affecting state-owned lands. Processes, other than denial, for dealing with an incomplete application are set forth.

There are procedures for notifying persons who have so requested, about applications received. The receipt of an application for an individual environmental resource permit shall be advertised by the District in a general circulation newspaper within 45 days of receipt.

Once the application is complete, a staff review summary ["staff report"] will be prepared and will include staff recommendations, including whether to approve, deny, or approve with conditions. Copies of the summary will be provided to the applicant and others who have so requested. The Chapter includes definitions of those situations in which notice of proposed District action on an application will be published by the District, or those when the District may require the applicant to publish such a notice in a general circulation newspaper.

Conceptual approval and individual permits shall be acted upon by the Governing Board no later than 90 days after the application is complete. Standard general permits shall be acted upon no later than 60 days after completeness. Processes for waiving the time frames and appealing a proposed or final District action have been established.

The District assesses permit application processing fees to defray the required costs of evaluating, processing, advertising and mailing. Fees are non-refundable unless the proposed activity is found to be exempt or the amount is incorrect. Failure to pay the prescribed fee shall be grounds for application denial. (Certain counties and municipalities may request a fee waiver. See Section 218.075, Florida Statutes.)

Processes for denying, suspending, revoking, modifying, renewing, and transferring permits are set forth. Forms which are used in connection with the Environmental Resource Permit process are listed, as are the addresses of all District Service Centers at which copies of the forms are kept. There is no charge for any of the forms.

Rules of the South Florida Water Management District

GENERAL AND PROCEDURAL
Chapter 40E-1, F.A.C.

Amended September 16, 2003

January 2004

Source Documents Editor's Notes

Chapter 40E-1, F.A.C.

Section 40E-1.701 was repealed effective October 3, 1995.

CHAPTER 40E-1 GENERAL AND PROCEDURAL (Formerly 16CA-1; 16K-1)

40E-1.001 Policy, Objectives and Implementation Dates. (Repealed)
40E-1.002 Scope of Jurisdictions. (Repealed)
40E-1.003 Powers and Duties. (Repealed)
40E-1.004 Appropriation of Funds. (Repealed)
40E-1.005 Definitions. (Repealed)
40E-1.006 Permits Required. (Repealed)
40E-1.0061 Bond. (Repealed)
40E-1.0062 Reapplying With Permits. (Repealed)
40E-1.007 Power to Enforce. (Repealed)
40E-1.008 General Permit Procedure. (Repealed)
40E-1.009 Filing of Citizen Objection or Complaints. (Repealed)
40E-1.010 Administrative Enforcement Procedures. (Repealed)
40E-1.011 Quasi-Judicial Hearings Before the Board. (Repealed)
40E-1.0111 Parties to Proceedings. (Repealed)
40E-1.0112 Pleadings. (Repealed)
40E-1.0113 Witness Fees. (Repealed)
40E-1.012 Request for Hearing. (Repealed)
40E-1.013 Petitions for Declaratory Statements. (Repealed)
40E-1.014 Administrative Determination of Validity of Regulation. (Repealed)
40E-1.015 Procedure for Adoption of Rules. (Repealed)
40E-1.016 Description of Organization. (Repealed)
40E-1.017 Agenda and Scheduling of Meetings and Workshops. (Repealed)
40E-1.018 Procedures Under Consultants' Competitive Negotiations Act. (Repealed)
40E-1.090 Forms and Instructions. (Repealed)

PART I GENERAL
40E-1.100 Uniform Rules of Procedure and Statement of District Organization and Operation.
40E-1.101 General. (Repealed)
40E-1.102 Definitions. (Repealed)
40E-1.103 The District. (Repealed)
40E-1.104 The Governing Board. (Repealed)
40E-1.105 General Description of District Organization and Operations. (Repealed)
40E-1.106 Post-Employment Restrictions.
40E-1.1065 Misuse of Public Position.
40E-1.107 Basins Within the District. (Repealed)
40E-1.121 General Information Concerning the District. (Repealed)
40E-1.123 Statutory Chapters and Rules. (Repealed)
40E-1.125 Public Information and Inspection of Records.
40E-1.132 District Clerk and Official Reporter. (Repealed)
40E-1.133 Public Access. (Transferred to 40E-1.138)
40E-1.1335 Final Order Indexing. (Repealed)
40E-1.134 Final Orders Required to be Indexed. (Repealed)

40E-1.135 Listing of Final Orders. (Repealed)
40E-1.136 Numbering of Final Orders. (Repealed)
40E-1.137 Maintenance of Final Orders. (Repealed)
40E-1.138 Public Access. (Repealed)
40E-1.139 Complaints under the Americans with Disabilities Act.

PART II MEETINGS, HEARINGS AND WORKSHOPS
40E-1.200 Procedures for Agendas and Scheduling of Meetings and Workshops.
40E-1.201 Notice of Meeting or Workshop and Telecommunications. (Repealed)
40E-1.203 Agenda of Public Meetings and Workshops. (Repealed)
40E-1.207 Emergency Meetings. (Repealed)
40E-1.208 Procedures for Abstaining from Voting Conflicts of Interest.

PART III RULEMAKING PROCEEDINGS
40E-1.300 Rulemaking Procedures.
40E-1.301 Commencement of Proceedings. (Repealed)
40E-1.303 Notice of Proceeding and the Proposed Rules. (Repealed)
40E-1.307 Content of Notice. (Repealed)
40E-1.311 Petitions to Initiate Rulemaking Proceedings. (Repealed)
40E-1.313 District Action on Petitions to Initiate Rulemaking Proceedings. (Repealed)
40E-1.327 Rulemaking Materials. (Repealed)
40E-1.330 Rulemaking Proceedings - No Hearing. (Repealed)
40E-1.331 Rulemaking Proceedings - Hearing. (Repealed)
40E-1.335 Incorporation by Reference. (Repealed)
40E-1.337 Emergency Rule Adoption. (Repealed)

PART IV DECLARATORY STATEMENTS
40E-1.400 Procedures Regarding Declaratory Statements.
40E-1.401 General. (Repealed)
40E-1.405 Purpose and Use of Declaratory Statement. (Repealed)
40E-1.407 District Disposition. (Repealed)

PART V DECISIONS DETERMINING SUBSTANTIAL INTERESTS
Subpart A General Provisions
40E-1.500 Procedures for Proceedings which Determine Substantial Interests and Associated Mediation.
40E-1.501 Scope of Part V. (Repealed)
40E-1.503 Computation of Time. (Repealed)
40E-1.504 Parties. (Repealed)
40E-1.505 Appearances; Criteria for Authorized Representation. (Repealed)
40E-1.506 Consolidation. (Repealed)
40E-1.507 Joinder of Parties. (Repealed)
40E-1.508 Disqualification. (Repealed)
40E-1.509 Filing and Service of Papers. (Repealed)
40E-1.5095 Publication of Notice of Agency Decision or Intended Agency Decision.
40E-1.510 Complaints, District Investigations and Probable Cause Determinations. (Transferred to 40E-1.721)

40E-1.511 Point of Entry Into Proceedings.
40E-1.512 Other Applicable Procedural Rules. (Repealed)

Subpart B Formal Proceedings
40E-1.520 Procedures Concerning Formal Proceedings.
40E-1.521 Initiation of Formal Proceedings.
40E-1.522 Amendment of Petitions. (Repealed)
40E-1.523 Answer. (Repealed)
40E-1.524 Motions. (Repealed)
40E-1.525 Motions in Opposition to Petition. (Repealed)
40E-1.526 Prehearing Conferences. (Repealed)
40E-1.527 Intervention. (Repealed)
40E-1.528 Discovery. (Repealed)
40E-1.529 Notice of Hearing. (Repealed)
40E-1.530 Continuances. (Repealed)
40E-1.531 Dismissal and Default. (Repealed)
40E-1.541 Subpoenas. (Repealed)
40E-1.542 Witness Fees. (Repealed)
40E-1.543 Order of Presentation. (Repealed)
40E-1.544 Burden of Proof. (Repealed)
40E-1.545 Witnesses. (Repealed)
40E-1.546 Evidence. (Repealed)
40E-1.547 Recordation. (Repealed)
40E-1.548 Venue. (Repealed)
40E-1.561 Post-Hearing Memoranda. (Repealed)
40E-1.562 Recommended Order. (Repealed)
40E-1.564 Exceptions to Recommended Order.
40E-1.565 Final Order. (Repealed)

Subpart C Informal Proceedings
40E-1.570 Procedures Concerning Informal Proceedings.
40E-1.571 Informal Proceedings. (Repealed)
40E-1.572 Submission of Evidence. (Repealed)
40E-1.573 Final Order. (Repealed)

PART VI PERMITS
40E-1.601 General.
40E-1.6015 Delegation of Authority Pertaining to General Environmental Resource Permits, General Surface Water Management Permits and Associated Sovereign Submerged Lands Authorizations. (Transferred to 40E-40.061)
40E-1.602 Permits Required.
40E-1.6025 Permit Applications Processed by District Service Centers. (Repealed)
40E-1.603 Application Procedures for Conceptual Approval, Individual and General Permits.
40E-1.604 Bond.

40E-1.605 Complaints. (Repealed)
40E-1.6051 Application Procedures for Noticed General Environmental Resource Permits Pursuant to Chapter 40E-400, F.A.C. (Repealed)
40E-1.6058 Publication and Requests for Notification of Permit Applications or Notices of Intent.
40E-1.6059 Public Notice Requirements Concerning Receipt of Environmental Resource or Surface Water Management Permit Applications, and Proposed Agency Action. (Repealed)
40E-1.606 Application Procedures for General Water Use Permits. (Repealed)
40E-1.6062 Public Notice Requirements for Water Use Permit Applications and Proposed Agency Action. (Repealed)
40E-1.6065 Consideration of Intended Agency Decision on Permit Applications.
40E-1.607 Permit Application Processing Fees.
40E-1.608 Denial of Permits.
40E-1.609 Suspension, Revocation and Modification of Permits.
40E-1.610 Permit Renewal.
40E-1.6105 Notification of Transfer of Interest in Real Property.
40E-1.6107 Transfer of Environmental Resource, Surface Water Management, or Water Use Permit.
40E-1.611 Emergency Action.
40E-1.6115 Emergency Authorization.
40E-1.612 Administrative Enforcement Action. (Transferred to 40E-1.705)
40E-1.614 Orders of Corrective Action and Consent Agreements. (Transferred to 40E-1.711)
40E-1.615 Coordinated Agency Review Procedures for the Florida Keys Area of Critical State Concern.
40E-1.659 Forms and Instructions.

PART VII COMPLIANCE AND ENFORCEMENT
40E-1.701 Interagency Agreements.
40E-1.702 Environmental Resource, Surface Water Management Permit and Consumptive Use Enforcement Guidelines.
40E-1.705 Administrative Enforcement Action. (Repealed)
40E-1.711 Orders of Corrective Action and Consent Agreements.
40E-1.715 Civil Penalty Calculation.
40E-1.721 Complaints, District Investigations, Probable Cause Determinations and Notices of Violations.
40E-1.901 Forms and Instructions. (Transferred to 40E-1.659)

PART I GENERAL

40E-1.100 Uniform Rules of Procedure and Statement of District Organization and Operation.

(1) Procedures governing the District's proceedings under Chapter 120, F.S., including rulemaking, meetings and workshops, conducting proceedings by communications media technology, declaratory statements, decisions determining substantial interests, licensing, and variances and waivers, are contained in Title 28, F.A.C., Uniform Rules of Procedure. Exceptions to the Uniform Rules of Procedure were granted by the Administration Commission and are set forth in Chapter 40E-0, F.A.C. Each exception is also delineated within the appropriate substantive rules in Chapters 40E-1, 40E-3, 40E-4, and 40E-21, F.A.C.

(2) General information about the District is contained in the SFWMD "Statement of District Organization and Operation", a non-rule document published pursuant to Section 120.54(5), F.S., and Uniform Rules of Procedure Chapter 28-101, F.A.C. The Statement of District Organization and Operation provides information on the District's mission, statutory authority, delegation of authority and duties pursuant to Chapter 373, F.S.; governing board and internal organization and functions; public assistance programs and opportunities, identification of the agency clerk and the official reporter; and how to obtain District documents and publications, including district statutes, rules, and permit applications or authorizations; and document filing procedures.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5) FS. History–New 7-2-98.

40E-1.106 Post-Employment Restrictions.

(1) For a period of two years following separation of employment, or expiration of term of office, no former specified employee or official shall personally represent another person or entity for compensation before the District in connection with any matter where the person participated personally and substantially, within their last two years of employment or service on the board, and where the person has actual knowledge of the matter.

(2) Such representation is prohibited unless the Executive Director consents to such representation.

(3) This section shall apply to all specified employees hired after November 1, 1997; all employees promoted to a position which is included in the definition of specified employee after November 1, 1997; and all officials appointed after November 1, 1997.

(4) This section does not apply to former specified employees or officials working for another government agency.

(5) For the purposes of this rule, the following definitions shall apply:

(a) “Matter” shall include any judicial or other proceeding, application, request for ruling or other determination, contract, claim, controversy or investigation.

(b) “Official” shall mean any member of the Basin Board(s) or Governing Board of the South Florida Water Management District.

(c) “Represent” or “Representation” shall mean actual physical attendance on behalf of an individual or entity, for compensation, at a proceeding before the South Florida Water Management District or personal communications made with any officials, employees, or advisory board members of the South Florida Water Management District in their official capacity, on behalf of an individual or entity, including the filing of documents or the writing of letters on behalf of said individual or entity.

(d) “Specified employee” shall mean any management position within the Executive Council of the District.

Specific Authority 112.311, 112.313(13), 373.044 FS. Law Implemented 112.311, 112.313(13) FS. History–New 10-22-97.

40E-1.1065 Misuse of Public Position.

(1) No District public official, Advisory Board Member or employee shall initiate use of their official District title or District position to influence voters on pending issues unless the Governing Board has adopted an official position on the issue. District public officials, advisory board members and employees may provide factual information based upon District policies, databases, research or other District information sources upon request from the public, to support informing the public with accurate, current, relevant information.

(2) The Chairpersons of the Governing Board and Big Cypress Basin Board serve as elected spokespersons for these bodies and must use the privilege and trust placed in the chairperson position to promote the policies and adopted positions of the Governing Board and the Big Cypress Basin Board, and must not use the position of Chairperson to represent personal positions or interests.

(3) The preceding policies shall not infringe in any way upon the rights of District public officials, advisory board members or employees as responsible citizens to take a personal position on any issues outside of the direct bounds of their responsibilities as District public officials, advisory board members or employees of the District.

(4) Any District public official, advisory board member or employee may comply with this rule by including a disclaimer in any written or oral statements which could rea-

sonably be interpreted to influence voters. The disclaimer should disclose that the statements are not those of the District, but rather that they are statements of the person as a private citizen.

(5) For the purposes of this rule, the following definitions shall apply:

(a) “Advisory Board” shall mean any advisory board created and appointed by the South Florida Water Management District Governing Board or Basin Board whose sole or primary responsibility is to recommend action or give advice to the South Florida Water Management District Governing Board or Basin Board.

(b) “District public official” shall mean any member of the Basin Board(s) or Governing Board of the South Florida Water Management District.

Specific Authority 112.311, 112.313(6), 373.044 FS. Law Implemented 112.311, 112.313(6) FS. History–New 10-22-97.

40E-1.125 Public Information and Inspection of Records.

(1) For purposes of this section, “public records” are all records as defined in Chapters 119, 120, and 373, F.S. Unless exempt from public disclosure by law, District records can be inspected or copied either at the District’s West Palm Beach Headquarters office, located at 3301 Gun Club Road, West Palm Beach, FL 33406 or any other District office where such records are maintained, during the hours specified in Rule 40E-1.121, F.A.C.

(2) Requests for public records may be submitted to any District office or department, or to the District Public Records Coordinator in writing at P. O. Box 24680, West Palm Beach, FL 33416, or by telephone at (407) 686-8800. Requestors are encouraged to submit requests in writing to expedite accurate processing of their requests. Requests should be sufficiently detailed to identify the documents sought to be examined or copied. The District shall provide access to, and copies of, District records upon payment of fees prescribed by law. The District shall not be obligated to create or assemble a new record to accommodate any request for information.

(3) Standard legal or letter size copies of public records shall be furnished upon request for a fee of $0.15 per page or $0.20 for double-sided copies. The District shall waive the first five dollars ($5.00) of costs incurred for all requests for standard size copies. Unless otherwise stated herein, all other copies of public records, including records which require special medium, shall be furnished upon payment of the actual cost of duplication.

(4) When the nature or volume of records requested to be examined or copied requires extensive use of District clerical or supervisory personnel, or extensive use of

information technology resources, the District shall charge, in addition to the actual cost of duplication, a special service charge. The term “extensive use” shall mean a time period longer than 30 minutes required to locate the record, review the record for statutorily exempt information, and copy the requested material. This special service charge shall be based on the cost incurred for such extensive use of information technology resources or the labor most of the personnel providing the service that is actually incurred by the District or attributable to the District for the clerical or supervisory assistance required, or both. These charges shall not apply to the first 30 minutes of service provided. Information technology resources shall mean data processing hardware and software services, supplies, personnel, facility resources, maintenance and training. Prior to the assessment of any special services charge, the District shall notify the Requestor that the information does not appear to be readily identifiable, possibly does not exist or will require additional time to review and copy. Upon agreement by the Requestor and payment of estimated charges, if any, the District will proceed to complete the request pursuant to section (5) herein.

(5) The District shall determine which District personnel is appropriate to provide assistance in fulfilling a request. The requestor shall be required to pay any estimated special service charges, as determined by the District, prior to District personnel rendering such services. Payment for special services shall also be imposed where extensive use of District personnel or information technology is necessary to determine whether the public record exists or is exempt from public disclosure, including instances where such investigation reveals that the record either does not exist or is exempt from disclosure. The District will refund to the requestor any monies deposited with the District in excess of the actual costs incurred to fulfill a request, or, in the alternative, the requestor shall be required to remit additional monies to pay for any costs in excess of the monies deposited with the District. In the event the requestor fails to remit additional monies to cover costs in excess of the monies deposited by the requestor, the District may withhold releasing any public records produced pursuant to that request until those amounts are paid in full.

(6) All rules, forms and instructions used by the District in dealing with the public are available without cost. Rules relating to personnel matters may be obtained by contacting the District’s Human Resources Division at the District’s West Palm Beach Headquarters office and are also available without cost.

(7) The District may provide remote electronic access to public records determined by the District to be of interest to the general public. If remote electronic access is provided to the public, such service shall be performed pursuant to a contract with users and shall be provided free of charge.

(8) Copies of District records produced solely for general distribution may be furnished at no cost to the public; provided, however, that pre-printed copies of such records are available.

(9) Requests for District public records shall be provided to governmental and educational institutions at no cost.

Specific Authority 119.01, 119.085, 120.53, 282.303(1), 286.011, 373.044, 373.113 FS. Law Implemented 119.01, 119.07, 119.021, 119.085, 120.53, 286.011, 373.044, 373.113 FS. History–New 9-3-81, Formerly 16K-1.16(4), (7), Amended 5-11-93, 9-19-95.

40E-1.139 Complaints under the Americans with Disabilities Act.

(1) It is the policy of the District to provide an equal opportunity for access to District services, programs, activities, and facilities which are held open to the public by handicapped and disabled persons in keeping with Title III of the Americans With Disabilities Act of 1990, 42 USC 12101, et seq., and the regulations which implement the Act, 28 CFR 35.

(2) Interested persons may obtain information concerning handicapped and disabled accessibility to the District's services, activities, programs, and facilities which are held open to the public by contacting the facilities manager.

(3) Any affected person may file a complaint alleging discrimination on the basis of handicapped or disabled inaccessibility of District services programs, activities and facilities which are held open to the public.

(a) Complaints shall be filed with the facilities manager and shall specify to the best of the complainant's knowledge, the location and nature of the conduct or circumstances complained of;

(b) The complaint must be signed by the complainant or authorized representative and contain an address or telephone number where the complainant can be reached;

(c) The District shall promptly investigate the complaint and may require the complainant to furnish any additional information reasonably necessary to aid investigating the complaint;

(d) The District shall promptly provide to the Complainant a written decision which documents why the decision is consistent with the provisions of the Americans With Disabilities Act and the regulations which implement the Act.

(4) The complaint procedure established by this subsection is intended to provide a prompt informal method of dispute resolution. Failure to file a complaint pursuant to this subsection will not preclude an affected person from following other remedies which may be available under state and federal law. A District decision regarding a complaint shall not be considered an agency action pursuant to Chapter 120, F.S.

Specific Authority 120.53(1), 373.044, 373.113 FS., 28 CFR 35.106, 35.107 Law Implemented 120.53, 286.26, 373.083 FS. CFR 35.106, 35.107 FS. History–New 5-11-93.

PART II MEETINGS, HEARINGS AND WORKSHOPS

40E-1.200 Procedures for Agendas and Scheduling of Meetings and Workshops.

The District's procedures for agendas and scheduling of meetings and workshops, including communications by media technology, are set forth in the Uniform Rules of Procedure, Chapters 28-102 and 28-109, F.A.C.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5) FS. History–New 7-2-98.

40E-1.208 Procedure for Abstaining from Voting Conflicts of Interest.

(1) No Board member shall vote in his or her official capacity upon any matter which:

(a) Would inure to the member's special private gain;

(b) The member knows would inure to the special private gain of any principal by whom the member is retained;

(c) The member knows would inure to the parent organization or subsidiary of a corporate principal by which the member is retained, other than an agency as defined in Section 112.312(2), F.S., or;

(d) The member knows would inure to the special private gain of a relative, as defined in Section 112.3143(1)(b), F.S., or business associates, as defined in Section 112.312(4), F.S., of the member.

(2) Prior to a vote being taken on a matter delineated in subsection (1), the member shall publicly state at the Board meeting the nature of the interest in the matter from which the member is abstaining from voting and this announcement shall appear in the minutes. The Secretary of the Board, in conjunction with Office of Counsel, shall prepare the appropriate memorandum of voting conflict as designated by the Florida Commission on Ethics which shall then be signed by the Board member, filed with the Board Secretary and incorporated into the minutes of the meeting with 15 days of the meeting.

(3) No member shall participate in any matter delineated in subsection (1), without first disclosing the nature of the member's interest in the matter as required by Section 112.3143(4), F.S. For purposes of this subsection, the term "participate" means any attempt to influence the decision by oral or written communication, whether made by the member or at the member's direction.

Specific Authority 112.3143, 120.53(1), 373.044, 373.113 FS. Law Implemented 120.53, 373.079 FS. History–New 5-11-93.

PART III RULEMAKING PROCEEDINGS

40E-1.300 Rulemaking Procedures.

The District's procedures for rulemaking are set forth in Section 120.54, F.S., and Uniform Rules of Procedure, Chapter 28-103, F.A.C.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5) FS. History–New 7-2-98.

PART IV DECLARATORY STATEMENTS

40E-1.400 Procedures Regarding Declaratory Statements.

The District's procedures regarding declaratory statements issued pursuant to Section 120.565, F.S., are set forth in Uniform Rules of Procedure, Chapter 28-105, F.A.C.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5) FS. History–New 7-2-98.

PART V DECISIONS DETERMINING SUBSTANTIAL INTERESTS

Subpart A General Provisions

40E-1.500 Procedures for Proceedings which Determine Substantial Interests and Associated Mediation.

The District's implementing procedures, Sections 120.569 and 120.57, F.S., for proceedings determining substantial interests and associated mediation are set forth in Uniform Rules of Procedure Chapter 28-106, F.A.C., and District's exceptions thereto, are set forth in this part in Rule 40E-1.511, F.A.C. This part does not apply to District investigations or probable cause determinations preliminary to agency action.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5) FS. History–New 7-2-98.

40E-1.5095 Publication of Notice of Agency Decision or Intended Agency Decision.

In cases where a project is determined to be of heightened public concern, or where there is the likelihood of a request for an administrative hearing, where the proposed activity is potentially harmful to the water resources of the District or contrary to the overall objectives of Chapter 373, F.S., as outlined in Section 373.016, F.S., or if objection(s) to the application has been received, the District shall publish, or require the permit applicant to publish notice of agency decision or intended agency decision in the

Florida Administrative Weekly or newspapers of general circulation in the area affected by such decisions as required by Chapter 50, F.S., and shall post notice and mail copies of its notice to applicants and interested groups. Such publication may be used as evidence of constructive and sufficient notice.

Specific Authority 120.54(5), 373.413 FS. Law Implemented 120.54(5), 373.413 FS. History–New 7-2-98, Amended 6-12-00.

40E-1.511 Point of Entry Into Proceedings.

Procedures regarding point of entry into proceedings determining substantial interests and mediation are set forth in the Uniform Rules of Procedure Rule 28-106.111, F.A.C. The following exceptions are applied in combination with the applicable Uniform Rules of Procedure.

(1)(a) "Receipt of written notice of agency decision" as set forth in Rule 28-106.111, F.A.C., means receipt of either written notice through mail or posting that the District has or intends to take final agency action, or publication of notice that the District has or intends to take final agency action.

(b) If notice is published pursuant to this chapter, publication shall constitute constructive notice to all persons. Until notice is published, the point of entry to request a formal or informal administrative proceeding shall remain open unless actual notice is received.

(2) If the Board takes action which substantially differs from the notice of intended agency decision, the applicant or persons who may be substantially affected shall have an additional point of entry pursuant to Rule 28-106.111, F.A.C., unless otherwise provided by law. The Board action is considered to substantially differ from the notice of intended agency decision when the potential impact on water resources has changed.

(3) Notwithstanding the timeline in Rule 28-106.111, F.A.C., intended agency decisions or agency decisions regarding consolidated applications for Environmental Resource Permits and Use of Sovereign Submerged Lands pursuant to Section 373.427, F.S., shall provide a 14 day point of entry to file petitions for administrative hearing.

Specific Authority 120.53, 373.044, 373.113 FS. Law Implemented 120.53(1), 120.54(17), 120.57, 373.113 FS. History–New 9-3-81, Amended 7-26-87, 5-11-93, 10-3-95, 7-2-98, 6-12-00.

Subpart B Formal Proceedings

40E-1.520 Procedures Concerning Formal Proceedings.

Formal proceedings under Section 120.57(1), F.S., shall be conducted pursuant to Part II of Chapter 28-106, F.A.C.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5) FS. History–New 7-2-98.

40E-1.521 Initiation of Formal Proceedings.

Initiation of formal proceedings under Section 120.57(1), F.S., shall comply with the procedures in Rule 28-106.201, F.A.C.

Specific Authority 120.53, 373.044, 373.113 FS. Law Implemented 120.53(1), 120.57, 373.113 FS. History–New 9-3-81, Formerly 16K-1.09(1), 16K-1.112(1)-(3), 16K-1.12, Amended 5-11-93, 7-2-98, 6-12-00.

40E-1.564 Exceptions to Recommended Order.

The procedures for filing exceptions to findings of fact or conclusions of law in a recommended order, and for filing responses thereto, are contained in Rule 28-106.217, F.A.C.

Specific Authority 120.53, 373.044, 373.113 FS. Law Implemented 120.53(1), 120.57, 373.113 FS. History–New 9-3-81, Formerly 16K-1.11(10), Amended 5-11-93, 7-2-98, 6-12-00.

Subpart C Informal Proceedings

40E-1.570 Procedures Concerning Informal Proceedings.

Informal proceedings for determining substantial interests shall be initiated and conducted pursuant to Part III of Chapter 28-106, F.A.C.

Specific Authority 120.54(5) FS. Law Implemented 120.54(5) FS. History–New 7-2-98.

PART VI PERMITS

40E-1.601 General.

All District actions regarding the application for issuance, denial, modification, suspension, and revocation of permits shall be governed by Sections 120.569, 120.57, and 120.60, F.S., and the rules in Chapter 28-107, F.A.C., and this part.

Specific Authority 120.53, 373.044, 373.113 FS. Law Implemented 120.53(1), 120.57, 120.60, 373.085, 373.116, 373.119, 373.175, 373.229, 373.239, 373.243, 373.246, 373.413, 373.416, 373.429, 373.433, 373.436, 373.439 FS. History–New 9-3-81, Amended 5-11-93, 7-2-98.

40E-1.602 Permits Required.

Unless expressly exempt by statute or District rule, permits must be obtained from the District prior to commencement of the following activities:

(1) A water use individual or general permit pursuant to Chapter 40E-2 or 40E-20, F.A.C., must be obtained prior to use or withdrawal of water or dewatering activities;

(2) A water well construction permit pursuant to Chapter 40E-3, F.A.C., must be obtained prior to the construction, repair or abandonment of any well within the District;

(3) A water well contractor's license, pursuant to Chapter 40E-3, F.A.C., must be obtained by contractors engaged in the business of construction, repair, or abandonment of water wells.

(4) An individual or general environmental resource permit pursuant to Chapter 40E-4, 40E-40, or 40E-400, F.A.C., or, an individual or general surface water management or wetland resource permit grandfathered pursuant to Sections 373.414(11)-(16), F.S., must be obtained prior to:

(a) Construction, alteration, operation, maintenance, repair or abandonment of any surface water management system, dam, impoundment, reservoir, appurtenant work or works including dredging or filling as prescribed by District rule,

(b) Establishment and operation of a mitigation bank.

(5) A conceptual environmental resource permit may be obtained for proposed surface water management systems or mitigation banks. However, a conceptual permit does not authorize construction or operation. A conceptual mitigation bank permit can be utilized to estimate the legal and financial requirements for the mitigation bank, information required for evaluation of the mitigation bank permit application, and potential mitigation credits that would be awarded to the specific project proposal.

(6) A proprietary authorization pursuant to Chapters 253 and 258, F.S., is required and shall be reviewed by the District for all activities which require a permit under Chapter 40E-4, 40E-40, or 40E-400, F.A.C., or a permit under subsections 373.414(11)-(16), F.S., and which are located on submerged lands owned by the Board of Trustees of the Internal Improvement Trust Fund pursuant to Section 373.427, F.S., Chapter 18-21, F.A.C., and Rules 18-18.014 and 62-343.075, F.A.C.

(7) An artificial recharge permit pursuant to Chapter 40E-5, F.A.C., must be obtained prior to construction of any project involving artificial recharge or the intentional introduction of water into any underground formation;

(8) A Works or Lands of the District permit pursuant to Chapter 40E-6, F.A.C., must be obtained prior to connecting with, placing structures in or across, discharging into or making use of works of the District and any additional lands or real property interests owned by the District.

(9) A Use of Works of the District within the Lake Okeechobee Basin General or Individual Permit must be obtained pursuant to Chapter 40E-61, F.A.C., by any owner of a parcel of land within the Lake Okeechobee Basin.

(10) An Occupancy or Use of the C-18 Right of Way general or individual permit pursuant to Chapter 40E-62, F.A.C., must be obtained prior to constructing, planting, maintaining, pruning, mooring boats, and placing other items on, across, under, or upon District lands and works along the C-18 canal right of way.

(11) A Use of Works of the District within the Everglades general, individual or master permit pursuant to Chapter 40E-63, F.A.C., must be obtained by any owner of a parcel of land in the Everglades Agricultural Area.

Specific Authority 373.044, 373.113, 373.4135 FS. Law Implemented 120.53(1), 120.57, 120.60, 373.085, 373.106, Chapter 373 Parts II and IV FS. History–New 9-3-81, Formerly 16K-1.06, Amended 7-26-87, 5-11-93, 10-3-95, 4-1-96.

40E-1.603 Application Procedures for Conceptual Approval, Individual and General Permits.

(1) The following procedures for processing permit applications or notices of intent apply in addition to the requirements of Section 120.60, F.S., and Rule 28-107.002, F.A.C.

(a) Within 30 days of receipt of an application or notice of intent, the District shall review the application to determine whether all information needed to evaluate the application has been submitted. The District shall notify the applicant of the date on which the application is declared complete.

(b) If the District determines that the application is incomplete, the District shall request the information needed to complete the application within 30 days of its receipt. For individual permits and standard general permits, the applicant shall have 90 days from receipt of a timely request for additional information to submit that information to the District.

(c) The District may request information needed to clarify any additional information submitted by the applicant, or to answer new questions raised by or related to the additional information within 30 days of its receipt. The applicant shall have 30 days from receipt of such a request in which to provide the necessary information. If the application is still incomplete after such information

is submitted, the District shall notify the applicant within 30 days. The applicant shall have an additional 30 days to complete the application.

(d) Failure of an applicant to provide the timely requested information within these timeframes shall be considered grounds for denial of the application. Denial of an application for lack of completeness is without prejudice to the applicant's right to file a new application on the same subject matter. The District shall grant an extension upon a showing of a good faith effort by the applicant to comply with the timelines set forth herein. Unless an extension of time has been granted by the District, any application which remains incomplete 240 days after the original submittal date of an individual permit application or 90 days after the original submittal date of a notice of intent for general permit, shall be denied without prejudice.

(e) If the applicant submits information, either in response to or independent of a request by the District, which incorporates or results in a substantial modification in the proposed activity for which the applicant seeks a permit, the application will be considered an amended application. For purposes of this subsection, the term "substantial modification" shall mean a modification reasonably expected to result in water resource or environmental impacts which differ from those expected from the original application and require detailed review. Review timelines of the permit application or notice of intent will be reinitiated under this section.

(2) Upon a determination by the District that the activity requested in the notice of intent for any general permit requires an individual permit, the notice of intent shall be processed as an application for an individual permit, unless the permit applicant withdraws the application. If the application is processed as an individual permit, the permit applicant will be required to submit payment equal to the difference between the applicable fee for the individual permit and the fee previously submitted.

(3)(a) Agency action on individual permits and conceptual approvals shall occur within 90 days of receipt of a complete application, including receipt of all requested information and correction of any error or omission of which the applicant was timely notified.

(b) An authorization to proceed for standard general permits in Chapter 40E-20, F.A.C., shall occur within 60 days of receipt of a complete notice of intent, including receipt of all requested information and correction of any error or omission of which the applicant was timely notified.

(c) Agency action on a standard general permit application in Chapter 40E-40, F.A.C., shall occur within 60 days of receipt of a complete application, including receipt of all requested information and correction of any error or omission of which the applicant was timely notified.

(d) An authorization to proceed for general permits in Chapter 40E-30, F.A.C., shall be issued within 30 days of receipt of a complete notice of intent, including receipt of all requested information and correction of any error or omission of which the applicant was timely notified.

(e) Noticed general permits under Chapter 40E-400, F.A.C., may be utilized by the applicant 30 days after the District receives the notice of intent, unless a notice that the project does not qualify for the noticed general permit is mailed by the District within 30 days, in accordance with Rule 40E-400.211, F.A.C. If notice that the proposed project does not qualify for the noticed general permit is mailed by the District to the applicant, the review process under subsection (1) shall be initiated or the applicant shall be required to apply for the appropriate permit if the requested activity is not covered by the noticed general permit rule.

Specific Authority 120.53(1), 373.044, 373.113 FS. Law Implemented 120.60, 373.107, 373.109, 373.116, 373.229, 373.417, 373.421, 373.422 FS. History–New 9-3-81, Formerly 16K-1.08(1)-(8), Amended 7-1-86, 7-26-87, 11-21-89, 5-11-93, 10-3-95, 4-1-96, 7-2-98, 6-12-00.

40E-1.604 Bond.

(1) The Board may require the applicant for a permit to furnish a bond made payable to the District and its successors, with a reputable bonding corporation authorized to do business in this State as surety, conditioned upon full compliance with terms of the permit, including the proper construction, operation, and maintenance of the facility. The amount of the bond shall be determined by the Board.

(2) The Board may require liability insurance in such amount as the Board may determine endorsed in favor of the District or a hold harmless agreement satisfactory to the Board, in lieu of a bond under subsection (1).

(3) The Board may require that the bond or liability insurance be maintained as a condition of the continued validity of the permit.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.085, 373.103, 373.219, 373.413, 373.416 FS. History–New 9-3-81, Formerly 16K-1.061.

40E-1.6058 Publication and Requests for Notification of Permit Applications or Notices of Intent.

(1) Written Notice of Receipt of Permit Application or Notice of Intent.

(a) Persons who wish to be notified in writing of any permit application or notice of intent which affects a designated geographic area shall notify the District in writing, and shall specify their area of interest by county. Requests must be renewed every 6 months. The District shall provide written notice of receipt of application or notice of intent to all persons who have filed in the preceding 6 months a written request for notification of any application or notice of intent affecting the designated geographic area in which the proposed activity is to occur.

(b) Notices of intent for general permits shall be posted in the District Service Center responsible for reviewing the notice of intent.

(2) Publication of Notice of Receipt of Permit Application or Notice of Intent.

(a) Within 45 days of receipt of an individual permit application, the District shall publish notice thereof in a newspaper having general circulation as defined in Chapter 50, F.S., in the county in which the activity will occur.

(b) Within 14 days of filing notice of intent to use a general permit or application for a standard general permit, persons qualifying for the use thereof are not required to, but may publish notice of such filing in a newspaper of general circulation, as defined in Chapter 50, F.S., in the area affected by the proposed project. Proof of publication shall be submitted to the district within 14 days of publication.

(c) Published Notice of Use for No Notice General Permits. Publication of notice of use of general permits for which no notice is required to be filed with the District may occur if desired by the permittee. The published notice must be published in a newspaper of general circulation, as defined in Chapter 50, F.S., in the area affected by the proposed project within 7 days of commencing work. If published, proof of publication must be submitted to the district within 14 days of publication.

(3) Interested persons shall have the opportunity to inspect a copy of the permit application at the appropriate District Service Center and submit written comments, which shall be considered by the District if received before the District issues proposed agency action concerning the application. Where appropriate, the District shall request that persons submitting comments furnish additional information reasonably necessary to ascertain the nature of the comments.

(4) Persons who wish to be advised of the proposed agency action regarding a particular permit application shall file a written request for further notice within 14 days of receipt of the notice of application.

(5) The governing board may charge a subscription fee for information requested in accordance with this section to any person who has filed a written request for notification of any pending applications, pursuant to Rule 40E-1.125, F.A.C.

Specific Authority 373.044, 373.113 FS. Law Implemented 120.53(1), 120.60(3) FS. History–New 10-3-95, Amended 7-2-98, 6-12-00.

40E-1.6065 Consideration of Intended Agency Decision on Permit Applications.

(1) After the application for a permit is declared by staff to be complete, if a governing board hearing on the permit application is required, the District shall prepare a Staff Review Summary, which shall contain its recommendations regarding the subject application and which shall constitute intended agency decision. A notice of intended agency decision together with the Staff Review Summary shall be furnished to the applicant and any persons requesting the same pursuant to Rules 40E-.6058, F.A.C., as applicable. The notice shall state the District Staff's recommendation that the Governing Board approve, deny, or approve with conditions the permit application and the reasons therefore.

(2) The Governing Board shall consider the application for a conceptual approval, individual environmental resource, individual surface water management, or individual water use permit application at its next available regularly scheduled regulatory meeting following the mailing of notice of intended agency decision, unless an administrative hearing is requested and granted pursuant to Section 120.569, F.S.

(3) In no case shall agency action be taken later than 90 days after the application for a conceptual approval, individual environmental resource permit, or individual water use permit is declared complete unless waived by the applicant or stayed by the filing of a petition for an administrative hearing. The permit applicant may voluntarily waive the timeline for governing action on the permit application in Section 120.60, F.S., in order to resolve any outstanding issues, including third party objections, regarding the project.

(4) Because the Governing Board may take a final agency action which materially differs from the noticed intended agency action, applicants and other interested persons should be prepared to defend their position regarding the permit application when it is considered by the Governing Board. If the Governing Board takes final agency action which materially differs from the intended agency decision, the District shall mail a notice of the final agency action to all persons who were notified of the intended agency decision.

Specific Authority 120.53(1), 373.044, 373.113 FS. Law Implemented 120.60, 373.107, 373.109, 373.116 FS. History–New 7-2-98, Amended 6-12-00.

40E-1.607 Permit Application Processing Fees.

A permit application processing fee is required and shall be paid to the District when certain applications are filed pursuant to District rules. An application shall not be considered complete until the appropriate application fee is submitted. These fees are assessed in order to defray the cost of evaluating, processing, monitoring, and inspecting for compliance required in connection with consideration of such applications. Fees are non-refundable in whole or part unless the activity for which an application is filed is determined by the District to be exempt or the fee submitted is determined by the District to be incorrect. Failure of any person to pay the applicable fees established herein will result in denial of an application. Activities that do not require a permit and are exempt pursuant to Rule 40E-2.051 or 40E-3.051, F.A.C., are not subject to the following permit application fees. The District's permit application processing fees are as follows:

(1) Water Use Permit Application processing fees are in the following table:

TABLE 40E-1.607(1)
PERMIT APPLICATION PROCESSING FEES FOR
WATER USE PERMIT APPLICATIONS
REVIEWED PURSUANT TO CHAPTERS 40E-2 AND 40E-20, F.A.C.

Fee amounts shall apply to applications for new permits, permit modifications, and permit renewals, except as noted.

Category	Amount
Individual Public Water Supply with a duration less than 20 years	
Maximum monthly allocation	
Greater than 15 million gallons per month (mgm) through 30 mgm	$2700
Greater than 30 mgm through 300 mgm	$5500
Greater than 300 mgm	$7000
Individual Public Water Supply with a duration of 20 years	
Maximum monthly allocation	
Greater than 15 million gallons per month (mgm) through 30 mgm	$4200
Greater than 30 mgm through 300 mgm	$8500
Greater than 300 mgm	$11500
Individual Irrigation with a duration less than 20 years	$1000

Individual Irrigation with a duration of 20 years
Maximum monthly allocation

Greater than 15 mgm through 30 mgm	$1600
Greater than 30 mgm through 300 mgm	$3400
Greater than 300 mgm	$5600

Individual Mining (Dewatering)
Maximum monthly allocation

Greater than 15 mgm through 30 mgm	$1800
Greater than 30 mgm through 300 mgm	$3250
Greater than 300 mgm	$4000

Individual Industrial with a duration less than 20 years
Maximum monthly allocation

Greater than 15 mgm through 30 mgm	$1400
Greater than 30 mgm through 300 mgm	$2750
Greater than 300 mgm	$3500

Individual Industrial with a duration of 20 years
Maximum monthly allocation

Greater than 15 mgm through 30 mgm	$2000
Greater than 30 mgm through 300 mgm	$3650
Greater than 300 mgm	$5600

Individual Diversion and Impoundment with a duration less than 20 years
Maximum monthly allocation

Greater than 15 mgm through 30 mgm	$1400
Greater than 30 mgm through 300 mgm	$2750
Greater than 300 mgm	$3500

Individual Diversion and Impoundment with a duration of 20 years
Maximum monthly allocation

Greater than 15 mgm through 30 mgm	$2000
Greater than 30 mgm through 300 mgm	$3950
Greater than 300 mgm	$6200

Independent Secondary User of a Diversion and Impoundment with a duration of 20 years
Maximum monthly allocation

Greater than 15 mgm through 30 mgm	$1000
Greater than 30 mgm through 300 mgm	$2000
Greater than 300 mgm	$3200

General Standard Water Use Permit Maximum Monthly Allocation	
Less than 3 million gallons per month (mgm) (Minor)	$ 350
Greater than 3 mgm through 15 mgm (Major)	$1000
Short-term Dewatering	$ 500
Aquifer Storage and Recovery: (cost added to the applicable use type listed above)	$1000
Permit Transfer to Another Entity Pursuant to Rules 40E-1.611 and 40E-2.351, F.A.C.	$ 300
Letter Modification to Individual Permit	no fee
Letter Modification to General Permit	no fee

(2) Water Well Construction Permit Application processing fees are in the following table:

TABLE 40E-1.607(2)
PERMIT APPLICATION PROCESSING FEES FOR
WATER WELL CONSTRUCTION PERMIT APPLICATIONS
REVIEWED PURSUANT TO CHAPTER 40E-3, F.A.C.

Category	Amount
Water Well Construction	$100
Water Well Abandonment	no fee

(3)(a) Environmental Resource Permit Application processing fees are in the following table:

TABLE 40E-1.607(3)(a)
PERMIT APPLICATION PROCESSING FEES FOR
ENVIRONMENTAL RESOURCE PERMIT APPLICATIONS
REVIEWED PURSUANT TO CHAPTERS 40E-4, 40E-40, AND 40E-400, F.A.C.

Fee amounts shall apply to applications for conceptual and construction, or conceptual, or construction, except as noted.

Category	Amount
New Individual Permit, except Mitigation Bank	
Project area less than 100 acres	
Agriculture	$ 3050
All others	$ 5000
Project area 100 acres to less than 640 acres	
Agriculture	$ 4000
All others	$ 7500
Project area 640 acres or more	
Agriculture	$ 5000
All others	$10,000
New Individual Permit, Mitigation Bank	
Project area less than 100 acres	$ 5000
Project area 100 acres to less than 640 acres	$ 7500
Project area 640 acres or more	$10,000
Individual Permit Modification, except Mitigation Bank	
Project area less than 100 acres	
Agriculture	$ 2050
All others	$ 3500
Project area 100 acres to less than 640 acres	
Agriculture	$ 2500
All others	$ 5000
Project area 640 acres or more	
Agriculture	$ 3500
All others	$ 7500
Individual Permit Modification, Mitigation Bank	
Project area less than 100 acres	$ 3500
Project area 100 acres to less than 640 acres	$ 5000
Project area 640 acres or more	$ 7500
New Standard General Permit (excluding incidental site activities pursuant to Rule 40E-40.042, F.A.C.)	
Agriculture	$ 650
All others	$ 2000
Standard General Permit Modification including Application for phase construction under a Conceptual ApprovalApplication for individual permit modification for a system which does not exceed the criteria in Rule 40E-40.041, F.A.C. and which is not required to obtain an individual environmental resource permit for the reasons in subsection 40E-40.011(2), F.A.C.	

Agriculture	$ 500
All others	$ 1000
Noticed General Permit pursuant to Chapter 40E-400, F.A.C., including aquaculture	$ 100
Single family residential homesite consisting of 10 acres or less in total land area	$ 100
Standard General Permit for incidental site activities pursuant to Rule 40E-40.042, F.A.C.	$ 500
Transfer of permit (including Mitigation Bank) to another entity pursuant to Rules 40E-1.6107 and 40E-4.351, F.A.C.	$ 450
Variance associated with an environmental resource permit application From paragraph 40E-4.301(1)(e), F.A.C.	$ 100
From other permitting standards, permit conditions, or water quality standards	$ 500
New Individual Operation Permit	$ 3500
Letter Modification	$ 100
New Individual or Standard General Permits, or Individual or Standard General Permit Modifications, solely for environmental restoration or enhancement activities provided such activities are not associated with a mitigation bank and are not being implemented as mitigation for other activities that require a permit under Part IV of Chapter 373, F.S. Such activities may include incidental passive recreation and facilities to provide public access to the environmental restoration or enhancement site	$ 100

1. When used in Table paragraph 40E-1.607(3)(a), F.A.C., “Agriculture” shall be defined as set forth in Section 570.02, F.S.

2. For permit applications which involve a combination of fee categories, the highest fee that applies shall be charged.

3. Any individual permit application submitted concurrently with a conceptual approval application – where the individual permit application represents a phase of the conceptual approval application – is exempt from the above environmental resource permit fees.

4. For projects grandfathered pursuant to Section 373.414, F.S., the letter modification, conceptual approval, individual or general surface water management permit application fee shall be the same as listed in Table paragraph 40E-1.607(3)(a), F.A.C.

(b) Permit application processing fees for projects grandfathered pursuant to Section 373.414, F.S. wetland resource (dredge and fill) are in the following table:

TABLE 40E-1.607(3)(b)

PERMIT APPLICATION PROCESSING FEES FOR

PROJECTS GRANDFATHERED PURSUANT TO SECTION 373.414, F.S. WETLAND RESOURCE (DREDGE AND FILL) PERMIT APPLICATIONS REVIEWED PURSUANT TO CHAPTERS 40E-4, 40E-40, AND 40E-400, F.A.C.

Category	Amount
Construction projects up to and including 5 years	
Standard form projects including dredge and fill activities that affect 10 or more acres of jurisdictional area, pursuant to subsection 62-312.070(2), F.A.C. (1993)	$4000
Short form construction projects including dredging and filling activities that affect less than 10 acres of jurisdictional area, pursuant to subsection 62-312.070(2), F.A.C. (1993)	$ 500
Short form construction projects involving the construction of new docking or boardwalk facilities, pursuant to subsection 62-312.070(2), F.A.C. (1993), that provide:	
0-2 new boat slips	$ 300
3-9 new boat slips	$ 500
Dredge and fill construction permits in excess of 5 years	
Short form permits from 6 years up to and including 10 years	$3000
Standard form permit application processing fee for a construction period of 6 years shall be $6000 and shall increase by $1000 for each year beyond 6 years, up through and including 25 years and a corresponding fee of $25,000	
Variance associated with a wetland resource permit application	
From the prohibition of subsection 62-312.080(7), F.A.C.	$ 100

From other permitting standards, permit conditions, or water quality standards	$ 500
General Permits	$ 100

Minor modifications of permits that do not require substantial technical evaluation by the District, in conformance with subsections 62-4.050(6) and (7), F.A.C. (1993),do not require a new site inspection by the District, and will not lead to substantially different environmental impacts or will lessen the impacts of the original permit:

Transfer of permits or time extensions	$ 50
Minor technical changes	
Existing permit fee is less than $300, except for modification to permits issued pursuant to Section 403.816, F.S.	$ 50
Existing permit fee is equal to or more than $300	$ 250

1. For the purposes of determining the fee for wetland resource management permits, the term of duration for the permit shall be reduced by the period of time (in yearly increments) during which no dredging or filling activity occurs or no reclamation, restoration, or mitigation occurs and only minor monitoring and maintenance activities are required.The fee for the full term shall be submitted with the application. After the District determines the period of time that the term of the permit can be reduced, the excess fee shall be returned.

2. For permit applications which involve a combination of the project fee categories listed above, the highest fee that applies to the appropriate standard form or short form project, pursuant to Rule 62-312.070, F.A.C., shall be charged.

3. A single additional fee of $500 shall be required for projects in which monitoring and evaluation to determine the success of the mitigation will be required beyond the period of time to which the permit fee will ordinarily apply. If it is determined at the time of the permit application that monitoring and evaluation to determine the success of the mitigation will be required beyond the time period to which the permit fee will ordinarily apply, then this single additional fee shall be due when it is determined that this monitoring and evaluation is required.

(4) Application for proprietary authorization under Chapters 253 and 258, F.S., except consent of use authorizations, processing fees are in the following table:

TABLE 40E-1.607(4)
PERMIT APPLICATION PROCESSING FEES FOR
PROPRIETARY AUTHORIZATIONS UNDER
CHAPTERS 253 AND 258, F.S.,
EXCEPT CONSENT OF USE AUTHORIZATIONS

Category	Amount
Application	$ 200

(5) Petition for Formal Determination of Wetlands and Other Surface Waters processing fees are in the following table:

TABLE 40E-1.607(5)
DETERMINATION PETITION PROCESSING FEES FOR
FORMAL DETERMINATION OF WETLANDS AND
OTHER SURFACE WATERS

For the validation of informal, non-binding wetland determinations pursuant to Section 373.421(6), F.S., the fees shall be the same as formal determinations listed in Table subsection 40E-1.607(5), F.A.C.

Category	Amount
Property less than or equal to 1 acre	$ 250
Property greater than 1 acre but less than or equal to 10 acres	$ 550
Property greater than 10 acres but less than or equal to 40 acres	$ 750
Property greater than 40 acres but less than or equal to 120 acres	$1500
Property greater than 120 acres	$1500
Each additional 100 acres or portion thereof	$ 200
Renewal	$ 250

(6) Permit Processing Fee Waiver for Certain Local Governments.

Notwithstanding the provisions set forth above in this rule, the District shall waive permit processing fees for permit applications submitted by the governing body of a county with a population of less than 50,000, a municipality with a population of less than 25,000, a county or municipality not included within a metropolitan statistical area, or a third party under contract with such a county or municipality, provided:

(a) The project for which the fee waiver is sought serves a public purpose; and

(b) The governing body submits Form No. 889 certifying that the fee reduction is necessary due to an environmental need for a particular project or activity; or

(c) The governing body submits Certification of Waiver of Permit Application Processing Fee, Form No. 889, certifying that the permit processing fee is a fiscal hardship due to one of the following factors:

1. Per capita taxable value is less than the statewide average for the current fiscal year;

2. Percentage of assessed property value that is exempt from ad valorem taxation is higher than the statewide average for the current fiscal year;

3. Any condition specified in Section 218.503, F.S., that determines a state of financial emergency;

4. Ad valorem operating millage rate for the current year is greater than 8 mills; or

5. A financial condition is documented in annual statements at the end of the current fiscal year which indicates an inability to pay the permit processing fee during that fiscal year.

(7) PERMIT APPLICATION PROCESSING FEES FOR MODIFICATION OR TRANSFER OF ENVIRONMENTAL RESOURCE, SURFACE WATER MANAGEMENT OR WORKS OF THE DISTRICT PERMITS FOR PROPERTIES ACQUIRED BY THE DISTRICT PURSUANT TO THE FLORIDA FOREVER WORK PLAN OR SAVE OUR RIVERS LAND ACQUISITION AND MANAGEMENT PLAN

Modification of existing permits to reflect property ownership changes where no new works or modifications to an existing surface water management system is requested.	$ 0
Permit transfer pursuant to Rules 40E-1.6107 and 40E-4.351, F.A.C.	$ 0

Specific Authority 373.109 FS. Law Implemented 373.109, 373.421(6)(b), 403.201 FS. History–New 1-8-89, Amended 1-2-91, 11-15-92, 6-1-93, 1-23-94, 10-3-95, 4-1-96, 11-8-99, 5-24-00, 6-26-02, 7-11-02, 8-10-03, 8-14-03.

40E-1.608 Denial of Permits.

(1) Procedures concerning the District's denial of permit applications are contained in the Uniform Rules of Procedure, Rule 28-107.003, F.A.C.

(2) A recommendation for denial is based exclusively upon the specific proposal submitted by the applicant. Denial of permit is without prejudice to the applicant's right to file a modified proposal through a new application.

Specific Authority 373.044, 373.113 FS. Law Implemented 120.53(1), 120.57, 120.60 FS. History–New 9-3-81, Amended 10-3-95, 7-2-98, 6-12-00.

40E-1.609 Suspension, Revocation and Modification of Permits.

(1) Procedures concerning the District's suspension, revocation and modification of a permit are contained in the Uniform Rules of Procedure, Rule 28-107.004, F.A.C.

(2) The District may temporarily suspend or revoke a permit, in whole or in part, when it determines that the permittee or an agent of the permittee has:

(a) Submitted false or inaccurate information on an application or operational report;

(b) Violated Chapter 373, F.S., or portions of Chapter 403, F.S., for which authority has been delegated to the District, and the rules promulgated thereunder, or any other provision of Florida law related to the operations or regulations of the District;

(c) Failed to comply with an Administrative Order issued pursuant to Section 373.119, F.S.;

(d) Violated a condition of the permit;

(e) Failed to permit inspection of the subject property.

(3) The District may revoke a permit or modify its terms and conditions when it determines that such action is necessary to protect the public health, safety and welfare, prevent a public or private nuisance, or when the continued utilization of the permit becomes inconsistent with the objectives of the District. In such instances, due consideration shall be given to the extent to which the permittee has detrimentally relied upon the permit.

(4) The provisions of subsections (1) and (2) shall not preclude the District from exercising other enforcement remedies pursuant to Chapters 120, 373 and 403, F.S., when it determines such action is necessary and appropriate either in addition to or instead of suspension or revocation described above.

Specific Authority 120.53, 373.044, 373.113, 373.119, 373.129, 373.136 FS. Law Implemented 120.53(1)(b), (c), 120.60(2), 373.119, 373.239, 373.243, 373.429 FS. History–New 9-3-81, Amended 5-11-93, 10-3-95, 7-2-98, 6-12-00.

40E-1.610 Permit Renewal.

(1) Holders of renewable permits shall make timely application as required by Rule 40E-1.603, F.A.C., for renewal so as to avoid expiration during the renewal process. When timely application is made, the existing permit shall not expire until final agency action, or if the permit is denied or the terms limited, until the last day for seeking review of the District order or a later date fixed by order of the reviewing court.

(2) Application for a permit renewal is timely only if actually filed at the District prior to expiration of the existing permit. Mailing the application does not constitute filing.

Specific Authority 120.53(1), 373.044, 373.113 FS. Law Implemented 120.60, 373.219, 373.239, 373.323, 373.413 FS. History–New 5-11-93, Amended 6-12-00.

40E-1.6105 Notification of Transfer of Interest in Real Property.

Within 30 days of any transfer of interest or control of the real property at which any permitted facility, system, consumptive use, or activity is located, the permittee must notify the District, in writing, of the transfer giving the name and address of the new owner or person in control and providing a copy of the instrument effectuating the transfer. Notification of a transfer shall not constitute a permit transfer pursuant to Rule 40E-1.6107, F.A.C.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.083, 373.171, 373.309, 373.416, 373.426, 373.429, 373.436 FS. History–New 5-11-93.

40E-1.6107 Transfer of Environmental Resource, Surface Water Management, or Water Use Permit.

(1) To transfer an environmental resource, surface water management, or water use permit, the permittee, in addition to satisfying the applicable provisions in Rules 40E-2.351 and 40E-4.351, F.A.C., must provide information required in Rule 40E-1.6105, F.A.C., together with a written statement from the proposed transferee that it has reviewed the District permit and project design and will be bound by all terms and conditions of the permit, including all compliance requirements, for the duration of the permit.

(2) The District shall approve the transfer of a permit unless it determines that the proposed transferee cannot provide reasonable assurances that conditions of the permit will be met. The determination shall be limited solely to the ability of the new permittee to comply with the conditions of the existing permit, and it shall not concern the adequacy of those permit conditions.

(3) The District shall approve the transfer of the permit if the requirements in subsections (1) and (2) are met. If the District proposes to deny the transfer, it shall provide

both the permittee and the proposed transferee a written objection to such transfer together with the notice of right to request a Chapter 120, F.S., proceeding on such determination.

(4) Until transfer is approved by the District, the permittee shall be liable for compliance with the permit. The permittee transferring the permit shall remain liable for any corrective actions that are required as a result of any violations of the permit which occurred prior to the transfer of the permit.

Specific Authority 120.53(1), 373.044, 373.113 FS. Law Implemented 373.083, 373.171, 373.309, 373.416, 373.426, 373.429, 373.436 FS. History–New 5-11-93, Amended 10-3-95.

40E-1.611 Emergency Action.

The following applies to emergency actions, in addition to the procedures in Uniform Rules of Procedure Rule 28-107.005, F.A.C.

(1) An emergency exists when immediate action is necessary to protect public health, safety or welfare; the health of animals, fish or aquatic life; the works of the District; a public water supply, or recreational, commercial, industrial, agricultural or other reasonable uses of land and water resources.

(2) The Executive Director may employ the resources of the District to take whatever remedial action necessary to alleviate the emergency condition without the issuance of an emergency order, or in the event an emergency order has been issued, after the expiration of the requisite time for compliance with that order.

Specific Authority 120.54(5), 373.439 FS. Law Implemented 120.54(5), 373.439 FS. History–New 9-3-81, Amended 7-2-98.

40E-1.6115 Emergency Authorization.

(1) Permission to initiate activities regulated under Chapter 373, F.S., prior to the issuance of a permit or authorization of use may be applied for, in writing, when emergency conditions justify. However, no such permission shall be granted unless the proposed use is already under consideration for a permit under District rules. Mere carelessness or lack of planning on the part of the applicant shall not be sufficient grounds to warrant the granting of an emergency authorization.

(2) The Executive Director may grant an emergency authorization pursuant to Section 373.119(2), F.S. The emergency authorization shall be presented to the Governing Board for concurrence at its next regularly scheduled meeting. Failure to receive the

Governing Board's concurrence shall automatically invalidate the emergency authorization.

Specific Authority 120.54(5), 373.439 FS. Law Implemented 120.54(5), 373.439 FS. History–New 7-2-98, Amended 6-12-00.

40E-1.615 Coordinated Agency Review Procedures for the Florida Keys Area of Critical State Concern.

(1) This rule applies to applications for environmental resource, surface water management, and water use permits for projects located in the Florida Keys Area of Critical State Concern when the applicant has elected coordinated agency review under Section 380.051, F.S.

(2) The following coordinated agency review procedures apply to projects which are eligible for exemptions from District environmental resource and water use permitting requirements:

(a) No permit and no coordinated agency review participation by the District is required for the water uses exempted by Rule 40E-2.051 (Exemptions), F.A.C.

(b) No permit and no coordinated agency review participation by the District is required for surface water management activities which are exempted by Rule 40E-4.051 (Exemptions), F.A.C.

(3) The following coordinated agency review procedures apply to projects which require permits pursuant to Chapters 40E-2 or 40E-20 (Consumptive Use) and 40E-4 or 40E-40, (Environmental Resource), F.A.C.:

(a) The Coordinated Review Application shall consist of the application information required by Rules 40E-1.603 or 40E-1.606, F.A.C., and Rules 40E-2.101 (Content of Application) or 40E-4.101 (Content of Application), F.A.C.

(b) The District's Coordinated Review process begins when the District receives the Coordinated Review Application from the Permit Coordinator as required by subsection 9J-19.006(3) (Initiation of Coordinated Review), F.A.C.

(c) The District's Coordinated Review process follows the permit review procedures set forth in Rule 40E-1.603, F.A.C. (Application Procedures for Conceptual Approval, Individual and Standard General Environmental Resource Permits, Individual and General Surface Water Management Permits, and Individual Water Use Permits).

(d) If the applicant waives the time limits required by Chapter 120 and Section 380.051, F.S., as set forth in Rule 9J-19.007, F.A.C., the District shall delay initiation of

substantive review until written notice is received from the Permit Coordinator indicating that substantive review should begin, as provided in subsection 9J-19.007(3) (Coordination of Time for Sufficiency Review), F.A.C. If the applicant does not waive the time limits, the District shall begin substantive review when the Coordinated Review Application is complete.

(e) The Certification of the Coordinated Review Application required by Section 380.051(2)(a), F.S., and Rules 9J-19.002(3) (Purpose) and 9J-19.009(1) and (2) (Completion of Substantive Review), F.A.C., shall occur within 60 days after the District begins substantive review, and shall consist of the notice of proposed agency action together with the staff report on the individual permit pursuant to subsection 40E-1.603(6) (Procedures for Application for Individual Environmental Resource and Water Use Permits), F.A.C., which may recommend to the Governing Board approval, approval with conditions or denial of the permit.

(f) Certification concludes the coordinated agency review process. However, the applicant may complete the permit process as set forth in subsections 40E-1.603(6)-(11), F.A.C., which result in the Governing Board's approval, approval with conditions or

denial of the permit.

Specific Authority 373.044, 373.113, 380.051 FS. Law Implemented 380.051 FS. History–New 9-22-87, Amended 10-3-95.

40E-1.659 Forms and Instructions.

(1) The following forms and instructions are hereby incorporated by reference into this chapter:

Form No.	Date	Title
0050A	7-89	Application to the South Florida Water Management District for a Permit for Utilization of District Works and Modification of Existing Permit Works of the District No.
0108	3-91	Application for Release of Mineral, Canal, and Road Reservations Reserved Under Chapters 6456, 6957, 7305, 9131, 14717 and 20658, Laws of Florida
0113	8-95	Surface Water Management Permit No.
0115	8-95	Surface Water Management Permit Modification No.
0119	8-95	Wetland Resource Permit No.
0122	4-93	Application to the South Florida Water Management District for Authority to Utilize Works or Land of the District

0123	12-01	Well Construction Permit Application
0124	11-90	Well Completion Report
0145	8-95	Environmental Resource Permit No.
0157	8-95	Environmental Resource Permit Modification No.
0188-QMQ	8-03	Quarterly Report of Withdrawals
0188-MDQ	8-03	Monthly Report of Daily Withdrawals
0188-QASR	8-03	Quarterly Report of Injections and Withdrawals for Aquifer Storage and Recovery (ASR) Wells
0188-QMON	8-03	Quarterly Report of Monitoring Requirements
0188-QMQF	8-03	Quarterly Report of Withdrawals from Wells and Surface Water Pumps
0188-QCROP	8-03	Report of Planting and Harvest of Seasonal Crops
0188-QBWDR	8-03	Quarterly Report of Bulk Water Delivered and Received
0195	6-91	Public Water Supply Well Information and Classification
0196	10-89	Water Well Inspection Scheduling Card
0299	1-90	Water Use Permit No.
0444	8-95	Application for a Standard General Permit for Incidental Site Activities
0445	8-03	Mining/Dewatering Permit Application (RC-1A, RC-1W, RC-1G)
0483	8-95	Request for Environmental Resource, Surface Water Management, Water Use, or Wetland Resource Permit Transfer
0645-W01	8-03	Water Use Permit Application (RC-1A, RC-1W, RC-1G)
0645-G60	8-03	Table A Descriptions of Wells
0645-G61-1	8-03	Table B Description of Surface Water Pumps
0645-G61-2	8-03	Table C Description of Culverts
0645-G65	8-03	Table D Crop Information
0645-G74	8-03	Table E Water Received From or Distributed to Other Entities
0645-G69	8-03	Table F Past Water Use & Table G Projected Water Use
0645-G70	8-03	Table H Projected Water Use (For Per Capita Greater than 200 GPD)
0645-G71	8-03	Table I Water Treatment Method and Losses
0645-G72	8-03	Table J Aquifer Storage and Recovery
0645-G73	8-03	Table K Water Supply System Interconnections
0779	5-92	Guidance for Preparing an Application for a "Works of the District" Permit in the Everglades/Application for a Works of the

		District Permit
0830	4-94	Special Use Application and License
0881A	9-03	Environmental Resource/Surface Water Management Permit Construction Completion Certification
0881B	9-03	Environmental Resource/Surface Water Management Permit Construction Completion Certification - For Projects Permitted Prior to October 3, 1995
0889	8-95	Certification of Waiver of Permit Application Processing Fee
0920	8-95	Request for Conversion of Environmental Resource/Surface Water Management Permit from Construction Phase to Operation Phase and Transfer of Permit to the Operating Entity
0938	8-95	Mitigation Construction Commencement Notice
0941	8-95	Environmental Resource Standards/Noticed General Permit No.
0942	8-95	Surface Water Management General Permit No.
0960	8-95	Environmental Resource/Surface Water Management Permit Construction Commencement Notice
0961	8-95	Environmental Resource/Surface Water Management Permit Annual Status Report for Surface Water Management System Construction
0970	8-95	Applicant Transmittal Form for Requested Additional Information
0971	8-95	Joint Application for Environmental Resource Permit/Authorization to Use State Owned Submerged Lands/Federal Dredge and Fill Permit
0972	8-95	Petition for a Formal Wetland and Surface Water Determination
0973	8-95	Above Ground Impoundment Inspection/Certification Report
0974	8-95	Notice of Intent to Construct a Minor Silvicultural System
0980	8-95	Notice of Intent to Use a Noticed General Environmental Resource Permit
1105	6-02	Performance Bond to Demonstrate Financial Assurance
1106	6-02	Irrevocable Letter of Credit to Demonstrate Financial Assurance
1109	8-03	Water Use General Permit

(2) The forms and instructions listed in subsection (1) are available without cost from the following District Service Centers upon request:

(a) Florida Keys Service Center, 80431 Old Hwy., Islamorada, FL 33036;

(b) Ft. Myers Service Center, 2301 McGregor Blvd., Ft. Myers, FL 33901;

(c) Okeechobee Service Center, 205 North Parrott Ave., Suite 201, P. O. Box 2033, Okeechobee, FL 34973-2033;

(d) Orlando Service Center, 1707 Orlando Central Parkway, Suite 200, Orlando, FL 32809;

(e) Miami/Dade Regional Service Center, 172A W. Flagler Street, Miami, FL 33130;

(f) Big Cypress Basin, 6089 Janes Lane, Naples, FL 34109; and

(g) West Palm Beach Service Center, 3301 Gun Club Road, West Palm Beach, FL 33406.

Specific Authority 120.53, 373.044, 373.113 FS. Law Implemented 120.53, 373.113 FS. History–New 9-3-81, Amended 12-1-82, 3-9-83, Formerly 16K-1.90, Amended 7-26-87, 11-21-89, 1-4-93, Formerly 40E-1.901, Amended 5-11-93, 4-20-94, 10-3-95, 6-26-02, 8-14-02, 9-1-03, 9-16-03.

PART VII COMPLIANCE AND ENFORCEMENT

40E-1.702 Environmental Resource, Surface Water Management Permit and Consumptive Use Enforcement Guidelines.

The District's Environmental Resource, Consumptive Use and Surface Water Management Permit enforcement program is implemented through guidelines concerning Resource Protection, Dispute Resolution and Penalty Assessments.

(1) The Resource Protection guideline provides that:

(a) Adverse impacts to water resources shall be recovered by requiring complete restoration; or

(b) In those cases where restoration of the adverse impact is not environmentally feasible, the District shall require mitigation to offset such impacts.

(2) The Dispute Resolution guideline provides that:

(a) If the violation cannot be resolved in a negotiated, pro-active manner, it is the District's policy to seek full compliance with District permits and rules through appropriate legal action; and

(b) Violations can most effectively be prevented through educating the public about District permitting practices and criteria.

(3) The Penalty Assessment guideline provides that:

(a) The District shall provide for prompt resolution of enforcement matters in a manner that best protects the public interest and water resources; and

(b) The District shall ensure that violators do not gain an economic advantage over competitors by circumventing District permitting requirements. Enforcement action shall be designed to remove any economic advantage resulting from the failure to comply with District permits and rules.

Specific Authority 120.53(1), 373.044, 373.113 FS. Law Implemented 120.62, 120.69, 373.083(2), 373.119, 373.129, 373.136, 373.430, 373.433, 373.603 FS. History–New 10-3-95, Amended 7-2-98.

40E-1.711 Orders of Corrective Action and Consent Agreements.

(1) Orders of Corrective Action.

(a) An order of corrective action may accompany and be served with an administrative complaint upon an alleged violator pursuant to Rule 40E-1.705, F.A.C. An order of corrective action shall include a description of remedial action, with implementation timeframes, and shall, if applicable, set forth any damages, costs of investigation, or other demands that the District is authorized to recover pursuant to Chapter 373 or Chapter 403, F.S. Unless a responsive pleading and request for a Section 120.57, F.S., administrative hearing is filed within fourteen (14) days after service of the order of corrective action, the order for corrective action shall become final and effective, and shall constitute a final adjudication of the matters alleged, subject only to judicial review under Chapters 120 or 373, F.S.

(b) Orders of corrective action, which constitute final agency action, shall be enforceable pursuant to the enforcement provisions in Chapters 373 and 403, F.S.

(2) Consent Agreement.

(a) A consent agreement is final agency action wherein all parties and the District, by negotiation, have arrived at a resolution of alleged violations of law for the purpose of achieving full and expeditious compliance with Chapters 373 and 403, F.S., and District

rules promulgated thereunder. A consent agreement, executed by all parties to an enforcement action, shall have the same force and effect as a final order entered by the District after a formal Section 120.57, F.S., administrative hearing, and shall be enforced in like manner.

(b) The resolution of an enforcement action which requires only the payment of civil penalties and costs but no corrective action shall be memorialized by use of a letter agreement. Any other remedial action required, such as mitigation, restoration, or procurement of permits shall be implemented by use of a consent agreement.

(c) Upon execution by the Chair of the Governing Board, or a duly authorized designee, and filing by the District Clerk, a consent agreement shall constitute agency action subject to the provisions of Rule 40E-1.511, F.A.C.

(3) A non-exempt system which is constructed, operated, altered, maintained, removed or abandoned without a permit shall be restored to its pre-violation condition, unless a permit application for such activity is approved by the District.

Specific Authority 120.53, 373.044, 373.113 FS. Law Implemented 373.119, 373.129, 373.136, 373.430, 373.603 FS. History–New 5-11-93, Formerly 40E-1.614, Amended 10-3-95.

40E-1.715 Civil Penalty Calculation.

(1) Consistency and equitable treatment are essential elements of the District's enforcement guidelines. Therefore, the District has developed a civil penalty matrix (CPM) for use in calculating appropriate civil penalties in enforcement actions. The CPM is incorporated by reference into this chapter and Chapters 40E-2, 40E-3, 40E-4, 40E-5, 40E-40, 40E-41, 40E-61, 40E-63 and 40E-400, F.A.C.

(2) The CPM is the initial basis for determining the appropriate amount for a particular penalty. The CPM reflects the District's statutory authority under Section 373.129, F.S., to seek civil penalties of up to $10,000 per day, per violation. The CPM is comprised of two principle components:

(a) The actual or potential harm to the public and the environment that may occur as a result of the violation; and

(b) The extent of deviation from statutory or regulatory requirements.

(3) Because an economic advantage can be derived through avoidance of expenditures necessary to achieve compliance with District permitting rules and regulations, the District shall consider in its assessment of civil penalties any economic benefit which the violator may have gained through noncompliance.

(4) Multiple penalties shall be calculated for every violation which constitutes an independent and substantially distinguishable violation, or when the same person has violated the same requirement in substantially different locations.

(5) Multi-day penalties shall be calculated where daily advantage is being gained by the violator for an ongoing violation, computed by multiplying the original assessment amount by the number of days of noncompliance.

Specific Authority 120.53(1), 373.044, 373.113, 373.333(1) FS. Law Implemented 120.69, 373.129, 373.209(3), 373.430, 373.603 FS. History–New 10-3-95.

40E-1.721 Complaints, District Investigations, Probable Cause Determinations and Notices of Violations.

(1) Any person may file a written complaint with the District alleging that a person is in violation of any of the provisions of Chapter 373, F.S., or provisions of Chapter 403, F.S., for which authority has been delegated to the District, or the rules promulgated thereunder or an order issued pursuant thereto. Any person may file a written complaint alleging that a lawfully issued District permit is causing a public or private nuisance. District investigations and probable cause determinations preliminary to District action are not subject to the provisions of Section 120.57, F.S., or the rules in this part promulgated thereunder.

(2) The complaint shall specify to the best of complainant's knowledge the identity of the alleged violator, the location and nature of the alleged violation, and any additional information deemed relevant or material by the complainant. The complaint must be signed by the complainant or the complainant's agent and contain an address or phone number where the complainant can be reached. The District shall request that the complainant to furnish any additional information reasonably necessary to aid in investigating the complaint.

(3) Upon receipt of a complaint filed pursuant to this section, the District shall conduct an investigation and make a determination of probable cause. Nothing in this rule shall preclude the District from conducting investigations and probable cause determinations as otherwise authorized or required by law.

(4) An investigation or determination of probable cause is a non-adversary executive function to discover or procure evidence as part of the fact finding function of the District. The District need not have an administrative complaint pending to conduct an investigation or make such a determination.

(5) Upon receipt of a field inspection or investigation report and upon a finding of probable cause, District staff are authorized to issue a Notice of Violation providing instructions for compliance with Chapter 373, F.S., and all applicable District rules. Noth-

ing in this rule shall preclude the District from seeking injunctive relief or filing any other action that is authorized by Chapter 373, F.S.

Specific Authority 120.53(1), 120.54(10), 373.044, 373.113 FS. Law Implemented 120.53(1), 120.57(4), 373.219(2), 373.229(2), 373.333(2), 373.429 FS. History–New 9-3-81, Formerly 16K-1.09, 16K-2.03(3), Amended 5-11-93, Formerly 40E-1.510, Amended 10-3-95.

Chapter 40E-4, F.A.C.
Environmental Resource Permits

Chapter 40E-4 Environmental Resource Permits

[Note: The text on this page and the next provides a brief overview of the provisions of Chapter 40E-4, Florida Administrative Code (F.A.C.). The overview text is intended only to provide a basic understanding of the Chapter, and should not be used in place of the duly-adopted rule language or in a manner which is inconsistent with Chapter 40E-4, F.A.C.]

This Chapter sets forth the requirements for qualification by a project for an exemption from environmental resource permitting and for a Standard General, an Individual, or a Conceptual Approval Environmental Resource Permit. Generally, all construction, alteration, operation, maintenance, removal, or abandonment of any stormwater management system, dam, impoundment, reservoir, or related work must have an Environmental Resource Permit. This includes activities previously known as "dredge and fill".

The District may also be petitioned to perform formal determinations of wetlands and other surface waters.

Section 40E-4.051 sets forth the activities which are exempt from permitting. Section 40E-4.0515 sets forth the activities which are exempt from some permitting criteria. Additional criteria may be superimposed if a project is to be located within an area in which the District has adopted basin rules; see Chapter 40E-41. Additional requirements for qualification by a project for a Standard General Environmental Resource Permit are in Rule Chapter 40E-40.

General permits are issued by District staff. The Governing Board considers staff recommendations for denial of noticed or standard general permit applications. (See Subsection 40E-4.021(18).) Conceptual approvals and individual permits are issued only by the District Governing Board. (See Subsections 40E-4.021(5) and 40E-4.021(21), respectively.)

All mitigation bank environmental resource permits are issued by the Board. (See Subsections 40E-4.041(4), 40E-4.021(5), and 40E-4.021(21).)

An Individual (Governing Board-issued) Environmental Resource Permit is applicable for any project, system, or activity which equals or exceeds any one of the following criteria:

1. The surface water management system serves a project 100 acres or more in size.

2. Construction or alteration is proposed in, on, or over a total of one acre or more of wetlands.

3. More than nine boat slips are proposed.

Also, Subsection 40E-40.011(2) contains descriptions of activities which, regardless of the three criteria listed above, can require an application for an individual permit.

The Board may designate geographic areas within which thresholds apply which are lower than those listed above.

To apply for a Conceptual Approval or an Individual Environmental Resource Permit under this Rule Chapter, the applicant must submit a properly-completed and signed Joint Application for Environmental Resource Permit/Authorization to Use State Owned Submerged Lands/Federal Dredge and Fill Permit, Form 0971; the items and documents described in that form; and the appropriate fee.

Rules of the South Florida Water Management District

ENVIRONMENTAL RESOURCE PERMITS
Chapter 40E-4, F.A.C.



Amended September 16, 2003

CHAPTER 40E-4 ENVIRONMENTAL RESOURCE PERMITS

40E-4.010 Review of Environmental Resource Permit Applications.
40E-4.011 Policy and Purpose.
40E-4.021 Definitions.
40E-4.031 Implementation.
40E-4.041 Permits Required.
40E-4.0415 Permit Thresholds.
40E-4.042 Formal Determination of Wetlands and Other Surface Waters.
40E-4.051 Exemptions From Permitting.
40E-4.0515 Exemptions From Specified Review Criteria.
40E-4.052 Request for Exemption. (Repealed)
40E-4.053 Conditions for Exemption. (Repealed)
40E-4.054 Modification of Exempt Projects.
40E-4.091 Publications, Rules and Interagency Agreements Incorporated by Reference.
40E-4.101 Content of Permit Applications.
40E-4.201 Forms and Instructions.
40E-4.205 Permit Application Processing Fees.
40E-4.301 Conditions for Issuance of Permits.
40E-4.302 Additional Conditions for Issuance of Permits.
40E-4.303 Environmental Resource Permit Authorization.
40E-4.305 Conceptual Approvals.
40E-4.311 Variances from Specified Review Criteria.
40E-4.321 Duration of Permits.
40E-4.331 Modification of Permits.
40E-4.341 District Revocation or Modification of Permits.
40E-4.351 Transfer of Permits.
40E-4.361 Conversion from Construction Phase to Operation Phase.
40E-4.371 Abatement and Abandonment of a System. (Repealed)
40E-4.381 General Conditions.
40E-4.451 Emergency Authorization.

40E-4.010 Review of Environmental Resource Permit Applications.

Environmental Resource permit applications are processed pursuant to the provisions of Section 120.60, F.S., Part VI of Chapter 40E-1 and 28-107, F.A.C.

Specific Authority 120.54(5), 120.60 FS. Law Implemented 120.54(5), 120.60 FS. History–New 7-2-98.

40E-4.011 Policy and Purpose.

(1) It is the policy of the District to regulate activities in, on or over wetlands or other surface waters and the management and storage of all surface waters within its boundaries pursuant to the provisions of Chapter 373, F.S., and Chapters 40E-4, 40E-40, 40E-41 and 40E-400, F.A.C.

(2) This chapter, as well as Chapters 40E-40 and 40E-400, F.A.C., implement the comprehensive permit system contemplated in Part IV of Chapter 373, F.S.

(3) The rules relating to environmental resource permits are found in this chapter, Chapters 40E-40, (Environmental Resource Standard General Permits) and 40E-41, F.A.C. (Surface Water Management Basin and Related Criteria). In addition, no notice and noticed environmental resource general permits are found in Chapter 40E-400, F.A.C.

(4) Supplemental permit requirements for activities within defined geographical areas are found in Chapters 40E-41 (Surface Water Management Basin and Related Criteria), 40E-61, (Lake Okeechobee Surface Water Management and Improvement Permits), and 40E-63, F.A.C. (Everglades Agricultural Area Surface Water Management and Improvement Permits).

Specific Authority 373.044, 373.113 FS. Law Implemented 373.086(1), 373.103(1), 373.103(4), 373.403-.443 FS. History–New 9-3-81, Formerly 16K-4.01, Amended 4-20-94, 10-3-95.

40E-4.021 Definitions.

When used in this chapter, Chapters 40E-40, 40E-41 and 40E-400, F.A.C.:

(1) “Abandon” or “Abandonment” means cessation of use and maintenance activities or responsibility for a system, or part of a system.

(2) “Alter” means to extend a dam or works beyond maintenance in its original condition, including changes which may increase or diminish the flow or storage of surface water which may affect the safety of such dam or works.

(3) “Appurtenant Works” means any artificial improvements to a dam which might affect the safety of such dam or, when employed, might affect the holding capacity of such dam or of the reservoir or impoundment created by such dam.

(4) “Aquatic Preserve” means an exceptional area of submerged lands and its associated waters set aside for being maintained essentially in its natural or existing condition, as authorized by Chapter 258, F.S.

(5) “Conceptual Approval” means an environmental resource permit, issued by the District Governing Board, which approves a conceptual master plan for a surface water management system or a mitigation bank. Conceptual approvals constitute final District action, and are binding to the extent that adequate data has been made available for review by the applicant during the review process. To the extent that there is any inconsistency between the permit, staff report, and other information in the application file, the permit and staff report shall control.

(6) “Conservation Easement” means a right or interest in real property pursuant to Section 704.06, F.S., which is appropriate to retaining land or water areas predominantly in their natural, scenic, open, agricultural, or wooded condition; retaining such areas as suitable habitat for fish, plants, or wildlife; retaining the structural integrity or physical appearance of sites or properties of historical, architectural, archaeological, or cultural significance; or maintaining existing land uses and which prohibits or limits any or all of the following:

(a) Construction or placing of buildings, roads, signs, billboards or other advertising, utilities or other structures on or above the ground;

(b) Dumping or placing of soil or other substance or material as landfill or dumping or placing of trash, waste, or unsightly or offensive materials;

(c) Removal or destruction of trees, shrubs, or other vegetation;

(d) Excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance in such manner as to affect the surface;

(e) Surface use except for purposes that permit the land or water area to remain predominantly in its natural condition;

(f) Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation;

(g) Acts or uses detrimental to such retention of land or water areas; and

(h) Acts or uses detrimental to the preservation of the structural integrity or physical appearance of sites or properties of historical, architectural, archaeological, or cultural significance.

(7) “Construction” means any activity including land clearing, earth moving or the erection of structures which will result in the creation of a system.

(8) “Dam” means any artificial or natural barrier, with appurtenant works, raised to obstruct or impound, or which does obstruct or impound, any of the surface waters of the state.

(9) “Department” means the Florida Department of Environmental Protection.

(10) “Drainage Basin” means a subdivision of a watershed.

(11) “Dredging” means excavation, by any means, in surface water or wetlands, as delineated by Section 373.4211, F.S. It also means the excavation, or creation, of a water body which is, or is to be, connected to surface waters or wetlands, as delineated by Section 373.4211, F.S., directly or via an excavated water body or series of water bodies.

(12) “Embedment” means the placement of transmission or distribution lines, pipes or cables into the bottoms of waters of the State by minimal displacement of bottom material and without the creation of a trench, or trough, through the use of techniques such as plowing-in, weighing-in, or non-trenching jets.

(13) “Endangered species” means those animal species which are listed as endangered in Rule 68A-27.003, F.A.C., and those plant species which are listed in 50 Code of Federal Regulations 17.12, when such plants are found to be located in a wetland or other surface water.

(14) “Entrenchment” means the placement of transmission or distribution lines, pipes or cables into the bottoms of waters of the State by the creation of a defined trench, or trough, through the use of such devices as clamshells, dredges, trenching jets, or other devices which produce similar results.

(15) “Environmental resource permit” means a conceptual approval, individual or general permit for a surface water management system issued pursuant to Part IV, Chapter 373, F.S. Environmental resource permit also means a conceptual or individual permit for the establishment and operation of a mitigation bank.

(16) “Estuary” means a semi-enclosed, naturally existing coastal body of water which has a free connection with the open sea and within which seawater is measurably diluted with fresh water derived from riverine systems.

(17) “Filling” means the deposition, by any means, of materials in surface waters or wetlands, as delineated by Section 373.4211, F.S.

(18) “General Permit” means a no notice, noticed or standard general environmental resource permit issued by District staff. However, staff recommendations for denial of noticed or standard general permit applications shall be considered by the Governing Board.

(19) “Impoundment” means any lake, reservoir, pond, or other containment of surface water occupying a bed or depression in the earth’s surface and having a discernible shoreline.

(20) “Incidental site activities” means those certain site activities in uplands which may be conducted in conjunction with the work proposed in an environmental resource permit application such as: land clearing in uplands; minimal earthwork, lake construction; road subgrade construction; foundation construction; utility installation; fence instal-

lation; construction trailer installation; unconnected drainage facility construction; or other similar activities.

(21) “Individual Permit” means an environmental resource permit issued by the District Governing Board.

(22) “Isolated Wetland” means any wetland without a direct hydrologic connection to a lake, stream, estuary, or marine water.

(23) “Lagoon” means a naturally existing coastal zone depression which is below mean high water and which has permanent or ephemeral communications with the sea, but which is protected from the sea by some type of naturally existing barrier.

(24) “Listed Species” means those animal species which are endangered, threatened or of special concern and are listed in Rules 68A-27.003, 68A-27.004 and 68A-27.005, F.A.C., and those plant species listed in 50 Code of Federal Regulations 17.12.

(25) “Maintenance” or “Repairs” means remedial work of a nature as may affect the safety of any dam, impoundment, reservoir, or appurtenant work or works, but excludes routine custodial maintenance.

(26) “Operation Permit” means a permit issued by the District authorizing the operation and maintenance of a surface water management system in accordance with the terms and conditions of the permit.

(27) “Other Surface Waters” means surface waters as described and delineated pursuant to Rule 62-340.600, F.A.C., as ratified by Section 373.4211, F.S., other than wetlands.

(28) “Riprap” means a sustaining wall made to reduce the force of waves and to protect the shore from erosion and consists of unconsolidated boulders, rocks, or clean concrete rubble with no exposed reinforcing rods or similar protrusions.

(29) “Species of Special Concern” means those animal species listed in Rule 68A-27.005, F.A.C.

(30) “State Water Quality Standards” means water quality standards adopted pursuant to Chapter 403, F.S.

(31) “Stormwater Management System” means a system which is designed and constructed or implemented to control discharges which are necessitated by rainfall events, incorporating methods to collect, convey, store, absorb, inhibit, treat, use or reuse water to prevent or reduce flooding, over drainage, environmental degradation, and water pollution or otherwise affect the quantity and quality of discharges from the system.

(32) “Surface Water Management Permit” means a permit issued pursuant to Chapter 40E-4 or 40E-40, F.A.C., prior to October 3, 1995, or that is grandfathered pursuant to Sections 373.414(11)-(16), F.S.

(33) “Surface Water Management System” or “System” means a stormwater management system, dam, impoundment, reservoir, appurtenant work or works, or any combination thereof. The terms “surface water management system” or “system” includes areas of dredging or filling as defined by Section 373.403(13) and (14), F.S., respectively.

(34) “Threatened Species” means those animal species listed in Rule 68A-27.004, F.A.C., and those plant species which are listed as threatened in 50 Code of Federal Regulations 17.12.

(35) “Total Land Area” means land holdings under common ownership which are contiguous or land holdings which are served by common surface water management facilities.

(36) “Vertical Seawall” is a seawall the waterward face of which is at a slope greater than 75 degrees to the horizontal. A seawall with sloping riprap covering the waterward face to the mean high water line shall not be considered a vertical seawall.

(37) “Watershed” means the land area which contributes to the flow of water into a receiving body of water.

(38) “Wetlands” means those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological or reproductive adaptation, have the ability to grow, reproduce, or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto. The landward extent of wetlands is delineated pursuant to Rules 62-340.100 through 62-340.550, F.A.C., as ratified by Section 373.4211, F.S.

(39) “Wetland Resource Permit” means a permit issued pursuant to Chapter 62-312, F.A.C., prior to October 3, 1995, or that is grandfathered pursuant to Sections 373.414(11)-(16), F.S.

(40) “Works” means all artificial structures, including but not limited to ditches, canals, conduits, channels, culverts, pipes, and other construction that connects to, draws water from, drains water into, or is placed in or across the waters in the state.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.019, 373.403-.443, 403.031, 704.06 FS. History–New 9-3-81, Amended 1-31-82, 12-1-82, Formerly 16K-1.05(1), Amended 7-1-86, 4-20-94, 10-3-95, 4-1-96.

40E-4.031 Implementation.

(1) The effective dates for the permit program developed pursuant to Part IV, Chapter 373, F.S., are:

(a) January 12, 1977, for the portion of the District formerly within the Ridge and Lower Gulf Coast Water Management District.

(b) March 2, 1974, for the remainder of the District.

(2) The rules implementing the Environmental Resource Permit program shall apply to all projects which do not have a complete permit application, as evidenced by a letter of completeness from the District on the effective date of the rule, unless the project is grandfathered pursuant to Section 373.414, F.S.

(3) Unless otherwise addressed by this rule, an application deemed complete prior to the effective date of a rule shall be governed by the rule in effect at the time the application became complete.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.403-.443 FS. History–New 9-3-81, Amended 4-20-94, 10-5-95.

40E-4.041 Permits Required.

(1) Unless expressly exempt by law or rule, it shall be unlawful for any person to construct, alter, operate, maintain, remove or abandon any stormwater management system, dam, impoundment, reservoir, appurtenant work or works, or any combination thereof, including dredging or filling without first having obtained an environmental resource permit from the District. This includes the maintenance and operation of existing agricultural surface water management systems and the construction of new agricultural surface water management systems.

(2) The District issues three types of environmental resource permits: conceptual approval permits; individual permits; and general permits.

(a) Conceptual approval permits are issued in individual form only. A conceptual approval may be issued for projects that are to be developed in phases. A conceptual approval does not authorize any construction, alteration, operation, maintenance, removal or abandonment of a surface water management system.

(b) An individual permit shall be issued pursuant to Chapter 40E-4, F.A.C., for projects that do not qualify for general permits based on the threshold conditions set forth in Chapters 40E-40 and 40E-400, F.A.C.

(c) General permits are issued in three forms: no notice, noticed and standard general environmental resource permits. General permits are issued for specified activities or projects that satisfy the thresholds and conditions of Chapters 40E-40 and 40E-400, F.A.C. Standard general permits are issued pursuant to Chapter 40E-40, F.A.C. No notice and noticed general permits are issued pursuant to Chapter 40E-400, F.A.C.

1. If the District notifies an applicant that the system for which a noticed general permit is sought does not qualify for the noticed general permit, the applicant may apply for a standard general or individual permit.

2. The application fee for the noticed general permit shall be applied to the application fee for a standard general or individual permit if the applicant applies for such a permit within 60 days of notification by the District.

(3) For environmental resource permit applications and permit applications under subsections 373.414(11)-(16), F.S., which involve activities located on submerged lands owned by the Board of Trustees of the Internal Improvement Trust Fund under Chapter 253 or 258, F.S., the District shall conduct concurrent application review procedures in accordance with Section 373.427, F.S., Chapter 18-21, F.A.C., and Rules 62-343.075 and 18-18.014, F.A.C.

(4) The District issues two types of mitigation bank environmental resource permits: conceptual approvals and individual permits, pursuant to Section 4.4 of the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District – November 1996. A conceptual approval does not authorize the establishment or operation of the mitigation bank. A mitigation bank individual permit authorizes the establishment and operation of a mitigation bank and constitutes authorization pursuant to Chapters 40E-4, 40E-40, or 40E-400, F.A.C., as applicable, to construct any surface water management system proposed as part of the mitigation bank.

(5) Any dredging or filling in, on or over surface waters of the state that is authorized by an individual or general permit issued under Chapters 40E-4 and 40E-40, F.A.C., as these chapters existed prior to October 3, 1995, but is not authorized by a permit or an exemption under Chapter 62-312, F.A.C., (1994) shall require an environmental resource permit prior to the dredging or filling. However, such dredging or filling shall be exempt from the requirements of paragraphs 40E-4.301(1)(a) through (e) and (g) through (k), F.A.C.

Specific Authority 373.044, 373.113, 373.406(5) FS. Law Implemented 373.103, 373.413, 373.416, 373.426 FS. History–New 9-3-81, Amended 12-1-82, Formerly 16K-4.03(1), 16K-4.07(1), 16K-4.09(1), Amended 1-23-94, 4-20-94, 10-3-95, 4-1-96, 1-7-97.

40E-4.0415 Permit Thresholds.

(1) A system which exceeds any one of the following threshold conditions must obtain an individual environmental resource permit:

(a) The system serves a project of 100 acres or more; or

(b) Construction or alteration of the system, including dredging or filling, is proposed in, on, or over a total of one acre or more of wetlands or other surface waters; however, calculation of the one acre area shall not include:

1. Ditches and wholly owned ponds that were constructed in uplands;

2. Any isolated wetlands with a surface area of less than 0.5 acres.

(c) The system includes more than nine proposed boat slips.

(2) Any non-exempt system which does not qualify for a noticed or no-notice general environmental resource permit pursuant to Chapter 40E-400, F.A.C., and does not exceed the standard for individual permits listed above, shall obtain a standard general permit pursuant to Chapter 40E-40, F.A.C.

(3) Notwithstanding the provisions of subsections (1) and (2):

(a) The Governing Board has, in Rules 40E-41.023, 40E-41.123, 40E-41.223, and 40E-41.323, F.A.C., designated specific geographic areas in which additional surface water management criteria are necessary in order to ensure that construction, alteration, operation, maintenance, removal or abandonment of surface water management systems is not harmful to the water resources.

(b) Phases within a conceptually approved project shall be processed as standard general permits provided:

1. The proposed activity is consistent with the conceptual approval permit;

2. The approved conceptual plan includes the location and acreage of wetlands onsite, an assessment of wetland impacts, and a conceptual mitigation plan (if required); and

3. The approved conceptual plan includes the approximate size, location, and discharge points of the proposed stormwater management system.

Specific Authority 373.044, 373.113, 373.406(5) FS. Law Implemented 373.118(1), 373.413(1) FS. History–New 10-3-95, Amended 5-28-00, 6-26-02, 4-14-03.

40E-4.042 Formal Determination of Wetlands and Other Surface Waters.

(1) In accordance with subsection 373.421(2), F.S., a real property owner, an entity that has the power of eminent domain, or any other person who has a legal or equitable interest in real property may petition the District for a formal determination of the landward boundaries of wetlands and other surface waters on that property as defined in Chapter 62-340, F.A.C., and ratified by Section 373.4211, F.S.

(2) The Executive Director is delegated the authority of the Governing Board to take final action on petitions for formal wetland and other surface water determinations.

(3) The process and procedures for filing a petition for a formal determination of wetlands and other surface waters are set forth in Section 4.5 of the Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District – August 1995 and are incorporated by reference in this rule.

(4) A formal determination shall be binding for five years provided physical conditions on the property do not change so as to alter the boundaries of the wetlands or other surface waters during that period.

(5) In accordance with Section 373.421(4), F.S., a formal determination may be revoked upon a finding that the petitioner submitted inaccurate information to the District.

Specific Authority 373.043, 373.113, 373.421(2) FS. Law Implemented 373.421(2) FS. History–New 10-3-95.

40E-4.051 Exemptions From Permitting.

Exemptions from permitting under Chapters 40E-4, 40E-40 and 40E-400, F.A.C., are set forth below. The performance of activities pursuant to the provisions of the exemptions set forth in this section does not relieve the person or persons who are using the exemption or who are constructing or otherwise implementing the activity from meeting the permitting or performance requirements of other District rules. Nothing in this section shall prohibit the Department of Environment Protection from taking appropriate enforcement action pursuant to Chapter 403, F.S., to abate or prohibit any activity otherwise exempt from permitting pursuant to this section if the Department can demonstrate that the exempted activity has caused water pollution in violation of Chapter 403, F.S.

(1) Pipes or Culverts. The repair or replacement of existing functional pipes or culverts the purpose of which is the discharge or conveyance of stormwater. In all cases, the invert elevation, the diameter, and the length of the culvert shall not be changed. However, the material used for the culvert may be different from the original material. This exemption does not authorize the repair, replacement, or alteration of dam's spillways or appurtenant works, nor construction activities or procedures that cause violation of water quality standards as set forth in Chapter 62-302 and Rule 62-4.242, F.A.C.

(2) Maintenance of Systems.

(a) The performance of maintenance dredging of existing manmade canals, channels, basins, berths, and intake and discharge structures, where the spoil material is to be removed and deposited on a self-contained, upland spoil site which will prevent the escape of the spoil material and return water from the spoil site into wetlands or other surface waters, provided no more dredging is performed than is necessary to restore the

canal, channels, basins, berths, and intake and discharge structures to original design specifications, and provided that control devices are used at the dredge site to prevent turbidity and toxic or deleterious substances from discharging into adjacent waters during maintenance dredging. This exemption shall apply to all canals constructed before April 3, 1970, and to those canals constructed on or after April 3, 1970, pursuant to all necessary state permits. This exemption shall not apply to the removal of a natural or manmade barrier separating a canal or canal system from adjacent wetlands or other surface waters. Where no previous permit has been issued by the Board of Trustees of the Internal Improvement Trust Fund, the Department, the District or the United States Army Corps of Engineers for construction or maintenance dredging of the existing manmade canal, channel, basin, berth or intake or discharge structure, such maintenance dredging shall be limited to a depth of no more than 5 feet below mean low water.

(b) The maintenance of functioning insect control structures, and the maintenance of functioning dikes and functioning irrigation and drainage ditches, including roadway drainage ditches, provided:

1. The spoil material is deposited on a self-contained upland spoil site which will prevent the escape of the spoil material and return water into wetlands or other surface waters.

2. In the case of insect control structures, if the cost of using a self-contained upland spoil site is so excessive as determined by the Department of Health, pursuant to subsection 403.088(1), F.S., that it will inhibit the proposed insect control, existing spoil sites or dikes may be used, upon notification to the District. In the case of insect control where upland spoil sites are not used pursuant to this exemption, turbidity control devices shall be used to confine the spoil material discharge to that area previously disturbed when the receiving body of water is used as a potable water supply, is designated as approved, conditionally approved, restricted or conditionally restricted waters for shellfish harvesting by the Department, or functions as a habitat for commercially or recreationally important shellfish or finfish.

3. In all cases, no more dredging is to be performed than is necessary to restore the dike or irrigation or drainage ditch to its original design specifications.

4. This exemption shall apply to manmade trenches dug for the purpose of draining water from the land or for transporting water for use on the land and which are not built for navigational purposes.

(c) Maintenance of minor silvicultural surface water management systems as described in subsection 40E-400.500(4), F.A.C., which were permitted under Part IV of Chapter 373, F.S., or were constructed prior to the requirements for a permit under this

part, provided such maintenance is conducted in accordance with the performance standards set forth in subsection 40E-400.500(5), F.A.C.

(d) The restoration of less than 100 feet in length of existing insect control impoundment dikes and the connection of such impoundments to tidally influenced waters. Such impoundments shall be connected to tidally influenced waters for at least 6 months each year, beginning September 1 and ending February 28. The connection shall be of sufficient cross-sectional area to allow beneficial tidal influence. Restoration shall involve no more dredging than needed to restore the dike to original design specifications, and the final elevation of the dredge area shall be within two feet of immediately adjacent bottom elevations. For the purposes of this paragraph, restoration shall not include maintenance of impoundment dikes of insect control impoundments.

(3) Docking Facilities and Boat Ramps.

(a) The construction, replacement or repair of mooring pilings and dolphins associated with private docking facilities.

(b) The installation or repair of private docks, piers and recreational docking facilities, or piers and recreational docking facilities of local governmental entities when the local governmental entity's activities will not take place in any manatee habitat, and of which docks have 1000 square feet or less of surface area over wetlands or other surface waters, or 500 square feet or less of surface area over wetlands or other surface waters for docks which are located in Outstanding Florida Waters. This exemption shall include the construction and repair of structures above the dock area, such as boat shelters and gazebos, provided such structures are not enclosed with walls and doors, are not used for residential or commercial purposes, or storage of materials other than those associated with recreational use, and provided the structures do not exceed, together with the docking facility, the total area limitations, above. To qualify for this exemption, any such structure:

1. Shall be used for recreational, non-commercial activities;

2. Shall be constructed or held in place by pilings, including floating docks, so as not to involve filling or dredging other that necessary to install the pilings;

3. Shall not substantially impede the flow of water or create a navigational hazard; and

4. Shall be the sole dock constructed pursuant to this exemption as measured along the shoreline for a minimum distance of 65 feet, unless the parcel of land or individual lot as platted is less than 65 feet in length along the shoreline, in which case there may be one exempt dock allowed per parcel or lot. For the purposes of this paragraph, multi-family living complexes and other types of complexes or facilities associated with the proposed private dock shall be treated as one parcel of property regardless of the

legal division of ownership or control of the associated property. Construction of a dock under this exemption does not require the District to issue a subsequent permit to construct a channel to provide navigational access to the dock. Activities associated with a dock shall include the construction of structures attached to the dock which are only suitable for the mooring or storage of boats (i.e., boatlifts).

(c) Construction of private docks in artificially created waterways where construction will not violate water quality standards, impede navigation, or adversely affect flood control.

(d) The replacement or repair of existing docks, mooring piles or piers, provided:

1. No fill material other than the piles is used;

2. The replaced or repaired dock or mooring pile is in the same location and of the same configuration and dimensions as the dock or mooring pile being replaced or repaired; and

3. The dock or mooring pile must be functional and able to provide access to boats moored at the dock or pile before this exemption may be used unless such dock or mooring pile has been rendered non-functional by a discrete event such as a storm, flood, accident, or fire.

(e) The construction and maintenance to design specifications of boat ramps on artificial bodies of water where navigational access to the proposed ramp exists, or the construction and maintenance to design specifications of boat ramps open to the public in any wetlands or other surface waters where navigational access to the proposed ramp exists and where the construction of the proposed ramp will be less than 30 feet wide and will involve the removal of less than 25 cubic yards of material from the wetlands or other surface waters, and the installation of docks with an area of 500 square feet or less over wetlands or other surface waters that are associated with and adjoining the boat ramps constructed pursuant to this exemption. All material removed shall be placed upon a self-contained upland site so as to prevent the escape of the spoil material and return water from the spoil site into the wetlands or other surface waters. For the purpose of this exemption, artificial bodies of water shall include residential canal systems, canals permitted by a District created under Section 373.069, F.S., and artificially created portions of the Florida Intracoastal Waterway.

(4) Shore Stabilization.

(a) Construction of seawalls or riprap, including only that backfilling needed to level the land behind seawalls or riprap, in artificially created waterways, where such construction will not violate existing water quality standards, impede navigation or adversely affect flood control. An artificially created waterway is defined as a body of water that has been totally dredged or excavated and which does not overlap natural

wetlands or other surface waters. For the purpose of this exemption, artificially created waterways shall also include existing residential canal systems. This exemption does not apply to the construction of vertical seawalls in estuaries or lagoons unless the proposed construction is within an existing man-made canal where the shoreline is currently occupied in whole or in part by vertical seawalls.

(b) The restoration of a seawall or riprap at its previous location or upland of or within 18 inches waterward of its previous location, as measured from the face of the existing seawall slab to the face of restored seawall slab or from the front slope of the existing riprap to the front slope of the restored riprap. No filling can be performed except in the actual restoration of the seawall or riprap. No construction shall be undertaken without necessary title or leasehold interest, especially where private and public ownership boundaries have changed as a result of natural occurrences such as accretion, reliction and natural erosion. This exemption shall be limited to functioning seawalls or riprap. This exemption shall not affect the permitting requirements of Chapter 161, F.S.

(c) The construction of seawalls or riprap in wetlands or other surface waters, where such construction is between and adjoins at both ends existing seawalls or riprap, follows a continuous and uniform construction line with the existing seawalls or riprap, is no more than 150 feet in length, does not violate state water quality standards, impede navigation, or adversely affect flood control. However, this exemption shall not affect the permitting requirements of Chapter 161, F.S. In estuaries and lagoons, construction of vertical seawalls is limited to the circumstances and purposes stated in subsection 373.414(5)(b)1.-4., F.S.

(5) Transmission and Distribution Lines and Utility Poles.

(a) The installation of subaqueous transmission and distribution lines laid on, or embedded in, the bottoms of wetlands or other surface waters, except in Class I and Class II waters and aquatic preserves, provided that no dredging or filling is necessary.

(b) The replacement or repair of subaqueous transmission and distribution lines laid on, or embedded in, the bottoms of wetlands or other surface waters.

(c) Activities necessary to preserve, restore, repair, remove, or replace an existing communication or power pole or line, provided that the work does not involve dredge and fill activities other than the removal of the existing structure and the installation of the new structure, and, in the case of a power pole or line, the activity does not increase the voltage of existing power lines. An activity does not qualify to use this exemption if it results in relocation of an existing structure or facility more than 10 feet in any direction from its original location, or if it involves construction of new power or telephone lines or the repair and replacement of existing structures that require dredge and fill activities in order to provide access to the site.

(d) The installation, removal, and replacement of utility poles that support telephone or communication cable lines, or electric distribution lines of 35kV or less, together with the bases and anchoring devices to support those poles, as specified below. For the purpose of this exemption, “anchoring device” shall mean steel guy wires fastened to the ground, without the need for dredging, and “base” shall mean a concrete or steel foundation not exceeding four feet in radius, used to support a utility pole. This exemption shall be subject to the following conditions:

1. No more than 15 utility poles may be installed, removed, or replaced in wetlands;

2. This exemption shall not apply in surface waters other than wetlands;

3. The temporary disturbance to wetlands shall be limited to a length of 0.5 miles, an areal extent of 0.5 acre, and a width of 30 feet to access the site to actually install, remove, or replace the utility poles; thereafter, maintenance of the utility right-of-way in wetlands shall be limited to a cleared corridor that does not exceed a total width of 15 feet and a total area of 0.25 ac.;

4. This exemption shall not apply in forested wetlands located within 550 feet from the mean or ordinary high water line of a named waterbody that is designated as an Outstanding Florida Water or an Outstanding National Resource Water, or to activities in any Aquatic Preserves;

5. There shall be no permanent placement of fill other than utility poles and anchoring devices;

6. There shall be no dredging or filling of fill pads or access roads except for temporary mats, which may be used to access pole installation sites, and all temporary mats shall be removed within thirty days after the installation, removal or replacement of the utility poles, associated bases, and anchoring devices;

7. The installation of the utility pole(s) and associated bases and anchoring devices shall not interfere with navigation or impede water flow in wetlands;

8. Turbidity, sedimentation, and erosion shall be controlled during and after construction to prevent violations of state water quality standards due to construction related activities;

9. Except for the permitted structures, pre-construction ground elevations and the contours of all soils that are disturbed by construction activities, including vehicle ruts in wetlands, shall be restored within 30 days of completion of the installation of the utility line or cable, and restored grades shall be stabilized within 72 hours following completion of elevation and contour restoration to minimize erosion;

10. Vehicle usage in wetlands shall be conducted so as to minimize tire rutting and erosion impacts;

11. Water jets shall not be used except for those which are a pre-engineered part of the pole, and provided that the water for the jets is either recirculated on-site or is discharged in a self-contained upland disposal site;

12. Vehicular access in wetlands shall be limited to existing roads, trails, rights-of-way or easements, and to other previously disturbed corridors where they exist; and

13. The permittee shall provide an annual report to the District which summarizes the activities conducted under this exemption for the period from January 1 to December 31 of each year, including: the acreage of temporary impacts in wetlands resulting from the use of temporary mats and the clearing of wetland vegetation; the extent of permanent impacts to wetlands including the number of poles and structures in wetlands and the acreage of clearing in wetlands; the voltage of all electric lines that are installed; the number of times this exemption is used; the specific location of each line that is installed (including the county, the section, township, and range, and the identity of permanent landmarks such as roads and named wetlands and other surface waters within or adjacent to the work location), and the number of times and locations where water jets are used.

(6) Bridges, Driveways and Roadway Crossings.

(a) The replacement or repair of existing open-trestle foot bridges and vehicular bridges that are 100 feet or less in length and two lanes or less in width, provided:

1. No more dredging or filling in wetlands or other surface waters is performed than that necessary to replace or repair pilings;

2. The structure to be replaced or repaired is the same length, the same configuration, and in the same location as the original bridge; and

3. No debris from the original bridge shall be allowed to remain in wetlands or other surface waters.

(b) The construction or maintenance of culverted driveway or roadway crossings and bridges of artificial waterways, provided:

1. This exemption shall apply only to wholly artificial, non-navigable drainage conveyances;

2. The construction project area shall not exceed one acre, and the construction shall be for a discrete project that is not part of a larger plan of development which requires permitting under Chapters 40E-400, 40E-40, 40E-4, F.A.C., or this chapter;

3. The artificial waterway in existing condition shall be not more than 4 feet deep, measured from the top of bank to the bottom of the artificial waterway;

4. The person performing the exempt activity shall ensure that the size and capacity of the culvert will be adequate to pass normal high water stages of the artificial waterway without causing adverse impacts to upstream or downstream property, but the

culvert shall not be larger than one 24 inch diameter pipe, or its equivalent; and in no instance shall the culvert(s) provide a smaller cross-sectional area or discharge capacity than any upstream culvert;

5. The elevation of the culvert invert shall be at the existing bottom grade of the artificial waterway;

6. The length of the driveway or roadway crossing the waterway shall not exceed 30 feet from top of bank to top of bank;

7. The top width of the driveway or roadway shall not exceed 20 feet, the toe to toe width shall not exceed 40 feet, and side slopes shall be no steeper than 3 feet horizontal to 1 foot vertical;

8. Clean fill used for the crossing shall be obtained from an upland borrow pit or from a dredge site that is in compliance with the permitting requirements of Part IV, Chapter 373, F.S., either through a permit or exemption issued by the District;

9. There shall be no additional dredging, filling, or construction activities within the artificial waterway or project area, except those directly involved in the construction or operation and maintenance of the culverted crossing and those exempted from regulation under Part IV, Chapter 373, F.S.;

10. All temporary fill in construction areas shall be removed and regraded to original elevations and revegetated;

11. The person performing the exempt activity shall implement measures for erosion and pollution control using best management practices, including turbidity curtains or similar devices and other site specific practices, in strict adherence to the Florida Department of Transportation's "Standard Specifications for Road and Bridge Construction," and Chapter 6 of the Department's "Florida Development Manual," to prevent violations of state water quality standards. Temporary erosion controls shall be implemented prior to and during construction, and permanent erosion control measures for all exposed soils shall be completed within 7 calendar days of the most recent construction activity;

12. Any spoil material from construction or maintenance shall be used or disposed of on an upland portion of the property or shall be transported off site and deposited on a self-contained upland spoil site that is in compliance with the permitting requirements of Chapters 40E-4 and 40E-40, F.A.C., as applicable;

13. If dewatering is performed, all temporary fill dikes and dewatering discharges shall be installed and constructed so that no upstream flooding or impoundment occurs and to prevent siltation, erosion or turbid discharges in violation of state water quality standards. Any temporary works shall be completely removed, and all areas upstream and downstream from the crossing shall be restored to grades, elevations and conditions which existed before the construction;

14. This exemption shall apply only to a maximum of 2 crossings on any total land area of property with a minimum distance of 500 feet between crossings; and

15. This exemption shall not apply to activities involving relocation or other alteration of all or part of the artificial waterway, or construction for other than the proposed culvert crossing.

(7) Aids to Navigation.

The installation of aids to navigation, including bridge fender piles, “No Wake” and similar regulatory signs, and buoys associated with such aids, provided that the devices are marked in accordance with Section 327.40, F.S.

(8) Construction of Freshwater Fish Attractors.

Construction of freshwater fish attractors by Florida Game and Fresh Water Fish Commission, U.S. Forest Service, and county and municipal governments, provided that the material to be used shall be clean concrete, rock, brush, logs, or trees, and shall be free of soils, preservatives, oil, grease, debris, litter, putrescible substances, “white goods,” asphalt materials, tires, or other pollutants, and shall be firmly anchored to the bottom of the waterbody. The size of an individual fish attractor shall not exceed one quarter of an acre in area. The material shall be placed so that the top of the fish attractor is at least three (3) feet below the surface of the water at ordinary low water and shall be outside any posted navigational channels. No fish attractor material shall be placed on or in areas vegetated by native aquatic vegetation. The site shall be marked with a buoy or buoys to ensure that no material is deposited outside of the site.

(9) Installation of Piling Support Structures Associated With Water Testing or Monitoring Equipment by the Department or the District. Installation of piling support structures associated with water testing or monitoring equipment by the Department and Water Management Districts, provided that flow or navigation are not impeded.

(10) Agriculture, silviculture, floriculture, and horticulture as specified in Section 373.406(2) and (3), F.S., provided that:

(a) Alteration of the topography of any tract of land for purposes consistent with the practice of agriculture, silviculture, floriculture and horticulture, provided such alteration may not be for the sole or predominant purpose of impounding or obstructing surface waters.

(b) Construction, operation, or maintenance of any agricultural closed system. This exemption does not eliminate the necessity to meet generally accepted engineering practices for construction, operation, and maintenance of dams, dikes, or levees.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.406, 373.413, 373.416, 403.813(2) FS. History–New 9-3-81, Amended 1-31-82, 3-9-83, Formerly 16K-4.02, Amended 4-20-94, 10-3-95, 5-28-00, 9-2-01, 4-14-03.

40E-4.0515 Exemptions From Specified Review Criteria.

Exemptions from specified review criteria under Chapters 40E-4 and 40E-40, F.A.C., are as follows:

(1) Exemptions for Treatment or Disposal Systems.

(a) Alteration and maintenance of the following shall be exempt from the provisions in Chapter 40E-4, F.A.C., adopted to implementing subsections 373.414(1) through 373.414(6), 373.414(8), and 373.414(10), F.S.; and subsection 373.414(7), F.S., regarding any authority to apply state water quality standards within any works, impoundments, reservoirs, and other watercourses described in this subsection and any authority granted pursuant to Section 373.414, F.S. (1991):

1. Works, impoundments, reservoirs, and other watercourses constructed and operated solely for wastewater treatment or disposal in accordance with a valid permit reviewed or issued under Rule 62-302.520 or Chapters 62-17, 62-600, 62-610, 62-640, 62-650, 62-660, 62-670, 62-671, 62-673, 62-701, F.A.C., or Section 403.0885, F.S., or rules implementing Section 403.0885, F.S., except for treatment wetlands or receiving wetlands permitted to receive wastewater pursuant to Chapter 62-611, F.A.C., or Section 403.0885, F.S., or its implementing rules;

2. Works, impoundments, reservoirs, and other watercourses constructed solely for wastewater treatment or disposal before a construction permit was required under Chapter 403, F.S., and operated solely for wastewater treatment or disposal in accordance with a valid permit reviewed or issued under Rule 62-302.520, or Chapters 62-17, 62-600, 62-610, 62-640, 62-650, 62-660, 62-670, 62-671, 62-673, or 62-701, F.A.C., or Section 403.0885, F.S., or rules implementing Section 403.0885, F.S., except for treatment wetlands or receiving wetlands permitted to receive wastewater pursuant to Chapter 62-611, F.A.C., or Section 403.0885, F.S., or its implementing rules;

3. Works, impoundments, reservoirs, and other watercourses of less than 0.5 acres in combined area on a project-wide basis, constructed and operated solely for stormwater treatment in accordance with a noticed exemption under Chapter 62-25, F.A.C., or a valid permit issued under Chapters 62-25 (excluding Rule 62-25.042), 62-330, 40E-4, F.A.C., except those permitted as wetland stormwater treatment systems;

4. Works, impoundments, reservoirs, and other watercourses of less than 0.5 acres in combined areas on a project-wide basis, constructed and operated solely for stormwater treatment before a permit being required under Chapters 62-25, 40E-4, F.A.C.

(b) Alteration and maintenance of the following shall be exempt from the provisions in Chapter 40E-4, F.A.C., adopted to implement subsections 373.414(1),

373.414(2)(a), 373.414(8), and 373.414(10), F.S.; and subsections 373.414(3) through 373.414(6), F.S.; and subsection 373.414(7), F.S., regarding any authority to apply state water quality standards within any works, impoundments, reservoirs, and other watercourses described in this subsection and any authority granted pursuant to Section 373.414, F.S. (1991), except for authority to protect threatened and endangered species in isolated wetlands:

1. Works, impoundments, reservoirs, and other watercourses of 0.5 acre or greater in combined areas on a project-wide basis, constructed and operated solely for stormwater treatment in accordance with a noticed exemption under Chapter 62-25, F.A.C., or a valid permit issued under Chapters 62-25 (excluding Rule 62-25.042), 62-330, 40E-4, F.A.C., except those permitted as wetland stormwater treatment systems.

2. Works, impoundments, reservoirs, and other watercourses of 0.5 acres or greater in combined area on a project-wide basis, constructed and operated solely for stormwater treatment before a permit was required under Chapters 62-25, 40E-4, F.A.C.

(c) The exemptions in paragraphs (a) and (b) above shall not apply to works, impoundments, reservoirs or other watercourses that are:

1. Currently wetlands which existed before construction of the stormwater treatment system and were incorporated in it;

2. Being altered through expansion into wetlands or other surface waters; or

3. Wetlands created, enhanced or restored as mitigation for wetland or other surface water impacts under a permit issued by the Department or the District.

(d) Alterations and maintenance of works, impoundments, reservoirs and other watercourses exempt under this subsection shall not be considered in determining whether the wetland permitting threshold in Rule 40E-4.0415 or subsection 40E-40.302(2), F.A.C., are met or exceeded.

(e) Works, impoundments, reservoirs and other watercourses exempt under this subsection, other than isolated wetlands in systems described in paragraph (b) above, shall not be delineated under Section 373.421, F.S.

(f) This exemption shall not affect the application of state water quality standards, including those applicable to Outstanding Florida Waters, at the point of discharge to waters as defined in subsection 403.031(13), F.S.

(g) As used in this subsection, “solely for” means the reason for which a work, impoundment, reservoir, or other watercourse is constructed and operated, and such construction and operation would not have occurred but for the purposes identified in paragraphs (a) and (b) above. Furthermore, the phrase does not refer to a work, impoundment, reservoir, or other watercourse constructed or operated for multiple purposes. Incidental uses, such as occasional recreational uses, will not render the exemp-

tion inapplicable, so long as the incidental uses are not part of the original planned purpose of the work, impoundment, reservoir or other watercourse. However, for those works, impoundments, reservoirs, or other watercourses described in subparagraphs (a)3. and (b)1., use of the system for flood attenuation, whether originally planned or unplanned, shall be considered an incidental use so long as the works, impoundments, reservoirs, and other watercourses are no more than two acres larger than the minimum area required to comply with the applicable stormwater treatment requirements of Chapters 40E-4, 62-25, 62-330, F.A.C. For the purposes of this subsection, reuse from a work, impoundment, reservoir, or other watercourse is part of treatment or disposal.

(2) Surface Waters or Wetlands Created by Mosquito Control Activities. Construction, alteration, operation, maintenance, removal, and abandonment of stormwater management systems, dams, impoundments, reservoirs, appurtenant works, or works, in, on, or over lands that have become surface waters or wetlands solely because of mosquito control activities undertaken as a part of a governmental mosquito control program, and which lands were neither surface water or wetlands before such activities, shall be exempt from the provisions in this Chapter adopted by the District to implement subsections 373.414(1) through (6); 373.414(7), F.S., regarding any authority granted pursuant to Sections 373.414, F.S. (1991); 373.414(8) and 373.414(10), F.S.

(3) The performance of activities in accordance with the provisions of the exemptions set forth in this section does not relieve the person or persons who are using the exemption or who are constructing or otherwise implementing the activity from meeting the permitting or performance requirements of other District rules.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.406, 373.413, 373.416, 403.813(2) FS. History–New 10-3-95, Amended 5-28-00.

40E-4.054 Modification of Exempt Projects.

In order to modify a project which was exempt from permitting under this chapter, an environmental resource permit must be obtained, unless the proposed modification of the surface water management system qualifies for an exemption pursuant to Rule 40E-4.051, F.A.C.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.406, 373.413, 373.416 FS. History–New 3-9-83, Amended 4-20-94, 10-3-95, 5-28-00.

40E-4.091 Publications, Rules and Interagency Agreements Incorporated by Reference.

(1) The following publications, rules and interagency agreements are incorporated by reference into this chapter, Chapters 40E-40, 40E-41 and 40E-400, F.A.C.:

(a) “Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District – September, 2003”.

(b) 50 Code of Federal Regulations, Section 17.12; and Rules 68A-27.003, 68A-27.004, and 68A-27.005, F.A.C.

(c) Operating Agreement Concerning Regulation Under Part IV, Chapter 373, F.S., and Aquaculture General Permits under Section 403.814, F.S., between South Florida Water Management District and Department of Environmental Protection, effective December, 1998.

(d) State water quality standards set forth in Chapters 62-3, 62-4, 62-302, 62-520, 62-522 and 62-550, F.A.C.

(e) Chapter 62-312, Part IV, F.A.C., “Additional Criteria for Dredging and Filling Within Outstanding Florida Waters in Monroe County”.

(f) 40 Code of Federal Regulations, Section 264.143(f), F.S., for the purpose of providing financial responsibility and corporate guarantee requirements.

(g) Chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (Florida Department of Environmental Protection, 1988).

(h) Chapter 62-340, F.A.C., as ratified by Section 373.4211, F.S., for the purpose of delineating wetlands and other surface waters.

(i) Chapter 3, Roadside Design Guide (American Association of State Highway and Transportation Officials, October, 1988).

(j) 30 Code of Federal Regulations, Section 800.23 for the purpose of providing self-bonding requirements.

(k) Delegation Agreement among the Florida Department of Environmental Protection, the South Florida Water Management District, and Broward County, (dated May 22, 2001).

(2) The documents listed in subsection (1) are available from District Service Centers upon request.

Specific Authority 373.044, 373.103(8), 373.113, 373.171, 373.413, 373.441 FS. Law Implemented 373.413, 373.4135, 373.4137, 373.414, 373.4142, 373.416, 373.418, 373.421, 373.426, 373.441 FS. History–New 9-3-81, Amended 1-31-82, 12-1-82, Formerly 16K-4.035(1), Amended 5-1-86, 7-1-86, 3-24-87, 4-14-87, 4-21-88, 11-21-89, 11-15-92, 1-23-94, 4-20-94, 10-3-95, 1-7-97, 12-3-98, 5-28-00, 8-16-00, 1-17-01, 7-19-01, 6-26-02, 6-26-02, 4-6-03, 4-14-03, 9-16-03.

40E-4.101 Content of Permit Applications.

(1) Applications for permits required by this chapter shall be filed with the District Service Center which will review the application as set forth in Rule 40E-1.6025, F.A.C. The application shall contain:

(a) The information required in subsection 373.413(2), F.S.

(b) One original and four copies of Joint Water Management District/Department of Environmental Protection/U.S. Army Corps of Engineers Environmental Resource Permit Application Form No. 0971 and five copies of drawings, calculations, environmental information, and engineering details sufficient to define the nature, scope, intent and functioning of the work proposed. This information must include at a minimum: flood protection, water quality, environmental impacts, proposed mitigation, water supply, and water conservation elements.

(2) The application must be signed by the owner or the owner's authorized agent and include documentation of ownership. Applications signed by agents must contain a letter of authorization which is signed by the owner. Those having the right to exercise the power of eminent domain or having a contract to purchase real property may apply for a permit, however, the permit shall prohibit commencement of work until the permittee provides proof of ownership to the District. A permit shall only be issued to the record title holder, holder of a recorded easement conveying the right to utilize the property for a purpose consistent with the authorization requested in the permit application, those having the right to exercise the power of eminent domain or having a contract to purchase real property. A Notice of Individual Environmental Resource or Surface Water Management Permit shall be filed in the county where the property is located. This notice shall not be considered an encumbrance upon the property.

(3) Environmental resource permit applications shall be filed and processed in accordance with Chapters 120 and 373, F.S., following the procedures set forth in Chapter 40E-1, F.A.C., and utilizing the forms incorporated by reference into Rule 40E-1.659, F.A.C.

(4) Applicants are advised that Chapter 471, F.S., sets forth certification requirements for engineering activities. Where required by law or District rule, surface water management system design plans must be signed and sealed by a professional engineer or other individual authorized by law. Chapter 471, F.S., sets forth exemptions to engineer certification.

Specific Authority 373.016, 373.044, 373.113, 373.171 FS. Law Implemented 373.016, 373.117, 373.413, 373.416, 373.426 FS. History–New 9-3-81, Amended 1-31-82, 12-1-82, Formerly 16K-4.03(2), 16K-4.07(2), 16K-4.09(2), Amended 7-1-86, 11-21-89, 4-20-94, 10-3-95, 5-28-00, 4-14-03, 8-14-03.

40E-4.201 Forms and Instructions.

(1) District forms and instructions have been approved by the Governing Board and are listed in Rule 40E-1.659, F.A.C.

(2) Forms and instructions are available from District Service Centers upon request.

Specific Authority 120.53(1), 373.044, 373.113, 373.118 FS. Law Implemented 120.53(1), 373.044, 373.113, 373.116, 373.118, 373.229, 373.413, 373.421 FS. History–New 10-3-95.

40E-4.205 Permit Application Processing Fees.

There shall be a non-refundable permit application processing fee as specified by Rule 40E-1.607, F.A.C., made payable to the District at the time a conceptual approval, individual or general permit application is submitted.

Specific Authority 373.044, 373.109, 373.113, 373.171, 373.421 FS. Law Implemented 373.109, 373.421 FS. History–New 10-3-95.

40E-4.301 Conditions for Issuance of Permits.

(1) In order to obtain a standard general, individual, or conceptual approval permit under this chapter or Chapter 40E-40, F.A.C., an applicant must provide reasonable assurance that the construction, alteration, operation, maintenance, removal or abandonment of a surface water management system:

(a) Will not cause adverse water quantity impacts to receiving waters and adjacent lands;

(b) Will not cause adverse flooding to on-site or off-site property;

(c) Will not cause adverse impacts to existing surface water storage and conveyance capabilities;

(d) Will not adversely impact the value of functions provided to fish and wildlife and listed species by wetlands and other surface waters;

(e) Will not adversely affect the quality of receiving waters such that the water quality standards set forth in Chapters 62-4, 62-302, 62-520, 62-522 and 62-550, F.A.C., including any antidegradation provisions of paragraphs 62-4.242(1)(a) and (b), subsections 62-4.242(2) and (3), and Rule 62-302.300, F.A.C., and any special standards for Outstanding Florida Waters and Outstanding National Resource Waters set forth in subsections 62-4.242(2) and (3), F.A.C., will be violated;

(f) Will not cause adverse secondary impacts to the water resources;

(g) Will not adversely impact the maintenance of surface or ground water levels or surface water flows established pursuant to Chapter 373.042, F.S.;

(h) Will not cause adverse impacts to a work of the District established pursuant to Section 373.086, F.S.;

(i) Will be capable, based on generally accepted engineering and scientific principles, of being performed and of functioning as proposed;

(j) Will be conducted by an entity with the sufficient financial, legal and administrative capability to ensure that the activity will be undertaken in accordance with the terms and conditions of the permit, if issued; and

(k) Will comply with any applicable special basin or geographic area criteria established in Chapter 40E-41, F.A.C.

(2) If the applicant is unable to meet water quality standards because existing ambient water quality does not meet standards, the applicant must comply with the requirements set forth in subsection 4.2.4.5 of the Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District – November 1996.

(3) The standards and criteria, including the mitigation provisions, and the provisions for elimination or reduction of impacts, contained in the Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District – November 1996 adopted by reference in Rule 40E-4.091, F.A.C., shall determine whether the reasonable assurances required by subsection 40E-4.301(1) and Rule 40E-4.302, F.A.C., have been provided.

(4) For all environmental resource permit applications and permit applications under subsections 373.414(11)-(16), F.S., which involve activities located on submerged lands owned by the Board of Trustees of the Internal Improvement Trust Fund under Chapter 253 or 258, F.S., the District shall conduct concurrent application and review procedures in accordance with Section 373.427, F.S., Chapter 18-21, F.A.C., and Rules 62-343.075 and 18-18.014, F.A.C.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416, 373.426 FS. History–New 9-3-81, Amended 1-31-82, 12-1-82, Formerly 16K-4.035(2), 16K-4.30, Amended 7-1-86, 3-24-87, 4-14-87, 7-9-87, 4-21-88, 4-20-94, 10-3-95, 4-1-96, 1-7-97.

40E-4.302 Additional Conditions for Issuance of Permits.

(1) In addition to the conditions set forth in Rule 40E-4.301, F.A.C., in order to obtain a standard general, individual, or conceptual approval permit under this chapter or Chapter 40E-40, F.A.C., an applicant must provide reasonable assurance that the construction, alteration, operation, maintenance, removal, and abandonment of a system:

(a) Located in, on, or over wetlands or other surface waters will not be contrary to the public interest, or if such an activity significantly degrades or is within an Outstanding Florida Water, that the activity will be clearly in the public interest, as determined by balancing the following criteria as set forth in subsections 4.2.3. through 4.2.3.7 of the Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District:

1. Whether the activity will adversely affect the public health, safety or welfare or the property of others;

2. Whether the activity will adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats;

3. Whether the activity will adversely affect navigation or the flow of water or cause harmful erosion or shoaling;

4. Whether the activity will adversely affect the fishing or recreational values or marine productivity in the vicinity of the activity;

5. Whether the activity will be of a temporary or permanent nature;

6. Whether the activity will adversely affect or will enhance significant historical and archaeological resources under the provisions of Section 267.061, F.S.; and

7. The current condition and relative value of functions being performed by areas affected by the proposed activity.

(b) Will not cause unacceptable cumulative impacts upon wetlands and other surface waters as set forth in subsections 4.2.8. through 4.2.8.2 of the Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District.

(c) Located in, adjacent to or in close proximity to Class II waters or located in Class II waters or Class III waters classified by the Department as approved, restricted or conditionally restricted for shellfish harvesting as set forth and incorporated in Chapter 62R-7, F.A.C., will comply with the additional criteria in subsection 4.2.5 of the Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District adopted by reference in Rule 40E-4.091, F.A.C.

(d) Which constitute vertical seawalls in estuaries or lagoons, will comply with the additional criteria provided in subsection 4.2.6 of the Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District adopted by reference in Rule 40E-4.091, F.A.C.

(2) When determining whether the applicant has provided reasonable assurances that District permitting standards will be met, the District shall take into consideration a permit applicant’s violation of any Department rules adopted pursuant to Sections 403.91-.929, F.S. (1984 Supp.), as amended, which the District had the responsibility to

enforce pursuant to a delegation, or any District rules adopted pursuant to Part IV, Chapter 373, F.S., relating to any other project or activity and efforts taken by the applicant to resolve these violations. The Department's delegation to the District to enforce the rules adopted pursuant to Sections 403.91-.929, F.S. (1984 Supp.), as amended, is set forth in the "Operating Agreement Concerning Regulation Under Part IV, Chapter 373, F.S., and Aquaculture General Permits under Section 403.814, F.S., between South Florida Water Management District and Department of Environmental Protection" dated October 27, 1998, incorporated by reference in Rule 40E-4.091, F.A.C.

Specific Authority 373.044, 373.113, 373.171, 373.414(9) FS. Law Implemented 373.042, 373.409, 373.413, 373.414, 373.416, 373.426, 380.23 FS. History–New 10-3-95, Amended 1-7-97, 12-3-98, 5-28-00.

40E-4.303 Environmental Resource Permit Authorization.

(1) For individual and standard general permits issued pursuant to Chapters 40E-4 and 40E-40, F.A.C., a completed permit application shall also constitute an application for certification of compliance with state water quality standards where necessary pursuant to Section 401, Public Law 92-500, 33 USC Section 1341. Issuance of the permit shall constitute certification of compliance with state water quality standards unless the permit is issued pursuant to the net improvement provisions of subsection 373.414(1)(b), F.S., or the permit specifically states otherwise.

(2) For projects located in or seaward of coastal counties, and which have regulated activities in, on or over wetlands or other surface waters, as delineated by the methodology ratified pursuant to Section 373.4211, F.S., a complete application for an individual or standard general environmental resource permit shall constitute a request for the State's concurrence that the project is consistent with the Florida Coastal Zone Management Program as provided in Section 307 of the Coastal Zone Management Act and 15 CFR 930, Subpart D. Issuance of the permit shall constitute such concurrence of consistency.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416, 373.421 FS. History–New 10-3-95.

40E-4.305 Conceptual Approvals.

(1) Conceptual approvals constitute final District action and are binding to the extent that adequate data has been submitted for review by the applicant during the review process.

(2) A conceptual approval does not authorize construction, alteration, operation, maintenance, removal or abandonment of a surface water management system or the establishment and operation of a mitigation bank.

(3) A permit application submitted pursuant to a conceptual approval must be consistent with the staff report and conditions of the conceptual approval. Primary areas for consistency comparisons include type of land use, percent imperviousness, allowable discharge, wetland and other surface water impacts and proposed mitigation, control elevations, sources of water supply and detention/retention volumes. To the extent that there is any inconsistency between the permit and staff report and other information in the application file, the permit and staff report shall control.

(4) For phased projects, the approval process must begin with an application for a conceptual approval which shall be the first permit issued for the project. An application for construction authorization of the first phase(s) may also be included as a part of the initial application. As the permittee desires to construct additional phases, new applications shall be processed as individual or standard general environmental resource permit applications pursuant to the conceptual approval. The conceptual approval, individual and standard general permits shall be modified in accordance with conditions contained in Chapters 40E-4 and 40E-40, F.A.C.

(5) Issuance of a conceptual approval permit pursuant to Chapter 40E-4, F.A.C., shall not relieve the applicant of any requirements for obtaining a permit to construct, alter, operate, maintain, remove or abandon a surface water management system or establish or operate a mitigation bank, nor shall the conceptual approval permit applicant be relieved of the District's informational requirements or the need to meet the standards of issuance of permits pursuant to Chapters 40E-4 or 40E-40, F.A.C.

(6) An applicant may seek conceptual approval under this chapter concurrently with a Development of Regional Impact (DRI) application for development approval (ADA) and a local government comprehensive plan amendment as allowed by subsection 380.06(9)(a)1., F.S. For projects which have filed an application for a Conceptual Approval concurrently with an Application for Development Approval (ADA) for a Development of Regional Impact (DRI), conceptual approval also means "conceptual agency review" as defined in subsection 380.06(9)(a)2., F.S.

(7) In the District's evaluation of permit applications, rules and criteria in effect at the time of the issuance of the conceptual approval, or at the time of the most recent modification of the Conceptual Approval, shall apply unless particular aspects of the project were not previously addressed in the Conceptual Approval. In such a case, rules and criteria in effect at the time of the individual or general permit application is completed shall apply to review of the previously unaddressed aspects.

(8) Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under Rule 40E-4.042, F.A.C., provides otherwise.

(9) An individual environmental resource permit application cannot be used alone to modify a Conceptual Approval. The intention to modify the conceptual approval must be explicitly stated or requested. Conceptual approval and individual environmental resource permits can be modified or issued concurrently under a single application.

(10) Applications for individual project phases, where no conceptual approval has been obtained, shall be considered only when the phases are totally independent of, or make sufficient provisions for, adjacent lands.

Specific Authority 373.044, 373.113, 373.171, 380.06(9) FS. Law Implemented 373.413, 373.416, 373.421(2), 380.06(9) FS. History–New 10-3-95, Amended 4-14-03.

40E-4.311 Variances from Specified Review Criteria for Environmental Resource Permits.

(1) The Governing Board is authorized to grant a variance from the provisions of Section 373.414, F.S., paragraph 40E-4.301(1)(e) or Rule 40E-4.302, F.A.C., pursuant to Section 403.201, F.S. The variance under this rule is provided in addition to the variance and waiver procedures set forth in Rule 28-104, F.A.C., which implements Section 120.542, F.S.

(2) A person seeking a variance must demonstrate that any hardship asserted as a basis of the need for a variance is peculiar to the affected property and not self-imposed and that the grant of a variance will be consistent with the general intent and purpose of this chapter.

(3) Any person seeking a variance shall file a petition for a variance that contains the following information:

(a) The petitioner’s name and signature.

(b) The statute or rule from which the variance is sought.

(c) Facts showing that a variance should be granted for one of the reasons set forth in Section 403.201, F.S.

(d) The time period for which the variance is sought, not to exceed the time period permitted by law, including the reasons and facts supporting the time period.

(e) The requirements which the petitioner can meet including the date or time when the requirements will be met.

(f) The steps or measures the petitioner is taking to meet the requirement from which the variance is sought. If the request is pursuant to subsection 40E-4.311(1), F.A.C., above, the petitioner shall include a schedule when compliance will be achieved.

(g) The social, economic and environmental impacts on the applicant, residents of the area and of the state if the variance is granted.

(h) The social, economic and environmental impacts on the applicant, residents of the area and of the state if the variance is denied.

(4) The District shall review the application within a reasonable period of time after receipt to determine if the application is complete. If the application is determined to be incomplete, the applicant shall be afforded an opportunity to supply additional information before the District evaluates the merits of the request.

(5) The District shall prepare a notice of proposed agency action regarding the petition for a variance. The District shall publish this notice one time in the Florida Administrative Weekly, and one time in a newspaper of general circulation, as defined in Section 50.031, F.S., in the county in which the property for which the variance is sought is located.

(6) Renewals of variances shall be applied for in the same manner as the initial variance.

Specific Authority 373.044, 373.113, 373.171, 373.414(17) FS. Law Implemented 403.201 FS. History–New 10-3-95, Amended 7-2-98, 6-12-00.

40E-4.321 Duration of Permits.

(1) Unless revoked or otherwise modified the duration of an environmental resource permit issued under this chapter or Chapter 40E-40, F.A.C., is as follows:

(a) For a conceptual approval, two years from the date of issuance or the date specified as a condition of the permit, unless within that period an application for an individual or standard general permit is filed for any portion of the project. If an application for an environmental resource permit is filed, then the conceptual approval remains valid until final action is taken on the environmental resource permit application. If the application is granted, then the conceptual approval is valid for an additional two years from the date of issuance of the permit. Conceptual approvals which have no individual or standard general environmental resource permit applications filed for a period of two years shall expire automatically at the end of the two year period.

(b) For a conceptual approval filed concurrently with a development of regional impact (DRI) application for development approval (ADA) and a local government comprehensive plan amendment, the duration of the conceptual approval shall be two years from whichever one of the following occurs at the latest date:

1. The effective date of the local government's comprehensive plan amendment,

2. The effective date of the local government development order,

3. The date on which the District issues the conceptual approval, or

4. The date on which the District issues a final order pertaining to the resolution of any Section 120.57, F.S., administrative proceeding or other legal appeals.

(c) For an individual or standard general environmental resource permit, the construction phase authorizing construction, removal, alteration or abandonment of a system shall expire five years from the date of issuance or such amount of time as made a condition of the permit.

(d) For an individual or standard general environmental resource permit, the operational phase of the permit is perpetual for operation and maintenance.

(e) For a noticed general permit issued pursuant to Chapter 40E-400, F.A.C., five years from the date the notice of intent to use the permit is provided to the District.

(2)(a) Unless prescribed by special permit condition, permits expire automatically according to the timeframes indicated in this rule. If application for extension is made in writing pursuant to subsection (3), the permit shall remain in full force and effect until:

1. The Governing Board takes action on an application for extension of an individual permit, or

2. Staff takes action on an application for extension of a standard general permit.

(b) Installation of the project outfall structure shall not constitute a vesting of the permit.

(3) The permit extension shall be issued provided that a permittee files a written request with the District showing good cause prior to the expiration of the permit. For the purpose of this rule, good cause shall mean a set of extenuating circumstances outside of the control of the permittee. Requests for extensions, which shall include documentation of the extenuating circumstances and how they have delayed this project, will not be accepted more than 180 days prior to the expiration date.

(4) Substantial modifications to Conceptual Approvals will extend the duration of the Conceptual Approval for two years from the date of issuance of the modification. For the purposes of this section, the term "substantial modification" shall mean a modification which is reasonably expected to lead to substantially different water resource or environmental impacts which require a detailed review.

(5) Substantial modifications to individual or standard general environmental resource permits issued pursuant to a permit application extend the duration of the permit for three years from the date of issuance of the modification. Individual or standard general environmental resource permit modifications do not extend the duration of a conceptual approval.

(6) Permit modifications issued pursuant to paragraph 40E-4.331(2)(b), F.A.C. (letter modifications) do not extend the duration of the permit.

(7) Failure to complete construction or alteration of the surface water management system and obtain operation phase approval from the District within the permit duration shall require a new permit authorization in order to continue construction unless a permit extension is granted.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416, 373.419, 373.426 FS. History–New 9-3-81, Amended 1-31-82, 12-1-82, Formerly 16K-4.07(4), Amended 7-1-86, 4-20-94, 10-3-95, 5-28-00.

40E-4.331 Modification of Permits.

An application for modification of an environmental resource, or surface water management permit shall be processed in accordance with this rule, unless the permit has expired or has been otherwise revoked or suspended.

(1) Applications to modify a conceptual approval may be made for an alteration of the design of the permitted surface water management system. Those portions of the modified project, and any additional areas impacted by the modification(s), shall be reviewed in accordance with the same criteria in effect at the time of said modification.

(2) Applications to modify environmental resource, or surface water management individual or standard general permits shall be made by the following methods:

(a) District permit application as described in Rule 40E-4.101, F.A.C. Permit modification applications shall be reviewed using the same criteria as new applications for those portions of the project proposed for, or affected by, the modification;

(b) By letter, provided the requested modification does not:

1. Substantially modify the permit authorization, or any permit conditions;

2. Increase the authorized off-site discharge;

3. Impact the environmental features of the project including wetlands and other surface waters;

4. Decrease the required retention/detention;

5. Decrease the required flood control elevations for roads or buildings; or

6. Decrease pollution removal efficiency.

(c) Modifications pursuant to paragraph (2)(b) above are acknowledged and approved by letter from the Regulation Department Director or designee through correspondence to the permittee.

(3) The same review time and informational requirements which apply to initial permit applications shall apply to all applications to modify an existing valid permit.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416(1) FS. History–New 12-1-82, Formerly 16K-2.031(1), 16K-2.032(1)(a), Amended 7-1-86, 11-21-89, 4-20-94, 10-3-95.

40E-4.341 District Revocation or Modification of Permits.

(1) The Governing Board may revoke a permit in accordance with the provisions of Sections 373.429 and 120.60(5), F.S., and Rules 40E-1.609 and 28-107.004, F.A.C.

(2) The Governing Board shall revoke or modify a permit at any time if it determines that a stormwater management system, dam, impoundment, reservoir, appurtenant work, works or any combination thereof, has become a danger to the public health or safety, or if its operation has become inconsistent with the objectives of the District.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.429 FS. History–New 12-1-82, Amended 7-1-86, 4-20-94, 10-3-95, 7-2-98, 5-28-00.

40E-4.351 Transfer of Permits.

(1) Any transfer of project ownership or transfer of a permit is subject to the requirements of Rules 40E-1.6105 and 40E-1.6107, F.A.C.

(2) Notification of a transfer shall not constitute a permit transfer under Rule 40E-1.6107, F.A.C.

(3) The District shall approve the transfer of the permit if the requirements set forth in Rule 40E-1.6107, F.A.C., are met. If the District proposes to deny the transfer, it shall provide both the existing permittee and the proposed transferee a written objection to such transfer together with the notice of rights to request a hearing pursuant to Section 120.57, F.S., regarding such agency action.

(4) Until the permit is transferred pursuant to Rule 40E-1.6107, F.A.C., the permittee shall be liable for compliance with the terms of the permit.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416(2) FS. History–New 9-3-81, Amended 12-1-82, Formerly 16K-4.07(4), Amended 4-20-94, 10-3-95.

40E-4.361 Conversion from Construction Phase to Operation Phase.

(1) In order to convert an environmental resource or surface water management permit from the construction phase to the operational phase, the permittee shall submit the following:

(a) A completed and executed Request for Conversion of Environmental Resource/Surface Water Management Permit from Construction Phase to Operation

Phase and Transfer of Permit to the Operating Entity Form No. 0920, incorporated by reference in Rule 40E-1.659, F.A.C.;

(b) A completed and executed Environmental Resource/Surface Water Management Permit Construction Completion Certification Form No. 0881A or Environmental Resource/Surface Water Management Permit Construction Completion Certification - For Projects Permitted Prior to October 3, 1995 Form No. 0881B, incorporated by reference in Rule 40E-1.659, F.A.C., in accordance with Section 10.0 of the “Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District", incorporated by reference in Rule 40E-4.091, F.A.C.; and

(c) Documentary evidence of satisfaction of permit conditions, other than long-term monitoring.

(2) The operation phase of a surface water management system which was required to be designed by a professional engineer or other individual authorized by law does not become effective until all of the following criteria have occurred:

(a) Within 30 days after completion of construction of the system, the permittee shall submit a signed and sealed certification by a professional engineer or other individual authorized by law indicating that the system has been constructed and that the system is ready for inspection by the District;

(b) The professional engineer or other individual authorized by law shall certify that:

1. The system has been constructed substantially in accordance with approved plans and specifications, or;

2. Any deviations from the approved plans and specifications will not prevent the system from functioning in compliance with the requirements of this rule and Section 10.0 of the “Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District – April 2003.” The professional engineer or other individual authorized by law shall note and explain substantial deviations from the approved plans and specifications and provide two copies of as-built drawings to the District; and

(c) As-built drawings shall be the permitted drawings revised to reflect any changes made during construction. Both the original and revised specifications must be clearly shown. The plans must be clearly labeled as “as-built” drawings. All surveyed dimensions and elevations required shall be certified by a registered surveyor.

(3) A conversion to the operational phase shall not occur until a responsible entity meeting the requirements in Section 9.0, of the “Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District –April 2003” has been established to operate and maintain the system. The entity must be pro-

vided with sufficient ownership, legal or equitable interest so that it has control over all water management facilities authorized by the permit.

(4) Upon the District's confirmation of the submitted information, the permit shall be converted from the construction phase to the operation phase. If the operational entity differs from the initial permittee, the transfer shall be subject to Rule 40E-1.6107, F.A.C. (the Permit Transfer rule).

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.413, 373.416 FS. History–New 10-3-95, Amended 1-7-97, 4-14-03, 9-16-03.

40E-4.381 General Conditions.

(1) The following general conditions shall be applicable to and binding on all permits issued pursuant to this chapter and Chapter 40E-40, F.A.C., unless waived by the District upon a determination that the conditions are inapplicable to the activity authorized by the permit. These conditions are enforceable under Part IV, Chapter 373, F.S.

(a) All activities authorized by this permit shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit and Part IV, Chapter 373, F.S.

(b) This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by the District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

(c) Activities approved by this permit shall be conducted in a manner which does not cause violations of state water quality standards. The permittee shall implement best management practices for erosion and pollution control to prevent violation of state water quality standards. Temporary erosion control shall be implemented prior to and during construction, and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. All practices shall be in accordance with the guidelines and specifications described in Chapter 6 of the Florida Land Development Manual; A Guide to Sound Land and Water Management (Department of Environmental Regulation, 1988), incorporated by reference in Rule 40E-4.091, F.A.C., unless a project-specific erosion and sediment control plan is approved as part of the permit. Thereafter the permittee shall be responsible for

the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

(d) The permittee shall notify the District of the anticipated construction start date within 30 days of the date that this permit is issued. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District an Environmental Resource/Surface Water Management Permit Construction Commencement Notice Form No. 0960, incorporated by reference in Rule 40E-1.659, F.A.C., indicating the actual start date and the expected completion date.

(e) When the duration of construction will exceed one year, the permittee shall submit construction status reports to the District on an annual basis utilizing the District's Environmental Resource/Surface Water Management Permit Annual Status Report for Surface Water Management System Construction Form No. 0961, incorporated by reference in Rule 40E-1.659, F.A.C. The Annual Status Report Forms shall be submitted the following June of each year.

(f) Within 30 days after completion of construction of the permitted activity, the permittee shall submit a written statement of completion and certification by a professional engineer or other individual authorized by law, utilizing the supplied Environmental Resource/Surface Water Management Permit Construction Completion Certification Form No. 0881A, or Environmental Resource/Surface Water Management Permit Construction Completion Certification - For Projects Permitted Prior to October 3, 1995 Form No. 0881B, incorporated by reference in Rule 40E-1.659, F.A.C. The statement of completion and certification shall be based on on-site observation of construction or review of as-built drawings for the purpose of determining if the work was completed in compliance with permitted plans and specifications. This submittal shall serve to notify the District that the system is ready for inspection. Additionally, if deviation from the approved drawings are discovered during the certification process, the certification must be accompanied by a copy of the approved permit drawings with deviations noted. Both the original and revised specifications must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawings. All surveyed dimensions and elevations shall be certified by a registered surveyor.

(g) The operation phase of this permit shall not become effective: until the permittee has complied with the requirements of condition (f) above, has submitted a Request for Conversion of Environmental Resource/Surface Water Management Permit from Construction Phase to Operation Phase and Transfer of Permit to the Operating Entity Form No. 0920, incorporated by reference in Rule 40E-1.659, F.A.C.; the District determines the system to be in compliance with the permitted plans and specifications; and the entity approved by the District in accordance with Sections 9.0 and 10.0 of the "Basis

of Review for Environmental Resource Permit Applications within the South Florida Water Management District – April 2003," accepts responsibility for operation and maintenance of the system. The permit shall not be transferred to such approved operation and maintenance entity until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall initiate transfer of the permit to the approved responsible operating entity if different from the permittee. Until the permit is transferred pursuant to Rule 40E-1.6107, F.A.C., the permittee shall be liable for compliance with the terms of the permit.

(h) Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the initiation of the permitted use of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans

and permit conditions prior to transfer of responsibility for operation and maintenance of the phase or portion of the system to a local government or other responsible entity.

(i) For those systems that will be operated or maintained by an entity that will require an easement or deed restriction in order to enable that entity to operate or maintain the system in conformance with this permit, such easement or deed restriction must be recorded in the public records and submitted to the District along with any other final operation and maintenance documents required by Sections 9.0 and 10.0 of the "Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District – April 2003," prior to lot or unit sales or prior to the completion of the system, whichever occurs first. Other documents concerning the establishment and authority of the operating entity must be filed with the Secretary of State where appropriate. For those systems which are proposed to be maintained by the county or municipal entities, final operation and maintenance documents must be received by the District when maintenance and operation of the system is accepted by the local government entity. Failure to submit the appropriate final documents will result in the permittee remaining liable for carrying out maintenance and operation of the permitted system and any other permit conditions.

(j) Should any other regulatory agency require changes to the permitted system, the permittee shall notify the District in writing of the changes prior to implementation so that a determination can be made whether a permit modification is required.

(k) This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations prior to the start of any activity approved by this permit. This permit does not convey to the permittee or create in the permittee any

property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40E-4 or Chapter 40E-40, F.A.C.

(l) The permittee is hereby advised that Section 253.77, F.S., states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the state, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.

(m) The permittee must obtain a water use permit prior to construction dewatering, unless the work qualifies for a general permit pursuant to subsection 40E-20.302(4), F.A.C., also known at the “No Notice” rule.

(n) The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any system authorized by the permit.

(o) Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under Rule 40E-4.042, F.A.C., provides otherwise.

(p) The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of a permitted system or the real property on which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rules 40E-1.6105 and 40E-1.6107, F.A.C. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations prior to the sale, conveyance or other transfer of the system.

(q) Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with the plans and specifications approved by the permit.

(r) If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the appropriate District Service Center.

(s) The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

(2) In addition to those general conditions set forth in subsection (1), the Governing Board shall impose on any permit granted under this chapter and Chapter 40E-40, F.A.C., such reasonable project-specific special conditions as are necessary to assure that the permitted system will meet the conditions for issuance in Rules 40E-4.301 and 40E-4.302, F.A.C. Upon receipt of notice of proposed agency action, any substantially affected persons shall have the right to request a hearing in accordance with Rules 40E-1.511 and 40E-1.521, F.A.C.

Specific Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.116, 373.229, 373.413, 373.416, 373.421, 373.422, 373.426 FS. History–New 9-3-81, Amended 1-31-82, 12-1-82, Formerly 16K-4.07(3), 16K-4.38, Amended 7-1-86, 4-20-94, 10-3-95, 1-7-97, 4-14-03, 9-16-03.

40E-4.451 Emergency Authorization.

(1) The District issues two types of emergency authorizations, pursuant to the procedures in Rule 40E-1.6115, F.A.C., as set forth below:

(a) Authorization to begin construction, alteration, operation, maintenance, removal or abandonment of a system prior to obtaining a permit may be applied for, in writing, when emergency conditions justify. However, no such permission shall be granted unless an environmental resource permit application for the proposed activity has been submitted. A serious set of unforeseen or unforeseeable circumstances must exist to create an emergency. Mere carelessness or lack of planning on the part of the applicant shall not be sufficient grounds to warrant the granting of emergency authorization.

(b) Upon the District's determination that an emergency exists within its geographic jurisdiction or any part thereof, the Executive Director shall issue an emergency order which shall describe the conditions which are causing the emergency and the type of corrective action necessary to minimize or abate the emergency condition.

1. An emergency exists when immediate action is necessary to protect the public health, safety or welfare; the health of animals, fish or aquatic life; the works of the District; a public water supply, or recreational, commercial, industrial, agricultural, or other reasonable uses.

2. The emergency order shall be delivered by service of process or by personal delivery by an agent of the District to the person responsible for conducting the corrective actions, or their agent. Such action shall include appropriate public notice in accordance with Chapter 50, F.S.

(2) All emergency authorization orders shall expire upon the granting or denial of the pending permit application, or as otherwise specified in the emergency authorization order.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.119(2), 373.413 FS. History–New 9-3-81, Formerly 16K-4.13, Amended 10-3-95, 7-2-98.

Chapter 40E-40, F.A.C.
Environmental Resource Standard General Permits

Chapter 40E-40 Environmental Resource Standard General Permits

[Note: The text on this page and the next provides a brief overview of the provisions of Chapter 40E-40, Florida Administrative Code (F.A.C.). The overview text is intended only to provide a basic understanding of the Chapter, and should not be used in place of the duly-adopted rule language or in a manner which is inconsistent with Chapter 40E-40, F.A.C.]

This Chapter sets forth the requirements for qualification by a project for certain incidental site activities prior to permit issuance and for an Environmental Resource Standard General permit. The specific detail design criteria set forth in another part of this manual (the *Basis of Review*) must still be met but the lawful time period (60 days) for processing the complete permit application is shorter than for projects regulated by Chapter 40E-4 (90 days). The rules in this Chapter may now be applied to projects in the lands named in Chapter 40E-41.

The following types of projects, systems, or activities may qualify for a Standard General Permit under this Rule Chapter:

1. Many works within the District which serve projects with less than 100 acres total land area and with less than ten boat slips and with construction or alteration of the surface water management system in, on, or over less than one acre of wetlands or other surface water, and which do not qualify for either a no-notice or a noticed general environmental resource permit (see Chapter 40E-400), are permitted by this rule, subject to conditions. (Subsection 40E-40.011(2) also contains descriptions of activities which will require an individual permit application.)

2. Limited site activities proposed in conjunction with work which has not only been described in a complete environmental resource permit application, but also received a preliminary staff recommendation of approval. Such activities might include, among others: upland clearing; limited earthwork and lake, road subgrade, and foundation construction; utility, fence, and construction trailer installation; and unconnected drainage facilities construction.

To apply for a standard general permit for any works qualifying under this Rule Chapter, except incidental site activities, the applicant must submit a properly-completed Joint Application for Environmental Resource Permit/Authorization to Use State Owned Submerged Lands/Federal Dredge and Fill Permit, Form 0971; the items and documents described in that Form; and the appropriate fee.

To apply for a standard general permit for incidental site activities under this Rule Chapter, the applicant must submit a plan or description of the proposed activities, any other appropriate documents, and the appropriate fee; and must provide certain assurances as to how the proposed activities would be conducted. (By submitting a properly-completed Application for a Standard General Permit for Incidental Site Activities, Form 0444; the items described in that Form; and the appropriate fee; an applicant will meet the submittal requirements for an incidental site activities general permit.)

Rules of the South Florida Water Management District

ENVIRONMENTAL RESOURCE STANDARD GENERAL PERMITS Chapter 40E-40, F.A.C.

Amended April 14, 2003

CHAPTER 40E-40 GENERAL ENVIRONMENTAL RESOURCE STANDARD PERMITS

40E-40.010 Review of Environmental Resource Standard General Permit Applications.
40E-40.011 Policy and Purpose.
40E-40.021 Definitions.
40E-40.031 Implementation.
40E-40.041 Permit Thresholds.
40E-40.042 Standard General Permit for Incidental Site Activities.
40E-40.051 Standard General Permit Authorization.
40E-40.061 Delegation of Authority Pertaining to General Environmental Resource Permits, General Surface Water Management Permits and Associated Sovereign Submerged Lands Authorizations.
40E-40.091 Publications, Rules and Interagency Agreements Incorporated by Reference.
40E-40.101 Content of Permit Application.
40E-40.112 Notice of Intent. (Repealed)
40E-40.141 Request for Additional Information.
40E-40.302 Conditions for Issuance of Permits.
40E-40.321 Duration of Permits.
40E-40.331 Modification of Permits.
40E-40.341 District Revocation or Modification of Permits.
40E-40.351 Transfer of Permits.
40E-40.381 General Conditions.
40E-40.391 Forms and Instructions.
40E-40.407 Permit Application Processing Fees.

40E-40.010 Review of Environmental Resource Standard General Permit Applications.

Environmental Resource Standard General permit applications are processed pursuant to Section 120.60, F.S., Part VI of Chapter 40E-1, F.A.C., and Chapter 28-107, F.A.C.

Specific Authority 120.54(5), 120.60 FS. Law Implemented 120.54(5), 120.60 FS. History–New 7-2-98.

40E-40.011 Policy and Purpose.

(1) The rules in this chapter authorize environmental resource standard general permits for certain surface water management systems which have been determined to be not harmful to the water resources of the District and to be not inconsistent with the objectives of the District. This chapter sets forth the requirements for qualifying for a standard general permit and the conditions under which it may be exercised. Unless expressly exempted by Rule 40E-4.051, F.A.C., surface water management systems

which do not qualify for a no notice or noticed general permit pursuant to Chapter 40E-400, F.A.C., and which do not qualify for a standard general permit pursuant to this chapter are required to obtain individual environmental resource permits pursuant to Chapter 40E-4, F.A.C.

(2) The District reserves the right to require an individual permit application for any system that does not comply with the provisions of this chapter; is harmful to the water resources of the District; is not consistent with the overall objectives of the District; is contrary to the provisions of Chapter 373, F.S.; or for which a substantial objection(s) has been received.

(3) The rules in this chapter also authorize standard general permits for incidental site activities in uplands which may be done in conjunction with the work set forth in an individual environmental resource permit application. Projects qualifying for a standard general permit for incidental site activities shall obtain an individual environmental resource permit for the proposed system and activities in, on, or over wetlands or other surface waters in accordance with this chapter, Chapter 40E-4 or 40E-400, F.A.C.

Specific Authority 373.044, 373.113, 373.118, 373.413(1) FS. Law Implemented 373.118, 373.413(1), 373.416 FS. History–New 9-3-81, Formerly 16K-4.021(1)(d), 16K-4.022(1)(e), Amended 7-26-87, 4-20-94, 10-3-95.

40E-40.021 Definitions.

As used in this chapter, all terms shall mean the same as defined in Chapter 373, F.S., and Rule 40E-4.021, F.A.C.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.019, 373.403, 373.413, 373.416, 373.419, 403.031(16), 704.06 FS. History–New 9-3-81, Amended 12-1-82, 7-26-87, 4-20-94, 10-3-95.

40E-40.031 Implementation.

(1) Rule 40E-4.031, F.A.C., specifies the effective dates for the environmental resource standard general permits granted in this chapter.

(2) The rules contained in this chapter shall apply to projects which do not have a complete permit application, as evidenced by a letter of completeness from the District prior to the effective date of these rules, unless the project is grandfathered pursuant to Section 373.414, F.S.

Specific Authority 373.044, 373.113, 373.118(1) FS. Law Implemented 373.103(1), Part IV, Ch. 373 FS. History–New 9-3-81, Amended 12-1-82, 7-26-87, 4-20-94, 10-3-95.

40E-40.041 Permit Thresholds.

(1) Any non-exempt surface water management systems which do not qualify for a no notice or noticed general environmental resource permit, and do not exceed the threshold for individual permits as listed below, shall obtain a standard general permit.

(2) Threshold conditions are as follows:

(a) The construction or alteration of a surface water management system, including dredging and filling, is proposed in, on, or over a total of one acre or more of wetlands or other surface waters; however, calculation of the one acre area shall not include:

1. Ditches and wholly owned ponds that were constructed in uplands;

2. Any isolated wetlands with a surface area of less than 0.5 acres.

(b) The system serves a project area of 100 acres or more in total land area;

(c) The system includes more than nine proposed boat slips.

(3) Notwithstanding the provisions of subsection (2), phases within a conceptually approved project shall be processed as standard general permits provided:

(a) The proposed activity is consistent with the conceptual approval permit;

(b) The approved conceptual plan includes the location and acreage of wetlands onsite, an assessment of wetland impacts, and a conceptual mitigation plan (if required);

(c) The approved conceptual plan includes the approximate size, location, and discharge points of the proposed stormwater management system.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.406(5), 373.413(1), 373.416 FS. History–New 4-20-94, Amended 10-3-95, 5-28-00, 6-26-02.

40E-40.042 Standard General Permit for Incidental Site Activities.

(1) Incidental site activities shall be conducted pursuant to the requirements of this rule.

(2) For purposes of this rule, “Incidental site activities” means site activities in uplands which may be conducted in conjunction and conformance with the work set forth in an individual permit such as: land clearing in uplands; minimal earthwork, lake construction; road subgrade construction; foundation construction; utility installation; fence installation; construction trailer installation; unconnected drainage facility construction; or other similar activities.

(3) In order to receive a permit under this rule the applicant must:

(a) Submit an environmental resource permit application deemed complete, as evidenced by a letter of completeness from the District.

(b) Receive a preliminary staff recommendation of approval of such application, and

(c) Submit Form 0444 and plans or a description of incidental site activities proposed, including proposed locations for work.

(d) Provide reasonable assurances that the conditions specified in Rule 40E-40.302, F.A.C., have been met.

(4)(a) The permittee shall not construct any works or engage in any land clearing activities within 50 feet of the landward extent of wetlands or other surface waters or proposed upland preservation areas on the project site.

(b) The permittee shall excavate no closer than 200 feet of the landward extent of wetlands or other surface waters on the project site, or as otherwise specified in the permit.

(5) Authorization to conduct incidental site activities pursuant to this rule must be approved by the Regulation Department Director or designee by letter to the applicant.

Specific Authority 373.044, 373.113 FS. Law Implemented 120.60(2), 373.103(4), 373.118, 373.413, 373.416 FS. History–New 9-3-81, Formerly 16K-4.021(1), 16K-4.022(1), Amended 12-1-82, 7-26-87, 4-20-94, 10-3-95, 5-28-00.

40E-40.051 Standard General Permit Authorization.

(1) Application procedures for standard general environmental resource permits are set forth in Rule 40E-1.603, F.A.C., and are incorporated by reference in this rule.

(2) Standard general environmental resource permit authorizations are set forth in Rule 40E-4.303, F.A.C., and are incorporated by reference in this rule.

(3) Agency action shall be taken no later than 60 days after a standard general permit application is declared complete, unless waived by the applicant or stayed by the filing of a petition for an administrative hearing.

(4) For applications for standard general permits, the Governing Board delegates to and appoints the Executive Director, Deputy Executive Director, Environmental Resources Regulation Department Director, Environmental Resources Regulation Department Deputy Director, Natural Resource Management Division Director, Surface Water Management Division Director, and Service Center Directors, as its agents for the purposes of reviewing and issuing these permits.

(5) For standard general environmental resource permit applications, or permit applications under subsections 373.414(11)-(16), F.S., which involve activities located on submerged lands owned by the Board of Trustees of the Internal Improvement Trust Fund under Chapters 253 or 258, F.A.C., the District shall conduct concurrent application and review procedures in accordance with Section 373.427, F.S., Chapter 18-21, F.A.C., and Rules 62-343.075 and 18-18.014, F.A.C.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.103(2), 373.103(6), 373.427 FS. History–New 10-3-95, Amended 4-1-96, 5-28-00.

40E-40.061 Delegation of Authority Pertaining to General Environmental Resource Permits, General Surface Water Management Permits and Associated Sovereign Submerged Lands Authorizations.

(1) The Governing Board delegates to and appoints the Executive Director, Deputy Executive Director, Environmental Resources Regulation Department Director, Envi-

ronmental Resources Regulation Department Deputy Director, Natural Resource Management Division Director, Surface Water Management Division Director, and Service Center Directors, as its agents to review and take final action on all general environmental resource and surface water management permit applications issued under Chapter 40E-40, F.A.C. However, staff recommendations for denial of general permit applications shall be considered by the Governing Board.

(2) The Board of Trustees of the Internal Improvement Trust Fund, pursuant to Rule 18-21.0051, F.A.C., has delegated to the Governing Board the authority to review and take final agency action on certain applications to use sovereign submerged lands. Rule 18-21.0051, F.A.C., also provides that the Governing Board may delegate review and decision-making authority to District staff. Therefore, the Governing Board further delegates this authority to the Executive Director, Deputy Executive Director, Regulation Department Director, Regulation Department Deputy Director, Natural Resource Management Division Director, Surface Water Management Division Director, and Service Center Directors, when an application to use sovereign submerged lands involves an activity which is to be reviewed pursuant to the general permit procedures of Chapters 40E-1, 40E-40, or 40E-400, F.A.C.

Specific Authority 120.53(1), 373.044, 373.113, 373.118 FS. Law Implemented 120.53, 373.016, 373.118 FS. History–New 4-1-96, Formerly 40E-1.6015, Amended 5-28-00.

40E-40.091 Publications, Rules and Interagency Agreements Incorporated by Reference.

All publications, rules and interagency agreements incorporated by reference are set forth in Rule 40E-4.091, F.A.C.

Specific Authority 120.54(8), 373.044, 373.046, 373.113, 373.171, 373.414, 403.812 FS. Law Implemented 120.54(8), 373.046, 373.403, 373.413, 373.414, 373.416, 373.429 FS. History–New 11-15-92, Amended 1-23-94, 4-20-94, 10-3-95.

40E-40.101 Content of Permit Application.

The content requirements for environmental resource permit applications are set forth in Rule 40E-4.101, F.A.C., and are incorporated by reference in this rule.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.117, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

40E-40.141 Request for Additional Information.

The District may request additional information from standard general permit applicants in accordance with paragraph 40E-1.603(1)(c), F.A.C.

Specific Authority 373.044, 373.113, 313.171 FS. Law Implemented 373.416, 373.419 FS. History–New 9-3-81, Amended 4-20-94, 10-3-95, 4-14-03.

40E-40.302 Conditions for Issuance of Permits.

In order to qualify for a standard general permit under this chapter, the applicant must give reasonable assurances that the surface water management system meets the following general conditions:

(1) The surface water management system must meet the criteria specified in Rules 40E-4.301 and 40E-4.302, F.A.C.

(2) The surface water management system must meet the threshold conditions as set forth in Rule 40E-40.041, F.A.C.

Specific Authority 373.044, 373.113, 373.149, 373.171 FS. Law Implemented 373.046, 373.413, 373.416 FS. History–New 9-3-81, Formerly 16K-4.021(1)(a), (2), 16K-4.022(1)(a), (b), Amended 12-1-82, 7-26-87, 11-15-92, 4-20-94, 10-3-95.

40E-40.321 Duration of Permits.

Unless revoked or otherwise modified, the duration of a standard general permit authorized pursuant to this chapter is set forth in Rule 40E-4.321, F.A.C.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416, 373.419, 373.426 FS. History–New 9-3-81, Amended 12-1-82, 7-26-87, 4-20-94, 10-3-95.

40E-40.331 Modification of Permits.

A request for modification of an environmental resource standard general permit shall be made in accordance with this chapter, unless the permit has expired or has been otherwise revoked or suspended. Requests to modify such permits shall be made:

(1) In accordance with Rules 40E-1.603 and 40E-40.302, F.A.C.; or

(2) By letter in accordance with paragraph 40E-4.331(2)(b), F.A.C.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416(1) FS. History–New 12-1-82, Amended 4-20-94, 10-3-95.

40E-40.341 District Revocation or Modification of Permits.

The Governing Board may revoke a permit in accordance with the provisions of Chapter 373, F.S., and Rules 40E-1.609 and 28-107.004, F.A.C.

Specific Authority 373.044, 373.113 FS. Law Implemented 120.60(6), 373.429 FS. History–New 9-3-81, Formerly 16K-4.021(1)(e), 16K-4.022(1)(f), Amended 12-1-82, 10-3-95, 7-2-98.

40E-40.351 Transfer of Permits.
Transfer of permits shall be made in accordance with Rule 40E-4.351, F.A.C.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416(2) FS. History–New 12-1-82.

40E-40.381 General Conditions.

(1) The standard general permits authorized pursuant to this chapter shall be subject to the general conditions set forth in Rule 40E-4.381, F.A.C.

(2) In addition to the general conditions referenced in subsection (1), the following shall apply to standard general permits authorizing incidental site activities:

(a) The permittee shall not construct any works or engage in any land clearing activities within 50 feet of the landward extent of wetlands or other surface waters on the project site.

(b) The permittee shall excavate no closer than 200 feet of the landward extent of wetlands or other surface waters on the project site, or as otherwise specified in the permit.

(c) The property must be restored to the satisfaction of the District if the individual environmental resource permit is denied or the permitted project is otherwise not in accord with the incidental site activities authorized herein.

(d) Any damage to off-site property which may have been caused by the incidental site activities herein must be mitigated.

(e) The activities are commenced at the permittee's own risk.

(f) The permittee shall proceed to timely obtain the individual environmental resource permit.

(3) The standard general permit shall be subject to other reasonable conditions as are necessary to assure that the permitted works will meet the conditions for issuance in Rules 40E-4.301 and 40E-4.302, F.A.C.

Specific Authority 373.044, 373.113, 373.118, 373.171 FS. Law Implemented 373.117, 373.118, 373.413, 373.416, 373.419 FS. History–New 9-3-81, Formerly 16K-4.021(1)(b), 16K-4.022(1)(c), Amended 7-26-87, 4-20-94, 10-3-95, 4-14-03.

40E-40.391 Forms and Instructions.

(1) District forms and instructions have been approved by the Governing Board and are set forth in Rule 40E-1.659, F.A.C.

(2) Forms and instructions are available at District Service Centers upon request.

Specific Authority 120.53(1), 373.044, 373.113, 373.118 FS. Law Implemented 120.52(16), 120.53(1), 373.085, 373.116, 373.118, 373.103, 373.106, 373.229, 373.413 FS. History–New 10-3-95.

40E-40.407 Permit Application Processing Fees.

There shall be a non-refundable permit application processing fee as specified by subsection 40E-1.607(3), F.A.C.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.109 FS. History–New 10-3-95.

Chapter 40E-41, F.A.C.
Surface Water Management Basin
& Related Criteria

Chapter 40E-41 Surface Water Management Basin and Related Criteria

[Note: The text on this page and the next four provides a brief overview of the provisions of Chapter 40E-41, Florida Administrative Code (F.A.C.). The overview text is intended only to provide a basic understanding of the Chapter, and should not be used in place of the duly-adopted language or in a manner which is inconsistent with Chapter 40-41, F.A.C.]

A. Part I of the Rule: Western C-9 Basin

1. Justification

The Western Canal 9 Basin has in the past been subject to periods of extensive flooding during moderate storm events and to severe over-drainage during dry seasons. The area has not been heavily developed to date, but development pressure is increasing and it is likely that any new development will create flooding problems in the eastern basin, as well as aggravate the over-drainage and flooding already existent in the western basin.

In addition to the criteria for surface water management systems already in effect throughout the District, additional restrictions are necessary in the Western Canal 9 Basin because of the unique water management regime in that area as described above. This part of the rule will preserve the existing flood protection in the eastern Canal 9 Basin and will prevent over-drainage of the Western Basin, while giving a degree of flood protection to the western developments.

2. Specifics

a. The District's Standard General Permit Rule Chapter, 40E-40, is now applicable in the Western Canal 9 Basin.

b. This part of the rule establishes for design purposes the 10-year, 25-year and 100-year flood frequency elevations as 6.5 feet, 6.8 feet, and 7.3 feet mean sea level, respectively, in the basin.

c. For diked and pumped systems, the allowable discharge is limited by this part of the rule to three-fourths of an inch per twenty-four hours and no pumping is permitted when Canal 9 stages exceed elevation 6.8 feet mean sea level.

d. All direct connections to Canal 9 must be installed at a discharge elevation no lower than six inches below average existing ground for the project.

However, discharge facilities designed to lower the water table temporarily below these elevations immediately prior to the arrival of a major storm event are allowed by this rule.

e. This rule restricts the volume encroached by development between average existing ground surface and elevation 7.0 feet mean sea level to 2.0 feet times the total area of the property. The rule restricts diked areas such that the area diked must be less than this encroached volume divided by the difference between average existing ground elevation within the dike and elevation 5.75 feet mean sea level.

B. Part II of the Rule: Kissimmee River Basin

1. Justification

It is anticipated that restoration of the Kissimmee River will be undertaken soon. Therefore, it is necessary to establish rules for projects within the basin which will yield designs similar to those which would have been permitted had the Kissimmee River Canal (C-38) not been constructed. Although there are already criteria for surface water management systems in effect throughout the District, there are enough significant different hydrologic and technical circumstances about the Kissimmee River Basin area to justify setting the specific standards in this separate rule part.

2. Specifics

a. The District's Standard General Permit Rule Chapter, 40E-40, is now applicable in the Kissimmee River Basin.

b. Applications for projects which have any part in the floodplain shall include a report on the status of the project as a development of regional impact. The acceptable form of the report shall be either a final approved development order, or a binding letter, issued by the Department of Community Affairs.

c. Allowable discharge shall be based upon the peak post-development discharge rate not exceeding the pre-development rate during a 10-year, 3-day design storm.

d. No net encroachment into the floodplain will be permitted.

e. Projects within the St. Johns River Water Management District which

require a permit from this District to drain into the Kissimmee River Basin shall meet the criteria established in this rule.

f. Except for approved connections to the Kissimmee River, District works or lands may not be used as part of an applicant's project.

g. No use of District works or lands which might interfere with the Kissimmee River restoration will be permitted.

h. Any drainage connection to the Kissimmee River must be part of a permitted surface water management system.

C. Part III of the Rule: C-51 Basin

1. Justification

The C-51 Basin experiences more frequent flooding for longer durations than other areas in the District which discharge into the Central and Southern Florida Flood Control Project. This rule part is intended to implement the District policy that it would be contrary to public health, safety and welfare to allow development to occur which decreases flood protection for the Basin, thereby aggravating a known flood hazard or condition.

This part of the rule establishes a regulatory framework to govern projects and systems in the C-51 Basin that directly or indirectly discharge into the C-51 Canal or significantly affect the C-51 Basin. It specifies criteria with which all development in the C-51 Basin must comply to preserve or to ensure minimum water quality and flood protection. The rule part addresses future development only and is not intended to alleviate existing flooding problems.

2. Specifics

a. The District's Standard General Permit Rule Chapter, 40E-40, is now applicable in the C-51 Basin.

b. The Basin is divided into parts: the Western C-51 Basin and the Eastern C-51 Basin.

c. Any project in the C-51 Basin which involves works of the District (District right of way) must comply with the criteria established in this rule.

d. Allowable discharge shall be based upon the peak post-development dis-

charge rate not exceeding the peak pre-development rate during a 10-year, 3-day design storm. Pre-development discharges must be determined using the equation and coefficients established in this rule.

e. Finished building floor elevations must be at least as high as the elevations established in this rule.

f. No net encroachment of floodplain storage is allowed. Floodplain storage for a site is established to be the volume of water stored on the site between the elevation established in this rule for the minimum finished building floor elevation and the existing site grading. Accommodation must occur on-site.

g. Any reduction in pre-development soil storage must be accommodated on the project site.

h. Projects in the Western C-51 Basin shall provide one-half inch of dry retention/detention as part of the required retention/detention.

D. Part IV of the Rule: Water Preserve Area Basins in Palm Beach and Broward Counties

1. Justification

The protection of the lands within and adjacent to the Water Preserve Areas (WPA's) is crucial to the success of Everglades restoration, flood protection, and water supply enhancement efforts. Because of their hydrological and biological relationship to the Everglades, the region's water supply, and other unique natural areas and resources, the lands within and adjacent to the WPA's require supplemental Environmental Resource Permit criteria.

The purpose of these criteria is to protect the current and future functions of aquifer recharge, water storage, flood attenuation, water quality enhancement, and wildlife habitat provided by lands within and adjacent to the WPA's. The purpose also is to limit seepage from the water conservation areas across the Protective Levees and ultimately to tide.

2. Specifics

a. All systems proposed within the boundaries of a WPA shall require an individual permit.

b. Projects within one mile of WPA components or Protective Levees shall leave in place enough overburden to prevent seepage increases eastward into surface water bodies.

c. Excavations within one-quarter mile of WPA components or Protective Levees shall maintain an overburden thickness of at least three-fourths of the original overburden.

d. Excavations between one-quarter and one-half mile from WPA components or Protective Levees shall maintain an overburden thickness of at least half of the original overburden.

e. Excavations between one-half and one mile from WPA components or Protective Levees shall maintain an overburden thickness of at least one-quarter of the existing overburden.

f. Applicants can:

    i. provide site-specific information that documents the presence of sufficient overburden above the production zone of the surficial aquifer system to demonstrate that proposed excavations will not cause adverse seepage or hydrologic impacts to WPA's or Water Conservation Areas; or

    ii. propose an alternative design with site-specific information that demonstrates that proposed excavations will not cause adverse seepage or hydrologic impacts to WPA's or Water Conservation Areas.

g. Projects within WPA's, WPA Basins, or adjacent to the Protective Levees shall not lower existing water tables.

h. The water quality treatment volumes required in the *Basis of Review* shall be increased by 50% for projects in WPA's and WPA Basins.

i. Wetland dredging and filling in WPA's is restricted. (See rule text for details.)

j. The reduced mitigation ratios set forth in the "Melaleuca Rule" sections of the *Basis of Review* do not apply in WPA's. (Additional criteria for qualifying for the reduced mitigation ratios are set forth in the rule text.)

Rules of the South Florida Water Management District

SURFACE WATER MANAGEMENT BASIN AND RELATED CRITERIA Chapter 40E-41, F.A.C.



Amended October 21, 2001

CHAPTER 40E-41 — SURFACE WATER MANAGEMENT BASIN AND RELATED CRITERIA

40E-41.011 Policy and Purpose.
PART I WESTERN C-9 BASIN
40E-41.020 Scope of Part I.
40E-41.023 Western Canal 9 Basin Boundary.
40E-41.033 Implementation.
40E-41.043 Application of Part I.
40E-41.053 Exemptions.
40E-41.063 Conditions for Issuance of Permits in the Western Canal 9 Basin.
40E-41.091 Publications, Rules and Interagency Agreements Incorporated by Reference.
PART II KISSIMMEE RIVER BASIN
40E-41.120 Scope of Part II.
40E-41.121 Definitions.
40E-41.123 Kissimmee River Basin Boundary.
40E-41.133 Implementation.
40E-41.143 Application of Part II.
40E-41.160 Content of Application.
40E-41.163 Conditions for Issuance of Surface Water Management Permits in the Kissimmee River Basin.
40E-41.165 Conditions for Issuance of Right of Way Permits in the Kissimmee River Basin.
PART III C-51 BASIN
40E-41.220 Scope and Policy of Part III.
40E-41.221 Definitions.
40E-41.223 C-51 Basin Boundary.
40E-41.233 Implementation.
40E-41.243 Application of Part III.
40E-41.260 Content of Application.
40E-41.263 Conditions for Issuance of Surface Water Management Permits in the C-51 Basin.
40E-41.265 Conditions for Issuance of Right-of-Way Permits in the C-51 Basin.
PART IV WATER PRESERVE AREA BASINS IN PALM BEACH & BROWARD COUNTIES
40E-41.320 Scope, Policy, and Implementation of Part IV.
40E-41.321 Definitions.
40E-41.323 Water Preserve Area & Water Preserve Area Basin Boundaries.
40E-41.333 Implementation.
40E-41.343 Application of Part IV.
40E-41.360 Permit Thresholds.
40E-41.363 Conditions for Issuance of Environmental Resource Permits and Surface Water Management Permits in the Water Preserve Area, Water Preserve Area Basin, or Adjacent to the Protective Levees.

40E-41.011 Policy and Purpose.
The rules in this part establish supplemental Environmental Resource Permit criteria for specified basins which insure that development within named basins incorporates the appropriate environmental, water quantity and water quality control measures necessary to protect the integrity of the public investments in the basin and minimize adverse impacts to the water resources of the District. Criteria delineated in this chapter are in addition to criteria specified in Chapter 40E-4, 40E-40 or 40E-400 F.A.C. The criteria, exemptions and additional requirements specified in this part are not intended to supersede or rescind the terms and conditions of any valid Environmental Resource Conceptual Approval, Construction or Operation Permit or Surface Water Management Conceptual Approval, Construction or Operation Permit, or certification order issued pursuant to ss. 403.501-.518 and 403.52-.5365 F.S. prior to the effective date of this part. In addition, the rules establish additional criteria for the named basins which insure that the use of the District's works or land is consistent with the policies of the District.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History—New 9-3-81, Formerly 16K-34.01, Amended 4-11-85, 4-20-94, 10-21-01.

PART I WESTERN C-9 BASIN

40E-41.020 — Scope of Part I.
The rules in this part shall apply to projects within the Western C-9 Basin.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History — New 4-11-85.

40E-41.023 — Western Canal 9 Basin Boundary.
The Western Canal 9 Basin is generally depicted in Figure 41-1, and specifically shall include the area within the following boundaries: In Dade and Broward Counties, Florida, as follows:
BEGINNING at the Southeast corner of Section 12, Township 52 South, Range 40 East; Thence, bear Westerly along the Section Lines to the intersection thereof with State Road No. 25; Thence, Northwesterly and Northerly along State Road No. 25 to the intersection thereof with State Road No. 820; Thence, Easterly along State Road No. 820 to the intersection thereof with the East line of Section 14, Township 51 South, Range 40 East; Thence, Southerly along Section Lines to the Northwest corner of Section 1, Township 52 South, Range 40 East; Thence, Easterly along the Section Line to the Northeast corner of said Section 1; Thence, Southerly along the Section Lines to the Southeast corner of said Section 12 to the POINT OF BEGINNING.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History — New 9-3-81, Formerly 16K-34.02.

40E-41.033 — Implementation.
(1) The effective date of this part is October 2, 1977.
(2) The rules contained in this Chapter will be applied to all new projects which do not have complete applications, as evidenced by a letter of completeness under Rule 40E-1.603(9)(a), F.A.C. on the effective date of the rule. An application deemed complete prior to the effective date of a rule shall be governed by the rule in effect at the time the application became complete.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History — New 9-3-81, Formerly 16K-34.03, Amended 4-20-94.

40E-41.043 — Application of Part I.
All projects located within the Western Canal 9 Basin requiring permits pursuant to Rule 40E-4.041 shall be constructed, altered, operated, maintained and abandoned in accordance with the criteria specified in Rules 40E-4.301, 40E-40.302 and 40E-41.063, F.A.C. unless specifically exempted in Rules 40E-4.051 or 40E-41.053, F.A.C. The most restrictive criteria will be applicable unless the applicant can demonstrate to the District's satisfaction through accepted methodology that the purpose and intent of this part will be fulfilled using alternate criteria.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416, 373.426 FS. History — New 9-3-81, Formerly 16K-34.04, Amended 4-20-94.

40E-41.053 — Exemptions.
Projects which have received final approval of construction plans, or equivalent approval, from local government prior to the effective date of this part are hereby exempt from the fill encroachment criteria specified in Subsection 40E-41.063(4), F.A.C. All other criteria specified in Rules 40E-4.301, 40E-40.302 and 40E- 41.063, F.A.C. must be strictly met.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History — New 9-3-81, Formerly 16K-34.05, Amended 4-20-94.

40E-41.063 — Conditions for Issuance of Permits in the Western Canal 9 Basin.
(1) For design purposes the 100-year, 25-year and 10-year flood frequency elevations are established as 7.3 feet, 6.8 feet and 6.5 feet mean sea level, respectively.
(2) For systems designed to be pumped from fully diked areas, discharge shall be limited to three-fourths of an inch per twenty-four hours, or the criteria in Rules 40E-4.301 and 40E-40.302, F.A.C. whichever is more restrictive. In addition, no pumping shall be permitted when Canal 9 stages at pump tailwater exceed the 25-year peak elevation of 6.8 feet mean sea level.
(3) All direct connections to Canal 9 shall be designed to prevent lowering of the groundwater table below elevation 2.5 feet mean sea level. All indirect connections to Canal 9 shall be designed to prevent lowering of the groundwater table by installing the discharge facilities at a discharge elevation no lower than six inches below average existing ground elevation for the project. Nothing in this subsection shall be construed to preclude the construction and operation of discharge facilities designed to temporarily lower the groundwater table below these elevations immediately prior to the arrival of a major storm event.
(4) Fill encroachment criteria
(a) The volume encroached by development between average existing ground surface and elevation 7.0 feet mean sea level shall not exceed 2.0 feet times the total area of the property.
(b) For diked areas with on-site retention of runoff, the area diked shall not exceed the encroachment volume specified in paragraph (a) divided by the difference between average existing ground elevation within the dike and elevation 5.75 feet mean sea level. This will require all such projects on land of average elevation less than 3.75 feet mean

sea level to preserve some area outside of the dikes with no fill. The preserved area shall be located so as to preserve natural basin flow patterns for lands outside the dikes.
(c) Typical development schemes using these criteria are depicted in Figure 41-2.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History — New 9-3-81, Formerly 16K-34.06, Amended 4-20-94.

40E-41.091 — Publications, Rules and Interagency Agreements Incorporated by Reference.
All publications, rules and interagency agreements incorporated by reference are set forth in Rule 40E-4.091, F.A.C.
Specific Authority 120.54(8), 373.044, 373.046, 373.113, 373.171, 373.414, 403.812 FS. Law Implemented 120.54(8), 373.046, 373.403, 373.413, 373.414, 373.416, 373.429 FS. History — New 11-15-92, Amended 1-23-94, 4-20-94, 10-3-95.

PART II KISSIMMEE RIVER BASIN

40E-41.120 — Scope of Part II.
The rules in this part shall apply to projects within the Kissimmee River Basin.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History — New 5-1-85.

40E-41.121 — Definitions.
When used in this Part:
(1) "Pre-project" means the hydrologic conditions which existed prior to the construction of the canal known as C-38.
(2) "Floodplain" means that area depicted on Figure 41-3, Plates 1 through 5. The large scale originals of these plates are located at the main office of the District.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History — New 5-1-85.

40E-41.123 — Kissimmee River Basin Boundary.
The Kissimmee River Basin boundary is generally described in Figure 41-4 and shall specifically include the area within the following boundaries:
Begin at the intersection of the Southerly right of way line of U.S. 98 (S. R. 700) and the West line of Section 16, Township 35 South, Range 31 East; Thence, Northerly along said West line of Section 16 and Section 9, Township 35 South, Range 31 East, to the Southwest corner of Section 4, Township 35 South, Range 31 East; Thence, Easterly along the South line of said Section 4 to the Southeast corner of said Section 4; Thence, Northerly along the East line of said Section 4 to the Southeast corner of Section 33, Township 34 South, Range 31 East; Thence, Westerly along the South line of said Section 33 to the Southwest corner of said Section 33; Thence, Northerly along the section lines to the Southeast corner of Section 20, Township 34 South, Range 31 East; Thence, Westerly along the section lines to the Southwest corner of Section 19, Township 34 South, Range 31 East and the range line between Ranges 30 and 31 East; Thence, Northerly along said range line to the Southeast corner of Section 36, Township 32 South, Range 30 East on the Polk-Highlands County line; Thence, Westerly along said Polk-Highlands County line, also being the section line to the Southwest corner of said

Section 36; Thence, Northerly along the section lines to the Southeast corner of Section 11, Township 32 South, Range 30 East; Thence, Westerly along the South line of said Section 11 to the Southwest corner of said Section 11; Thence, Northerly along the section lines to the Southeast corner of Section 34, Township 31 South, Range 30 East; Thence, Westerly along the South line of said Section 34 to the Southwest corner of said Section 34; Thence, Northerly along the section lines to the Southeast corner of Section 16, Township 31 South, Range 30 East; Thence, Westerly along the South line of said Section 16 to the Southwest corner of the East one-half (E 1/2) of said Section 16; Thence, Northerly along the one-half section lines to the Northwest corner of the West one-half (W 1/2) of Section 4, Township 31 South, Range 30 East, on the township line between Townships 30 and 31 South; Thence, Easterly along said township line to the Northeast corner of the West one-half (W 1/2) of Section 5, Township 31 South, Range 31 East; Thence, Southerly along the one-half section line of said Section 5 to the Southeast corner of said West one-half (W 1/2) of Section 5; Thence, Easterly along the section lines to the Southwest corner of Section 4, Township 31 South, Range 32 East; Thence, Northerly along the West line of said Section 4 to the Northwest corner of said Section 4 and the township line between Townships 30 and 31 South; Thence, Easterly along said township line to the Northeast corner of Section 6, Township 31 South, Range 33 East; Thence, Southerly along the East line of said Section 6 to the Northwest corner of Section 8, Township 31 South, Range 33 East; Thence, Easterly along the North line of said Section 8, to the Northeast corner of said Section 8; Thence, Southerly along the section lines to the Northwest corner of Section 28, Township 31 South, Range 33 East; Thence, Easterly along the North line of said Section 28, Township 31 South, Range 33 East; Thence, Easterly along the North line of said Section 28 to the Northeast corner of the West one-half (W 1/2) of said Section 28; Thence, Southerly along the one-half section line to the Northwest corner of the East one-half (E 1/2) of Section 33, Township 31 South, Range 33 East; Thence, Easterly along the North line of said Section 33 to the Northeast corner of said Section 33 and the Easterly boundary line of the South Florida Water Management District; Thence, Southerly along the section lines and the said Easterly boundary line of the South Florida Water Management District to the Osceola-Okeechobee County Line and the Southeast corner of Section 33, Township 32 South, Range 33 East; Thence, Easterly continuing along said Easterly boundary line and said County Line to the Northwest corner of Section 3, Township 33 South, Range 34 East; Thence, Southerly along the West line of said Section 3, to the Southwest corner of said Section 3; Thence, Easterly along the South line of said Section 3 to the Southeast corner of said Section 3 and the East boundary of the South Florida Water Management District; Thence, Southerly, continuing along said Easterly boundary line and along the section lines to the Southeast corner of Section 34, Township 34 South, Range 34 East; Thence, Easterly, continuing along said Easterly boundary line and the township line between Townships 34 and 35 South, to the Northeast corner of Section 1, Township 34 South, Range 34 East; Thence, Southerly along the East line of said Section 1 to the Southeast corner of the North one-half (N 1/2) of said Section 1; Thence, Westerly along the one-half section line to the Southwest corner of the North one-half (N 1/2) of said Section 1; Thence, Southerly along the West line of said Section 1 to the Northeast corner of Section 11, Township 35 South, Range 34 East; Thence, Westerly along the North line of said Section 11, to the Northeast corner of Section 10, Township 35 South, Range 34 East; Thence, Southerly along the East line of said Section 10 to the Southeast cor-

ner of the North one-half (N 1/2) of said Section 10; Thence, Westerly along the one-half section line to the Southwest corner of said North one-half (N 1/2) of Section 10; Thence, Southerly along the West line of said Section 10 to the Northeast corner of Section 16, Township 35 South, Range 33 East; Thence, Westerly along the North line of said Section 16 to the Northwest corner of the East one-half (E 1/2) of said Section 16; Thence, Southerly along the one-half section lines to the Southwest corner of the East one-half (E 1/2) of Section 28, Township 35 South, Range 34 East; Thence, Easterly along the section lines to the Northeast corner of the West one-half (W 1/2) of Section 34, Township 35 South, Range 34 East; Thence, Southerly along the one-half section lines to the Southeast corner of the West one-half (W 1/2) of Section 3, Township 36 South, Range 34 East; Thence, Westerly along the section lines to the Northeast corner of the West one-half (W 1/2) of Section 9, Township 36 South, Range 34 East; Thence, Southerly along the one-half section lines to the Southwest corner of the East one-half (E 1/2) of Section 16, Township 36 South, Range 34 East; Thence, Easterly along the section line to the Northeast corner of Section 21, Township 36 South, Range 34 East; Thence, Southerly along the section lines to the Northwest corner of Section 34, Township 36 South, Range 34 East; Thence, Easterly along the North line of said Section 34, to the Northeast corner of said Section 34; Thence, Southerly along the East line of said Section 34 to the Northeast corner of Section 3, Township 37 South, Range 34 East; Thence, Westerly to the Northwest corner of the East one-half (E 1/2) of said Section 3; Thence, Southerly along the one-half section line to the intersection thereof with the Southerly right of way line of the Seaboard Coast Line Rail Road (The Family Line); Thence, Northwesterly along said Southerly right of way line to the intersection thereof with the West line of Section 33, Township 36 South, Range 34 East; Thence, Southerly along the section lines to the Northeast corner of Section 20, Township 37 South, Range 34 East; Thence, Westerly along the North line of said Section 20 to the Northwest corner of said Section 20; Thence, Southerly along the section lines to the intersection thereof with the Southerly right of way line of South Florida Water Management District's Levee 48 Tieback; Thence, Westerly along said Southerly right of way line and the Southerly right of way line of South Florida Water Management District's Canal 41A to the intersection thereof with the West line of Section 35, Township 37 South, Range 33 East; Thence, Northerly along the section lines to the intersection thereof with the Southerly right of way line of State Road 70; Thence, Westerly along said Southerly right of way line of State Road 70 to the intersection thereof with the West line of Section 29, Township 37 South, Range 33 East; Thence, Northerly along the section lines to the Southeast corner of Section 7, Township 37 South, Range 33 East; Thence, Westerly along the South line of said Section 7 to the Southwest corner of the East one-half (E 1/2) of said Section 7; Thence, Northerly along the one-half section line of said Section 7 to the Northwest corner of said East one-half (E 1/2) of Section 7; Thence, Westerly along the section lines to the Southwest corner of the East one-half (E 1/2) of Section 1, Township 37 South, Range 32 East; Thence, Northerly along the one-half section line of said Section 1 to the Northwest corner of the East one-half (E 1/2) of said Section 1; Thence, Westerly along the North line of said Section 1 to the Northwest corner of said Section 1; Thence, Northerly along the section lines to the Southeast corner of Section 14, Township 36 South, Range 32 East; Thence, Westerly along the section lines to the Southwest corner of the East one-half (E 1/2) of Section 17, Township 36 South, Range 32 East; Thence, Northerly along the one-half section lines to the Southeast corner of the Northwest one-quarter (NW 1/4) of Sec-

tion 8, Township 36 South, Range 32 East; Thence, Westerly along the South line of said Northwest one-quarter (NW 1/4) of Section 8 and the South line of the North onehalf (N 1/2) of Section 7, Township 36 South, Range 32 East to the Southwest corner of said North one-half (N 1/2) of Section 7 and the range line between Ranges 31 and 32 East; Thence, Northerly along said range line to the Northeast corner of Section 1, Township 36 South, Range 31 East and the Township line between Township lines 35 and 36 South; Thence, Westerly along said township line to the Southwest corner of Section 36, Township 35 South, Range 31 East; Thence, Northerly along the West line of said Section 36 to the Southeast corner of Section 26, Township 35 South, Range 31 East; Thence, Westerly to the Southwest corner of said Section 26; Thence, Northerly along the section lines to the intersection thereof with the Southerly right of way line of U.S. 98 (S.R. 700); Thence, Westerly along said Southerly right of way line to the West line of Section 16, Township 35 South, Range 31 East and the POINT OF BEGINNING.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History — New 5-1-85.

40E-41.133 — Implementation.
The effective date of this part is May 1, 1985.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History — New 5-1-85.

40E-41.143 — Application of Part II.
(1) All projects located within the Kissimmee River Basin requiring permits pursuant to Rule 40E-4.041, F.A.C. shall be constructed, altered, operated, maintained and abandoned in accordance with the criteria specified in Rules 40E-4.301, 40E-40.302 and 40E-41.163, F.A.C. unless specifically exempted by section 373.406, Florida Statutes.
(2) The criteria set forth in Rule 40E-41.163 shall be considered more restrictive than that set forth in Rule 40E-4.301 and 40E-40.302, F.A.C. The most restrictive criteria will be applicable unless the applicant can demonstrate through accepted scientific and technical methodology that the purpose and intent of this part will be fulfilled by the use of alternate criteria.
(3) All projects located within the Kissimmee River Basin requiring permits pursuant to Rules 40E-6.041 and 40E-6.331 shall comply with the criteria set forth in Rules 40E-6.301 and 40E-41.165.
(4) The criteria set forth in Rule 40E-41.165 shall be considered more restrictive than that set forth in Rule 40E-6.301. The most restrictive criteria will be applicable.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.085, 373.086, 373.413, 373.416 FS. History — New 5-1-85, Amended 4-20-94.

40E-41.160 — Content of Application.
All projects located within the Kissimmee River Basin requiring permits pursuant to Rule 40E-4.041, F.A.C. shall submit the information specified by Rule 40E- 4.101 or 40E-40.112, F.A.C. as appropriate, and the following information:
(1) For projects wholly or partially within the floodplain the status of the project as a development of regional impact must be indicated by a final approved development order or a binding letter issued by the Department of Community Affairs.

(2) For projects requiring a permit under Chapter 40E-6, F.A.C., the applicant shall submit all information required under Rule 40E-6.101, F.A.C.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History — New 5-1-85, Amended 4-20-94.

40E-41.163 — Conditions for Issuance of Surface Water Management Permits in the Kissimmee River Basin.
(1) Allowable discharge for projects within the Kissimmee River Basin shall be based upon the post-development discharge rate not exceeding the pre-project development discharge rate during a design storm of a 10 year, 3 day duration.
(2) No net encroachment into the floodplain will be allowed. Any water storage volume removed from the floodplain must be accommodated by an equal volume of open storage compensation.
(3) Projects within the St. Johns River Water Management District which require a permit from the South Florida Water Management District to drain into the Kissimmee River Basin shall comply with the criteria set forth in this part.
(4) Other than an approved drainage connection to the Kissimmee River, the district works or land may not be utilized as part of the applicant's project.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.085, 373.413, 373.416 FS. History — New 5-1-85.

40E-41.165 — Conditions for Issuance of Right of Way Permits in the Kissimmee River Basin.
(1) Use of the district's works or lands which may interfere with the proposed Kissimmee River restoration shall not be allowed.
(2) Any drainage connection to the Kissimmee River must be part of a surface water management system approved under Rule 40E-41.163.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.085, 373.086, 373.413 FS. History — New 5-1-85.

PART III C-51 BASIN

40E-41.220 — Scope and Policy of Part III.
The rules in this part shall apply to new construction in the C-51 Basin.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.085, 373.413, 373.416 FS. History — New 5-13-87.

40E-41.221 — Definitions.
When used in this Part:
(1) "Basin" means the C-51 Basin as legally described in Florida Administrative Code Rule 40E-41.223, (Basin Boundary) and as depicted on Figure 41-5.
(2) "Western C-51 Basin" means that portion of the C-51 Basin west of State Road Seven as depicted on Figure 41-6 and described in Florida Administrative Code Rule 40E-41.223(1), (Western Basin Boundary).

(3) "Eastern C-51 Basin" means that portion of the C-51 Basin east and west of State Road Seven as depicted on Figure 41-7 and described in Florida Administrative Code Rule 40E-41.223(2), (Eastern Basin Boundary).
Specific Authority 373.044, 373.113 FS. Law Implemented 373.085, 373.413, 373.416 FS. History — New 5-15-87.

40E-41.223 — C-51 Basin Boundary.
The C-51 Basin is generally depicted in Figures 41-5, 41-6 and 41-7 and specifically includes land described below.
(1) Western C-51 Basin Boundary. Begin at the intersection of S. R. 80 (Southern Blvd.) and S. R. 7 (U. S. Highway No. 441) in Section 36, Township 43 South, Range 41 East; thence, westerly along S. R. 80 1000 feet; thence, southerly along a line 1000 feet west of and parallel with S. R. 7 to the north line of Section 1, Township 44 South, Range 41 East; thence, westerly along the north line of Section 1, Township 44 South, Range 41 East to the east line of Section 2, Township 44 South, Range 41 East; thence, southerly along the east line of Sections 2, 11 and 14, Township 44 South, Range 41 East to the southeast (SE) corner of said Section 14; thence, westerly along the south line of Sections 14, 15, 16, 17 and 18, Township 44 South, Range 41 East to the range line between Ranges 40 and 41 East; thence, southerly along said range line to the intersection thereof with South Florida Water Management District's Levee 40; thence, northwesterly and northerly along said Levee 40 and along Levee 8 to the south line of Section 21, Township 43 South, Range 40 East; thence, easterly along the south line of Sections 21 and 22, Township 43 South, Range 40 East to the southeast (SE) corner of said Section 22; thence, northerly along the east line of said Section 22 to the northeast (NE) corner of said Section 22; thence, westerly along the south line of Section 15, Township 43 South, Range 40 East to the southwest (SW) corner of said Section 15; thence, northerly along the west line of Sections 15 and 10, Township 43 South, Range 40 East to the intersection thereof with the "M" Canal of the City of West Palm Beach; thence, northerly, northeasterly and easterly along said "M" Canal to the range line between Ranges 41 and 42 East; thence, southerly along said range line to the southwest (SW) corner of Section 19, Township 43 South, Range 42 East; thence, southerly along S.R. 7 to the Point of Beginning.
(2) Eastern C-51 Basin Boundary.
(a) Begin at the intersection of the Florida East Coast Railway and SR 802 (Lake Worth Road) in Section 21, Township 44 South, Range 43 East; thence, Westerly along SR 802 to SR 7 (U. S. Highway No. 441); thence, North along the East line of Section 25, Township 44 South, Range 41 East to the Northeast (NE) corner of said Section 25; thence, Westerly along the North line of said Section 25 to the Southwest (SW) corner of Section 24, Township 44 South, Range 41 East; thence, North along the west line of Sections 24, 13, 12, and 1, Township 44 South, Range 41 East to the Northwest (NW) corner of said Section 1; thence, Easterly along the North line of said Section 1 to a line that is 1,000 feet west of and parallel with the East line of Section 36, Township 43 South, Range 41 East; thence, North along said line to the intersection thereof with Canal 51; thence, Easterly along Canal 51 to SR 7; thence, North along SR 7 to the Southwest (SW) corner of Section 19, Township 43 South, Range 42 East; thence, North along the West line of said Section 19 to the Northwest (NW) corner of said Section 19; thence, Easterly along the North line of said Section 19 and the North line of Section 20, Township 43 South,

Range 42 East to the Southwest (SW) corner of Section 16, Township 43 South, Range 42 East; thence, Northerly along the West line of said Section 16 to the Northwest (NW) corner of said Section 16; thence, Easterly along the North line of said Section 16 to the Southwest (SW) corner of Section 10, Township 43 South, Range 42 East; thence, Northerly along the West line of said Section 10 to the Northwest (NW) corner of said Section 10; thence, Easterly along the North line of said Section 10 to Florida's Turnpike; thence, Southerly along Florida's Turnpike to the North line of Section 23, Township 43 South, Range 42 East; thence, Easterly along the North line of said Section 23 to the Northeast (NE) corner of said Section 23; thence, Southerly along the East line of said Section 23 to SR 704 (Okeechobee Road); thence, Easterly along SR 704 to Palm Beach Lakes Boulevard; thence, Northeasterly along Palm Beach Lakes Boulevard to Interstate 95; thence, Southeasterly along I-95 to Congress Avenue; thence, Northeasterly along Congress Avenue to the North line of Section 20, Township 43 South, Range 43 East; thence, Easterly along the North line of said Section 20 to the Westerly bank of the canal connecting Clear Lake and Lake Mangonia; thence, Northerly, Easterly, Southerly, and Westerly along the shore of Lake Mangonia to the Easterly bank of said canal to the Northerly shore of Clear Lake; thence, Easterly and Southerly along the shore of Clear Lake to the Westerly extension of First Street; thence, Easterly along said extension and along First Street to the Florida East Coast Railway; thence, Southerly along the Florida East Coast Railway to the Point of Beginning.

(b) And Begin at the Northeast (NE) corner of Section 36, Township 44 South, Range 41 East on SR 7; thence Southerly along SR 7 to the Southeast (SE) corner of Section 24, Township 45 South, Range 41 East; thence, Westerly along the South line of said Section 24, and the east one-half of Section 23, Township 45 South, Range 41 East to the intersection thereof with South Florida Water Management District's Levee 40; thence, Northwesterly along said Levee 40 to the Southwest (SW) corner of Section 33, Township 44 South, Range 41 East; thence, Easterly along the South line of said Section 33 and the South line of Section 34; Township 44 South, Range 41 East to the Southwest (SW) corner of Section 35, Township 44 South, Range 41 East; thence, North along the West line of said Section 35 to the Northwest (NW) corner of said Section 35; thence, Easterly along the North line of said Section 35 and the North line of Section 36, Township 44 South, Range 41 East to the Northeast (NE) corner of said Section 36 and the POINT OF BEGINNING.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.085, 373.413, 373.416 FS. History — New 5-15-87.

40E-41.233 — Implementation.

The effective date of this part is May 15, 1987.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.085, 373.413, 373.416 FS. History — New 5-15-87.

40E-41.243 — Application of Part III.

(1) All projects located within the C-51 Basin which propose to discharge directly or indirectly into C-51 Canal or which are connected directly or indirectly in the C- 51 Basin and which require permits pursuant to Rule 40E-4.041, F.A.C. or this Part shall be constructed, altered, operated, maintained and abandoned in accordance with the criteria specified in Rules 40E-4.301, or 40E-40.302, F.A.C. (Surface Water Management, Con-

ditions for Issuance of a Permit) and 40E- 41.263, F.A.C., (Conditions for Issuance of Surface Water Management Permits in the C-51 Basin) unless specifically exempted by Rule 40E-4.051, F.A.C. (Surface Water Management, Exemptions).
(2) The criteria in Florida Administrative Code Rule 40E-41.263, (Conditions for Issuance of Surface Water Management Permits in the C-51 Basin), shall apply unless the applicant can demonstrate through accepted scientific and technical methodology that the purpose and intent of this rule chapter is fulfilled by the use of alternate criteria.
(3) All projects located within the C-51 Basin requiring permits pursuant to Florida Administrative Code Rules 40E-6.041, (Works of the District, Consent Required), and 40E-6.331 (Works of the District, Modification of Permits), shall comply with the criteria set forth in Florida Administrative Code Rules 40E-6.301, (Works of the District, Conditions for Issuance of Permits), and 40E-41.265, (Conditions for Issuance of Right-of-Way Permits in the C-51 Basin).
(4) The criteria in Florida Administrative Code Rule 40E-41.265, (Conditions for Issuance of Right-of-Way Permits in the C-51 Basin), shall apply unless the applicant can demonstrate through accepted scientific and technical methodology that the purpose and intent of this rule chapter is fulfilled by the use of alternate criteria.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.085, 373.086, 373.413, 373.416 FS. History — New 5-15-87, Amended 4-20-94.

40E-41.260 — Content of Application.
(1) All projects located within the C-51 Basin which require a permit from the District shall submit detailed plans showing the existing topography and proposed finished grading and detailed design calculations which demonstrate the proposed project's effect on net storage from the Basin for events up to and including the 100 year frequency event.
(2) In addition all projects in the C-51 Basin which require permits pursuant to Rule 40E-4.041, F.A.C., (Surface Water Management, Permits Required), shall submit the information specified by Rules 40E-4.101 or 40E-40.112, F.A.C., (Surface Water Management, Content of Application), and all projects located in the C-51 Basin which require a permit pursuant to Rule 40E-6.041, F.A.C., (Works of the District, Consent Required), shall submit the information required under Rule 40E-6.101, F.A.C., (Works of the District, Content of Application).
Specific Authority 373.044, 373.113 FS. Law Implemented 373.085, 373.413, 373.416 FS. History — New 5-15-87, Amended 4-20-94.

40E-41.263 — Conditions for Issuance of Surface Water Management Permits in the C-51 Basin.
The following criteria shall apply:
(1)(a) The allowable discharge shall be based upon the post development discharge rate not exceeding the pre-development discharge rate during a design storm of a 10-year 3-day duration as depicted on Figure 41-8. Predevelopment discharge rate shall be calculated by the formula:
Q = C sub e X A/640
Where
Q = allowable flow in cubic feet per second (cfs);
A = Project size in acres;
C sub e = discharge coefficient under existing/present conditions

(b) This criteria is not intended to limit inflows to the C-51 canal to the rates specified in subsection (a) above during non-flood conditions. Discharge capacity up to 27 cfs during non-flood conditions shall be considered on a case-by-case basis pursuant to the criteria in Rule 40E-4.091(1)(a), Florida Administrative Code, (Basis of Review) and Rule 40E-4.301, Florida Administrative Code, (Conditions for Issuance).
(2) Finished building floor elevations shall be above the most restrictive of the following:
(a) the 1 in 100 year storm elevations as determined by peak flood stage of the C-51 Basin as depicted on the attached Figure 41-9,
(b) the Federal Flood Insurance Rate Map, or
(c) the on-site stage created by a 100-year 3-day storm event assuming no offsite discharge.
(3) No net encroachment into the floodplain shall be allowed. Any water storage volume removed from the floodplain must be accommodated by an equal volume of open storage compensation. Water storage volume shall be computed by utilizing Figure 41-9. For the purposes of this part, the minimum volume of water which must be accommodated on site shall be that quantity equal to the volume stored below the level shown on Figure 41-9 and above the existing grades. Compensation for any reduction in soil storage also shall be accommodated on site.
(4) All criteria in the Basis of Review which is incorporated and adopted by Florida Administrative Code Rule 40E-4.091, (Surface Water Management, Publications Incorporated by Reference).
(5) Projects located within the Western C-51 Basin described in Florida Administrative Code Rule 40E-41.223, (Western C-51 Basin Boundary), shall provide one half inch of dry retention/detention pretreatment as part of the required retention/detention.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.085, 373.413, 373.416 FS. History — New 5-15-87.

40E-41.265 — Conditions for Issuance of Right-of-Way Permits in the C-51 Basin.
Any drainage connection to C-51 within the C-51 Basin must be part of a surface water management system approved under Florida Administrative Code Rule 40E-41.263, (Conditions for Issuance of Surface Water Management Permits in the C-51 Basin).
Specific Authority 373.044, 373.113 FS. Law Implemented 373.085, 373.086 FS. History — New 5-15-87.

PART IV WATER PRESERVE AREA BASINS IN PALM BEACH & BROWARD COUNTIES

40E-41.320 — Scope, Policy, and Implementation of Part IV.
The purpose of these rules is to protect areas that are necessary for water supply, water storage, water quality improvement, and ecological restoration. Further, it is an objective of the District to reduce the loss of groundwater through seepage or discharge to coastal receiving waters. The protection of lands within and adjacent to the Water Preserve Areas is crucial to the success of Everglades restoration, flood protection and water supply enhancement efforts. Because of their hydrological and biological relationships to the Everglades, the region’s water supply and other unique natural areas and resources, the lands within and adjacent to the Water Preserve Area require supplemental Environmen-

tal Resource Permit criteria. The purpose of such criteria is to protect the current and future functions of aquifer recharge, water storage, flood attenuation, water quality enhancement and wildlife habitat provided by lands within and adjacent to the Water Preserve Area. The purpose of this rule is also to limit seepage from the water conservation areas across the protective levees and ultimately to tide.
Specific Authority 373.044, 373.113, 373.114 FS. Law Implemented 373.413, 373.416, 373.4592 FS. History — New 10-21-01.

40E-41.321— Definitions.
(1) “Water Preserve Area ” or “WPA” means: those component areas identified in Figures 1, 2, 3, 4, 5 and 6.
(2) “Water Preserve Area Basin” or “WPAB” means: the WPA and all or a portion of those drainage basins located adjacent to, or planned to discharge into, the WPA as identified in Figures 1, 2, 3, 4, 5 and 6.
(3) “Protective Levees” means: for the purposes of this rule, those portions of levees L-33, L-35, L-35A, L-36, L-37, L-38 and L-40 adjacent to Water Conservation Areas 1, 2A, 2B, 3A and 3B as identified in Figure 3.
(4) “Overburden” means: for the purposes of this rule, the layer of existing natural soil material as shown in Figures 1, 2, 4, 5 and 6.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.085, 373.413, 373.416 FS. History — New 10-21-01.

40E-41.323 — Water Preserve Area & Water Preserve Area Basin Boundaries. (1) The WPA boundaries are shown in Figures 1, 2, 3, 4, 5 and 6.
(2) The WPAB includes all or a portion of the following drainage basins as shown in Figures 1, 2, 3, 4, 5, and 6.
(a) Palm Beach County: Acme Basin B
C-51 East (west of SR 7)
C-16 (west of the Florida Turnpike)
C-15 (west of the Florida Turnpike)
Hillsboro Canal (west of the Florida Turnpike)
(b) Broward County: C-11 West
C-9 West
Hillsboro Canal (west of the Florida Turnpike)
Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History — New 10-21-01.

40E-41.333 — Implementation.
(1) The effective date of this part is 10/21/01.
(2) The rules contained in this part will be applied to all projects which do not have complete applications, as evidenced by a letter of completeness under Rule 40E- 1.603(1)(a) F.A.C., on the effective date of the rule. An application deemed complete prior to the effective date of a rule shall be governed by the rule in effect at the time the application became complete.
(3) Permit applications submitted pursuant to a valid conceptual approval shall be evaluated in accordance with Rule 40E-4.305 F.A.C. (Conceptual Approvals).

Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History — New 10-21-01.

40E-41.343 — Application of Part IV.

All projects located within the WPA, WPAB, or adjacent to the Protective Levees which require permits pursuant to Rule 40E-4.041, F.A.C. shall be constructed, altered, operated, maintained and abandoned in accordance with the criteria specified in Rules 40E-4.301 and 40E-4.302, or Rule 40E-40.302, F.A.C., as applicable, (Environmental Resource Permits Conditions for Issuance) and 40E-41.363 (Conditions for Issuance of Environmental Resource Permits and Surface Water Management Permits in the Water Preserve Area, Water Preserve Area Basin, or Adjacent to the Protective Levees).

Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History — New 10-21-01.

40E-41.360 — Permit Thresholds.

All systems proposed within the boundaries of the WPA shall require an individual permit.

Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS. History — New 10-21-01.

40E-41.363 — Conditions for Issuance of Environmental Resource Permits and Surface Water Management Permits in the Water Preserve Area, Water Preserve Area Basin, or Adjacent to the Protective Levees.

(1) In order to obtain a permit under this part, an applicant must provide reasonable assurance that the proposed activities will meet the requirements of this section; not be harmful to the water resources; and be consistent with the purposes and objectives set forth in Rule 40E-41.320, F.A.C.

(2) Projects located within one mile of existing or proposed WPA components, or the Protective Levees, shall leave sufficient overburden in place to prevent seepage increases eastward into surface water bodies, such as surface water management lakes, canals, ditches or ponds, in accordance with the following design criteria:

(a) Proposed excavations located within one-quarter mile of the existing or proposed WPA components or the Protective Levees shall maintain an overburden thickness of at least three-quarters of the existing overburden.

(b) Proposed excavations located from one-quarter mile to one-half mile from existing or proposed WPA components or the Protective Levees shall maintain an overburden thickness of at least half of the existing overburden.

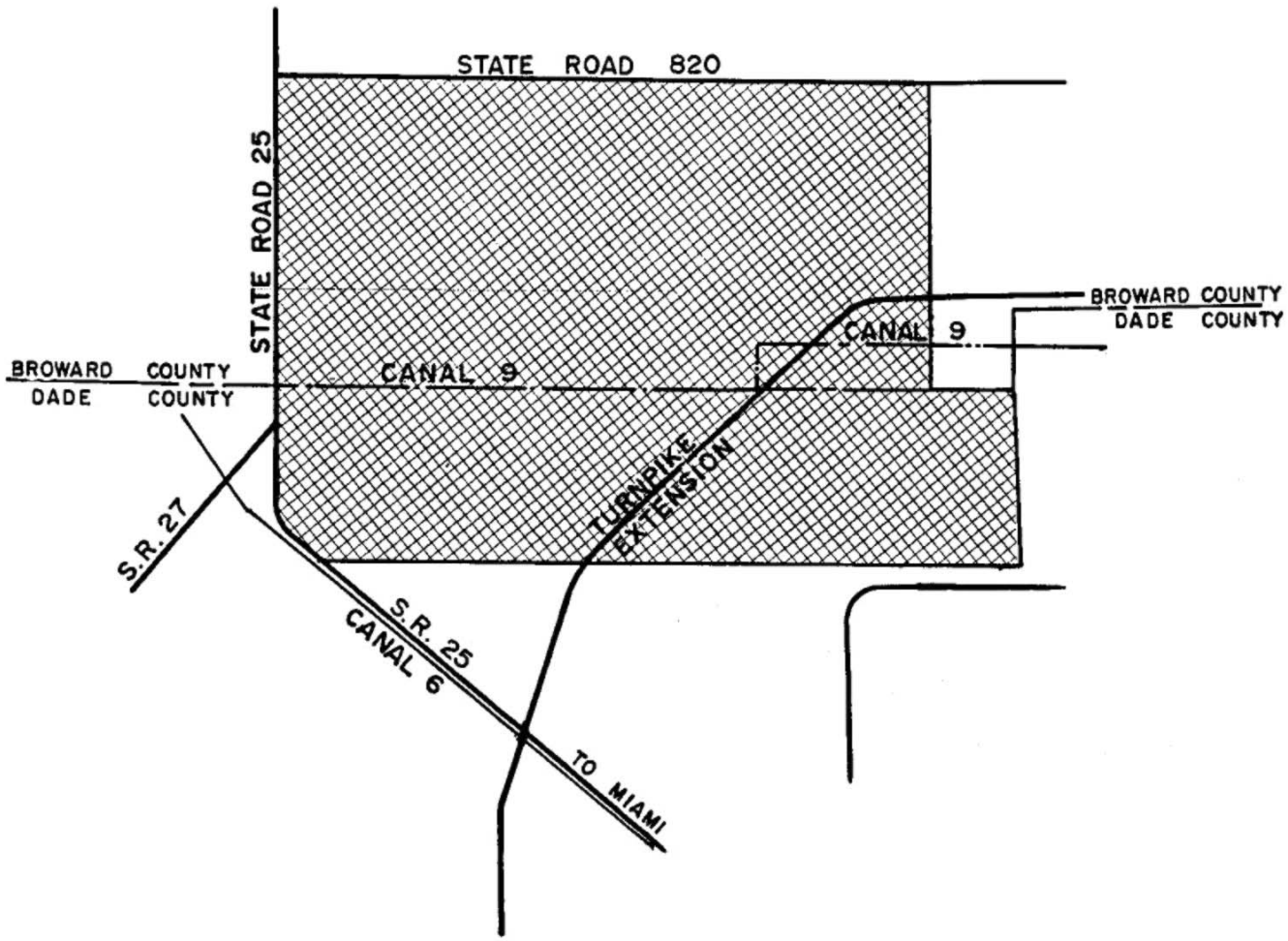
(c) Proposed excavations located from one-half mile to one-mile from existing or proposed WPA components or the Protective Levees shall maintain an overburden thickness of at least one-quarter of the existing overburden.

(d) Figures 1, 2, 4, 5 and 6 show the thickness of existing overburden within the WPA, WPAB and adjacent to the Protective Levees.

(3) Notwithstanding (2)(a)-(d) above, applicants can:

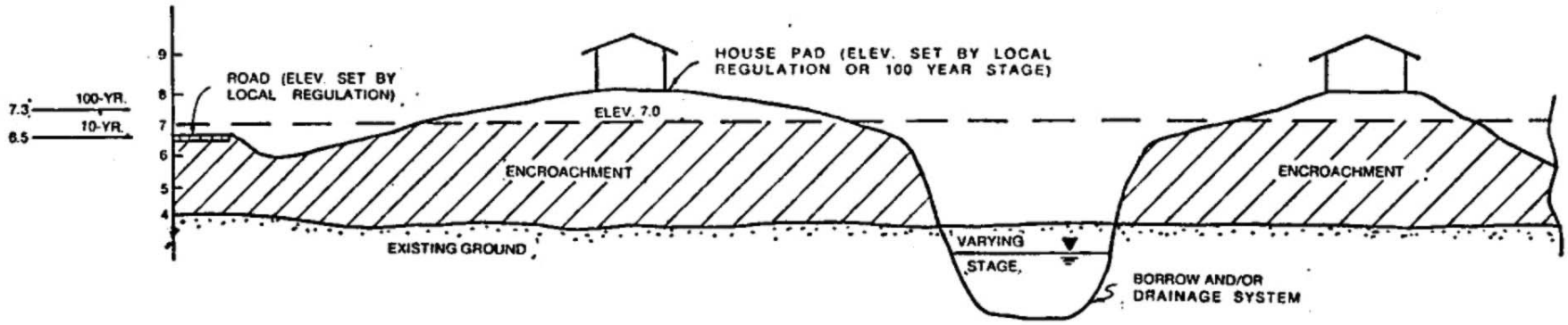
(a) Provide site-specific technical information documenting the presence of sufficient overburden above the production zone of the surficial aquifer system to demonstrate that a proposed excavation will not cause adverse seepage or hydrologic impacts to the WPA or Water Conservation Areas; or,

(b) Propose an alternative engineering design, such as installation of a synthetic liner, muck back-filled trench or other seepage barrier, with site-specific technical information to demonstrate that a proposed excavation will not cause adverse seepage or hydrologic impacts to the WPA or Water Conservation Areas.
(4) Proposed projects within the WPA, WPAB or adjacent to the Protective Levees shall not lower existing water table elevations.
(5) In addition to the water quality treatment volumes required in section 5.2.1. of the Basis of Review, projects within the WPA or WPAB shall provide an additional fifty (50) percent retention / detention water quality treatment.
(6) No dredging or filling of wetlands shall be permitted in the WPA, except where necessary to provide access to upland sites; allow an economically viable use of private property; facilitate relocation or installation of essential public services such as electricity, transportation, telecommunications and water supply in locations compatible with the WPA objectives when it has been demonstrated that such services cannot be located outside the WPA; or to facilitate the objectives of the WPA or Comprehensive Everglades Restoration Plan.
(7) Reduced mitigation ratios set forth in sections 4.3.2.4 and 4.3.9 (Melaleuca Rule) of the Basis of Review shall not apply in the WPA.
(8) In order to qualify for the reduced mitigation ratios set forth in section 4.3.2.4 and 4.3.9 (Melaleuca Rule) of the Basis of Review, projects located within the WPAB shall:
(a) provide a management plan for the control of exotic and nuisance species;
(b) maximize the spatial extent and connectivity of wetlands, wetland mitigation areas and open space; and
(c) incorporate a minimum of 50% native trees, shrubs and ground cover in the project landscape plan.
(9) The exotic and nuisance species management plan referenced in (8)(a) shall include as a minimum the following. All invasive exotic plants defined by the Florida Exotic Pest Plant Council (EPPC) as Category I plants will be removed or killed in-place during initial wetland construction, restoration and enhancement phase of the mitigation project or onsite natural area clearing. Subsequent regrowth of the invasive exotic and undesirable vegetation will be maintained at or below five (5) percent of coverage of the wetland mitigation area. During the construction restoration and enhancement phases of the mitigation project and as part of the perpetual maintenance of the mitigation areas, every effort will be taken to attain zero percent coverage of exotic/nuisance plant species immediately following maintenance activities.
(10) Mitigation for proposed impacts incurred in the WPA or WPAB must be provided within the WPAB, or at a mitigation bank or Regional Offsite Mitigation Area with an approved mitigation service area that includes the impact site, provided all other applicable criteria are met.
Specific Authority 373.044, 373.113 FS. Law Implemented 373.413, 373.416 FS.
History — New 10-21-01.

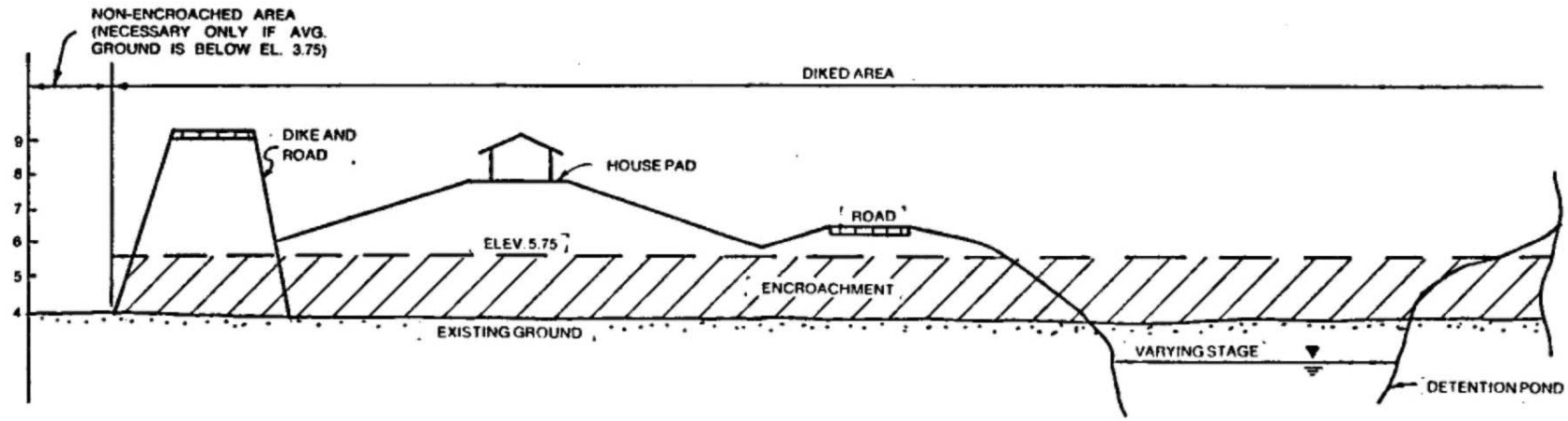


WESTERN CANAL 9 BASIN BOUNDARY

Figure (41-1)



GRAVITY DRAINAGE SYSTEM



PUMPED RETENTION SYSTEM

Figure 41-2 TYPICAL DEVELOPMENT SCHEMES

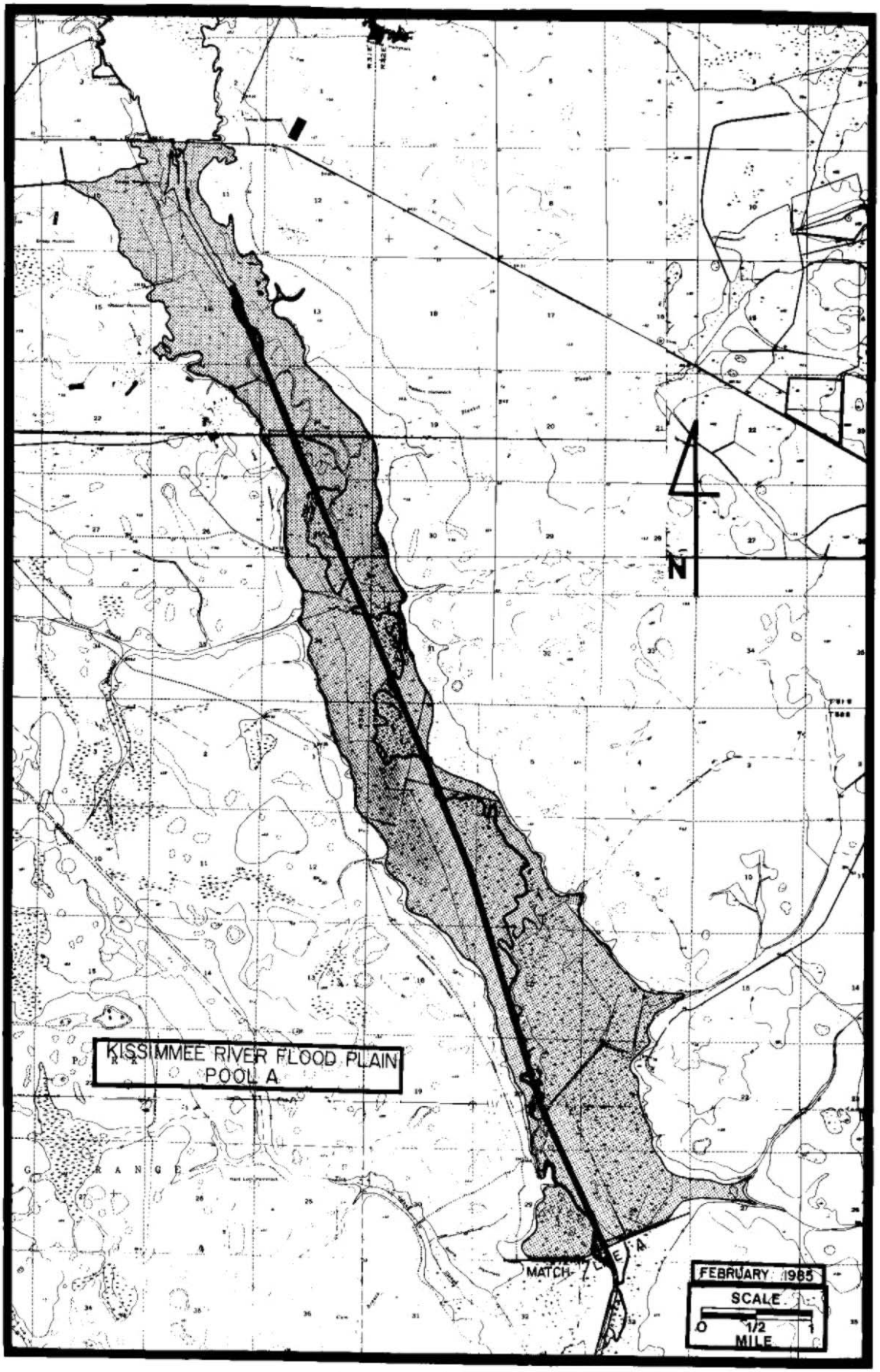


Figure 41-3, Plate 1 of 5

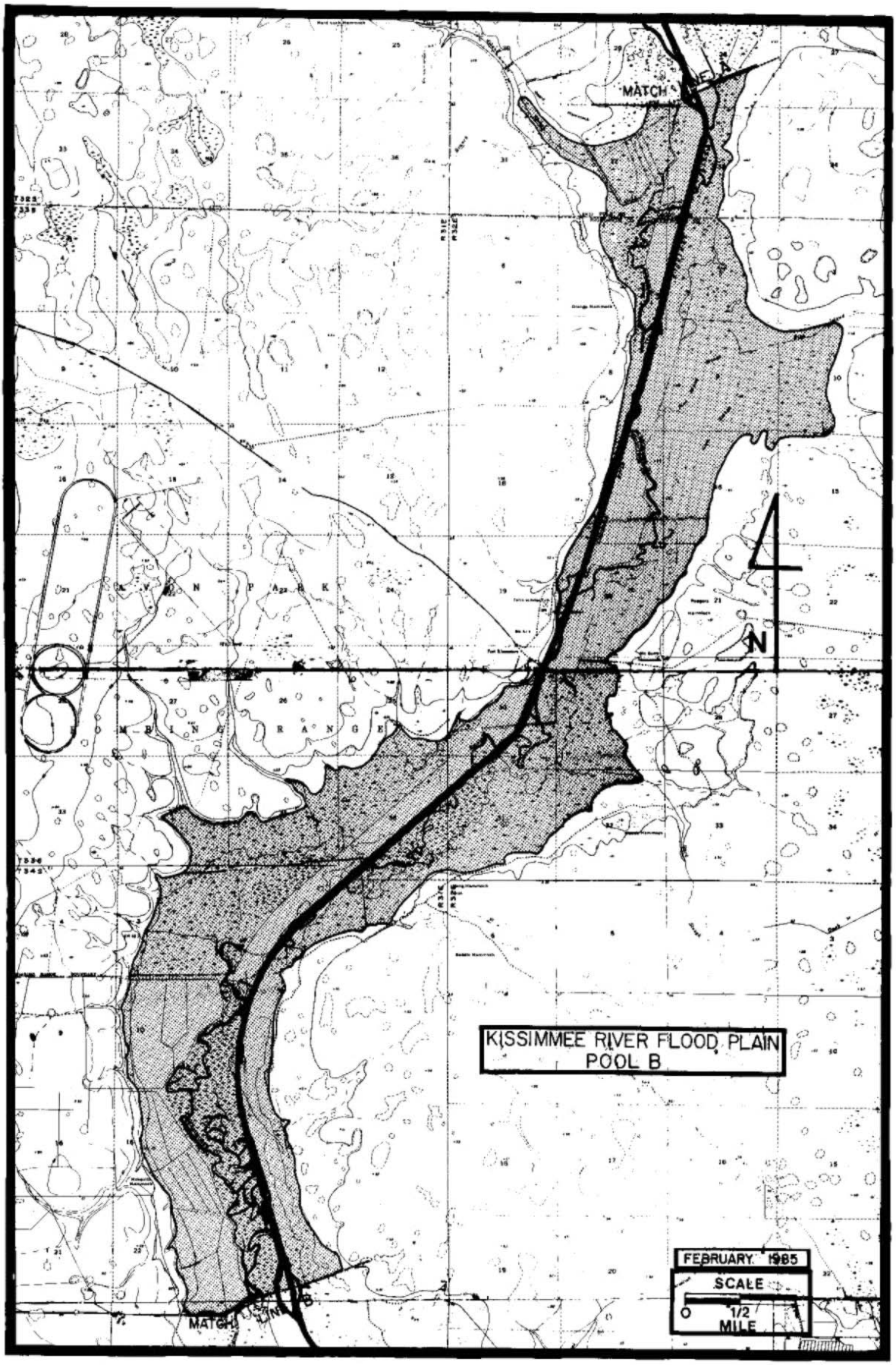


Figure 41-3, Plate 2 of 5

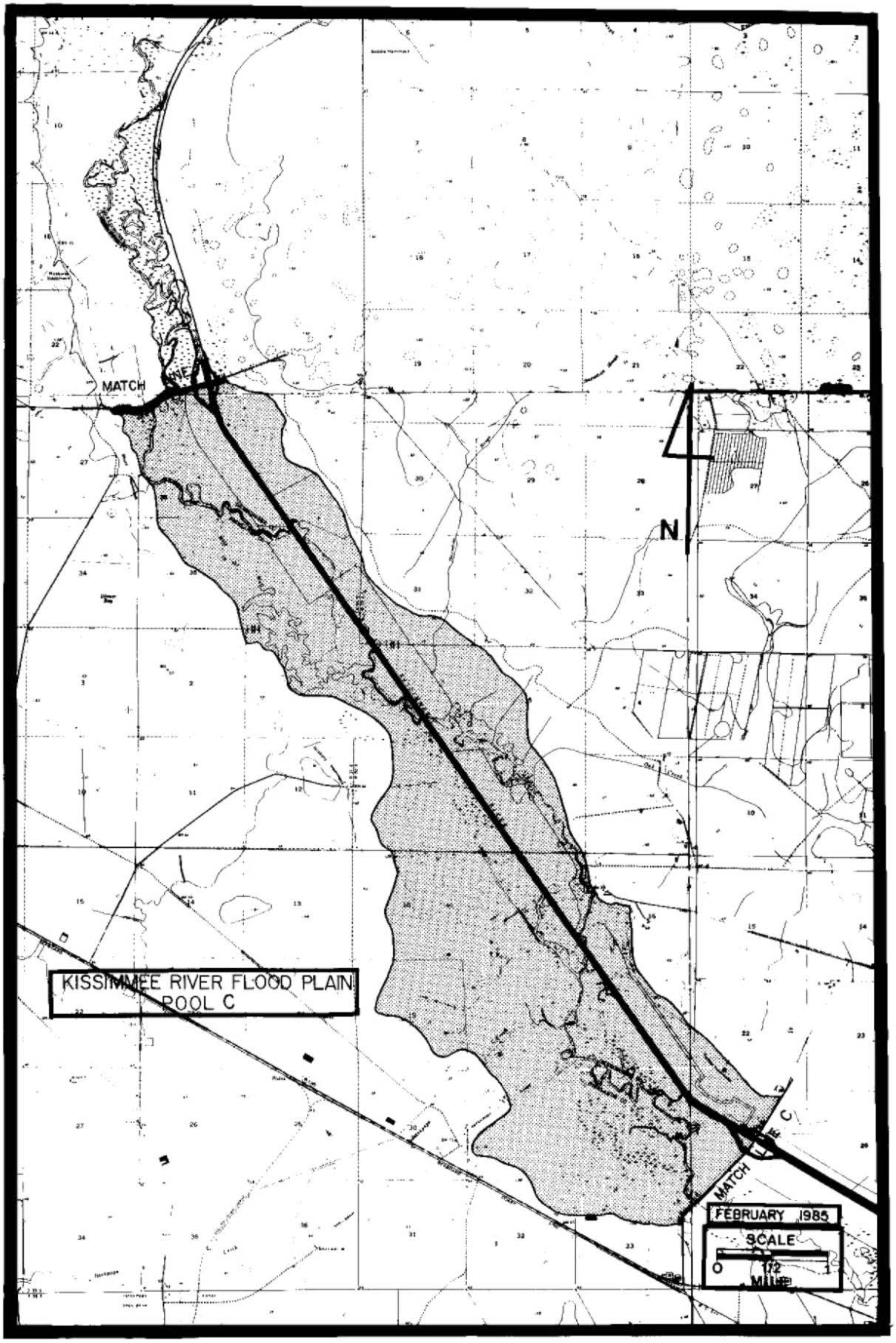


Figure 41-3, Plate 3 of 5

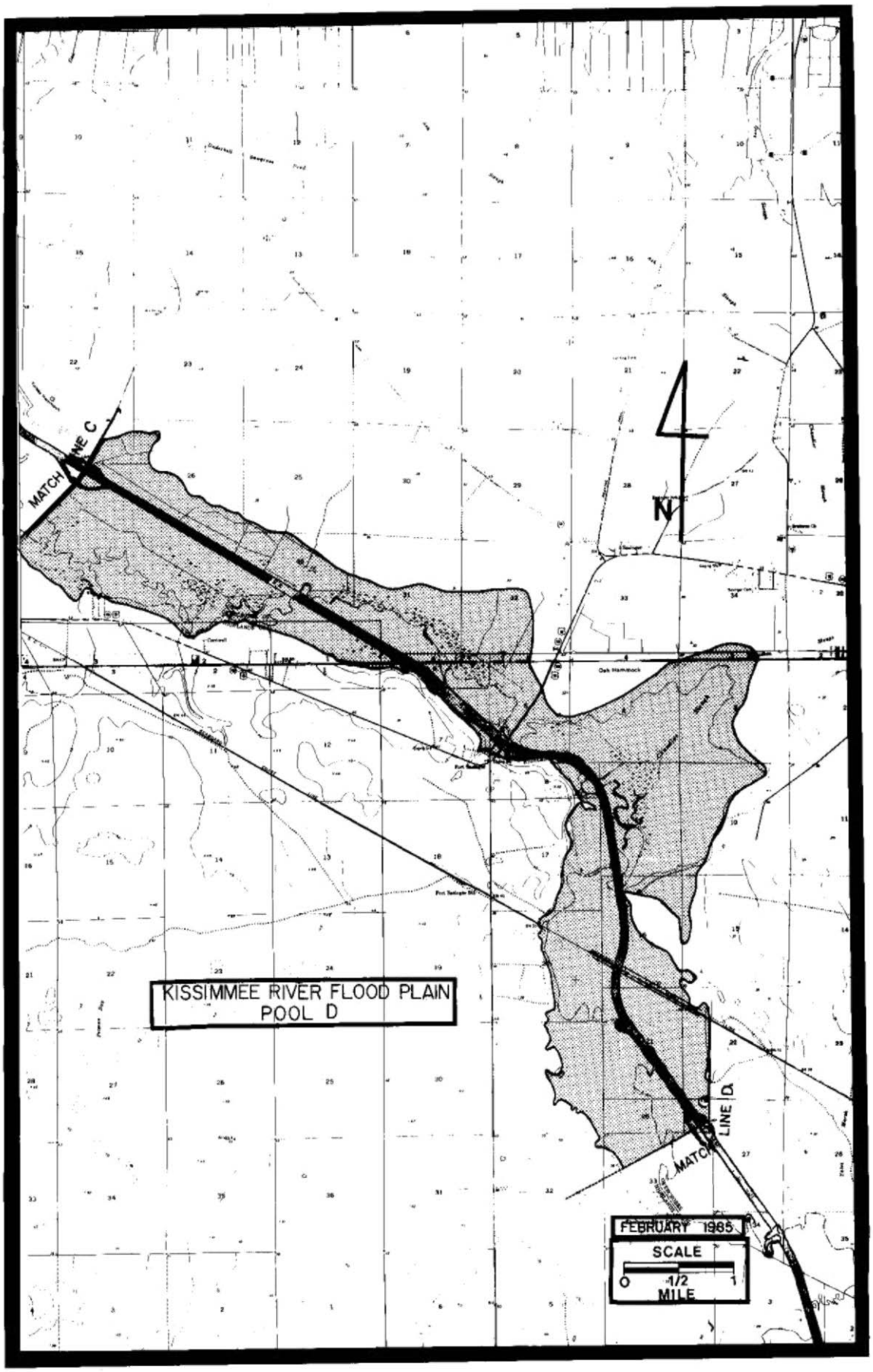


Figure 41-3, Plate 4 of 5

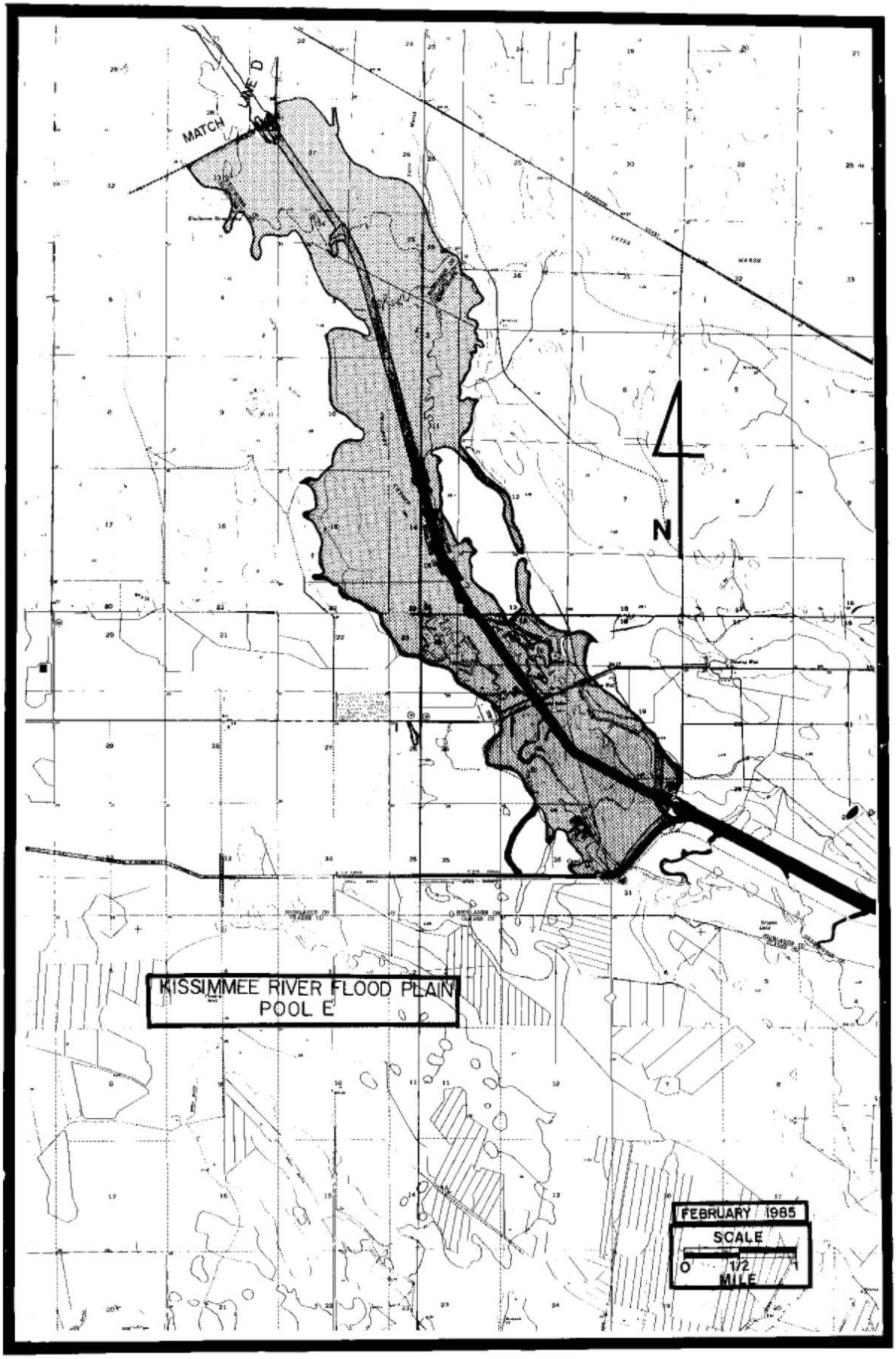
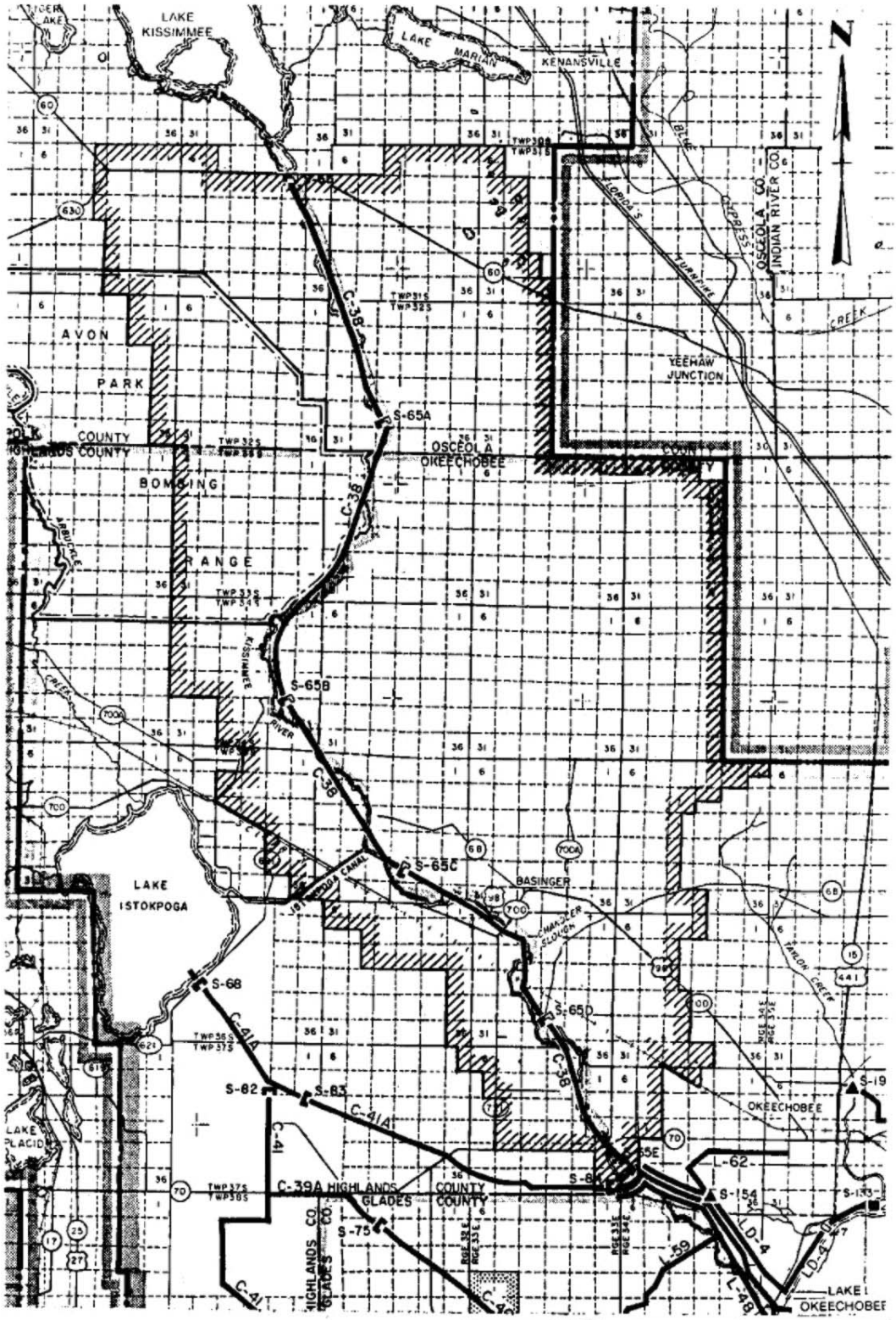


Figure 41-3, Plate 5 of 5



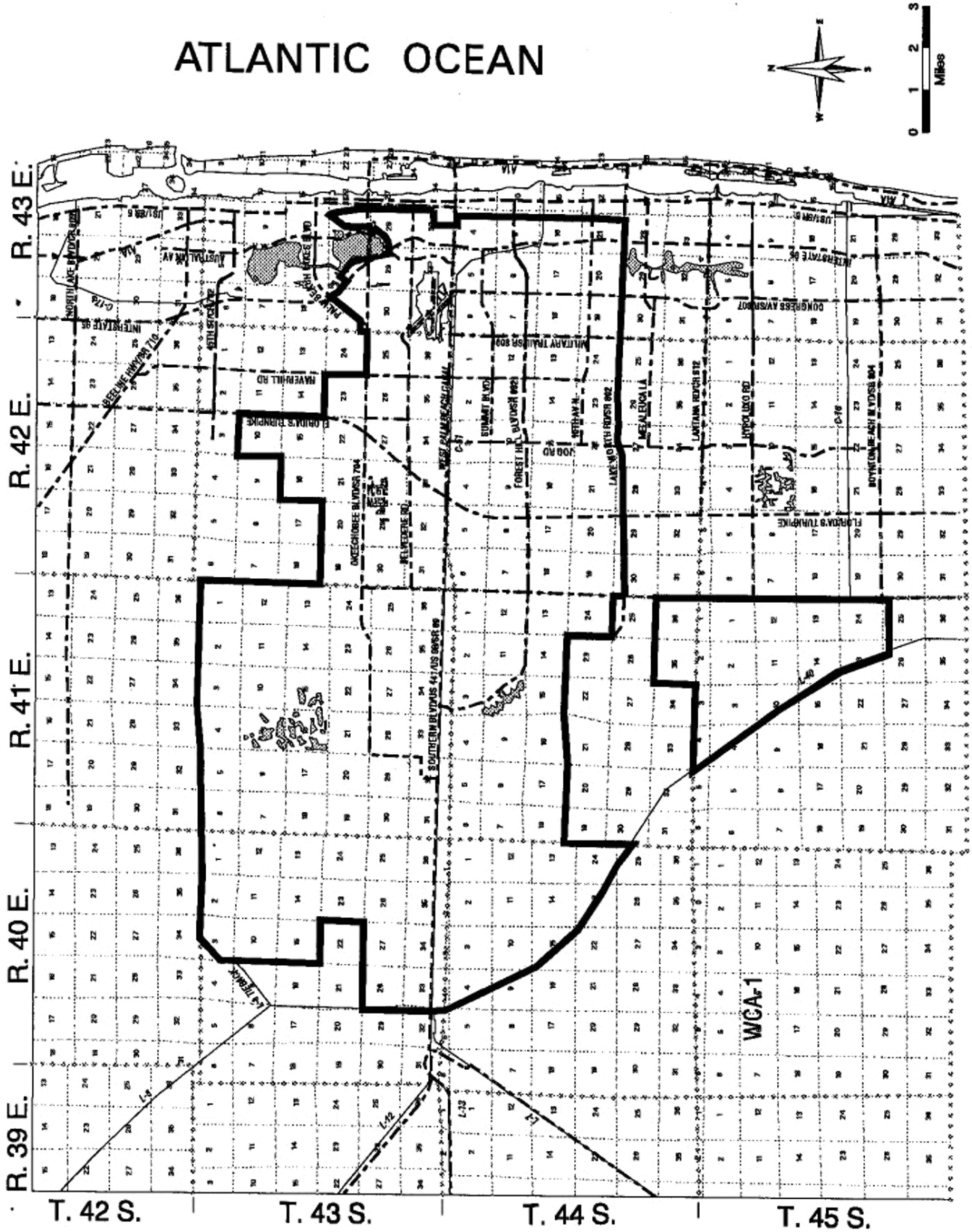
LEGEND

BOUNDARY OF KISSIMMEE RIVER BASIN

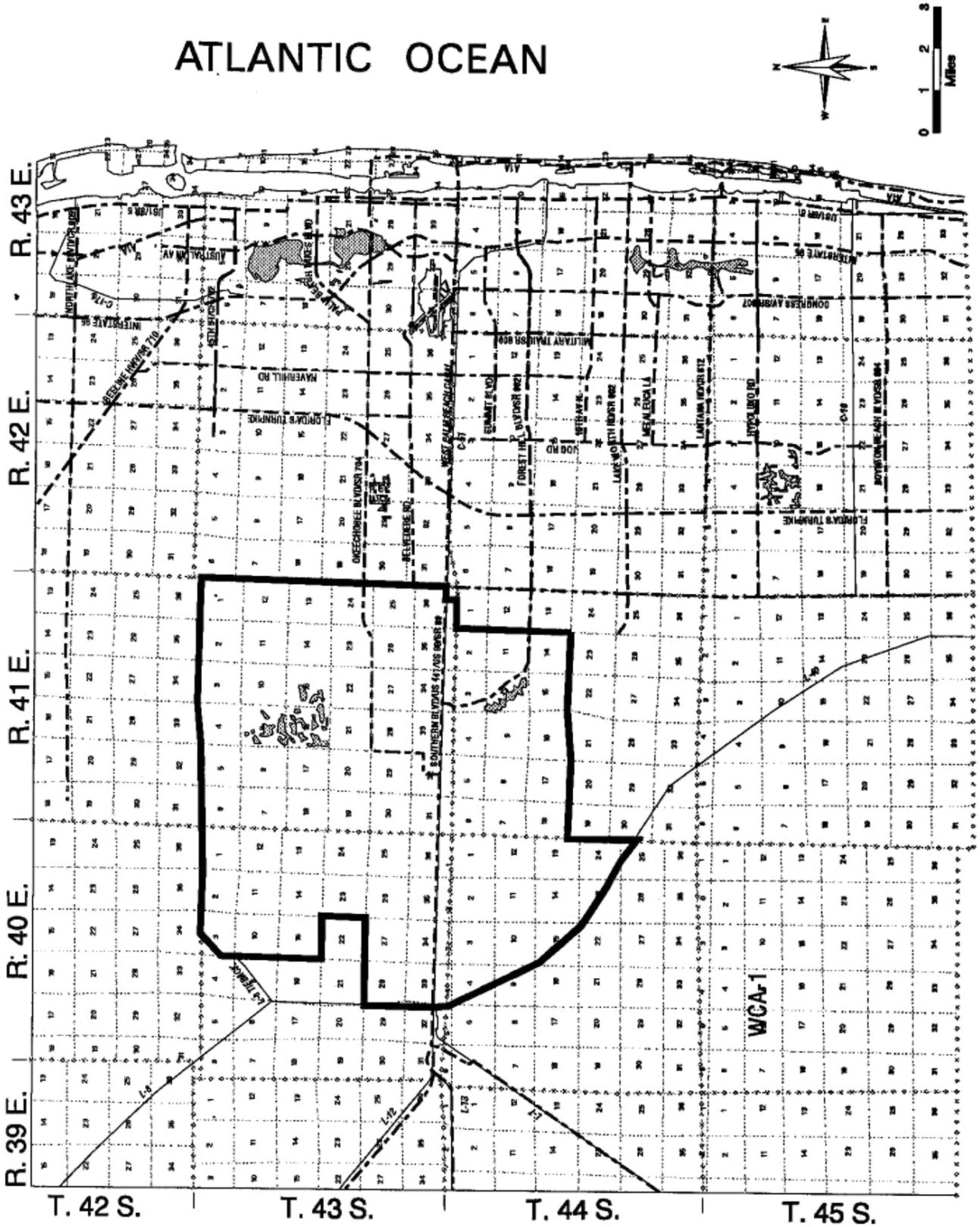
BASE MAP TAKEN FROM SOUTH FLORIDA WATER MANAGEMENT DISTRICT DRAWING NUMBER, FO-32

SOUTH FLORIDA WATER MANAGEMENT DISTRICT WEST PALM BEACH, FLORIDA	
BOUNDARY OF KISSIMMEE RIVER BASIN	
DRN H.J.E.	CKD C.Z.
DATE APRIL 9, 1984	SCALE 1" = 2 MILE
DRAWING NO. C-38-SK-99	SHEET 1OF 1

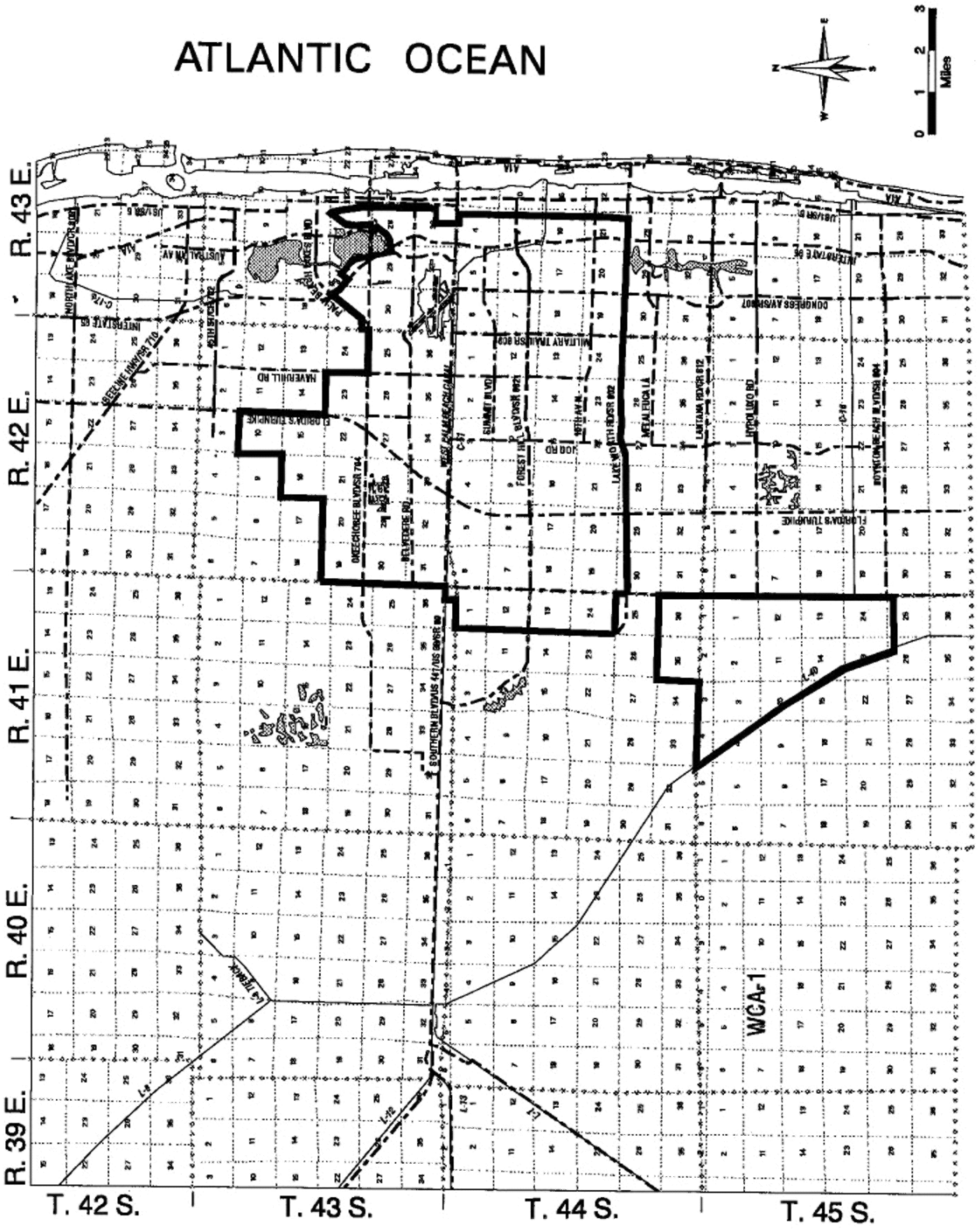
Figure 41-4



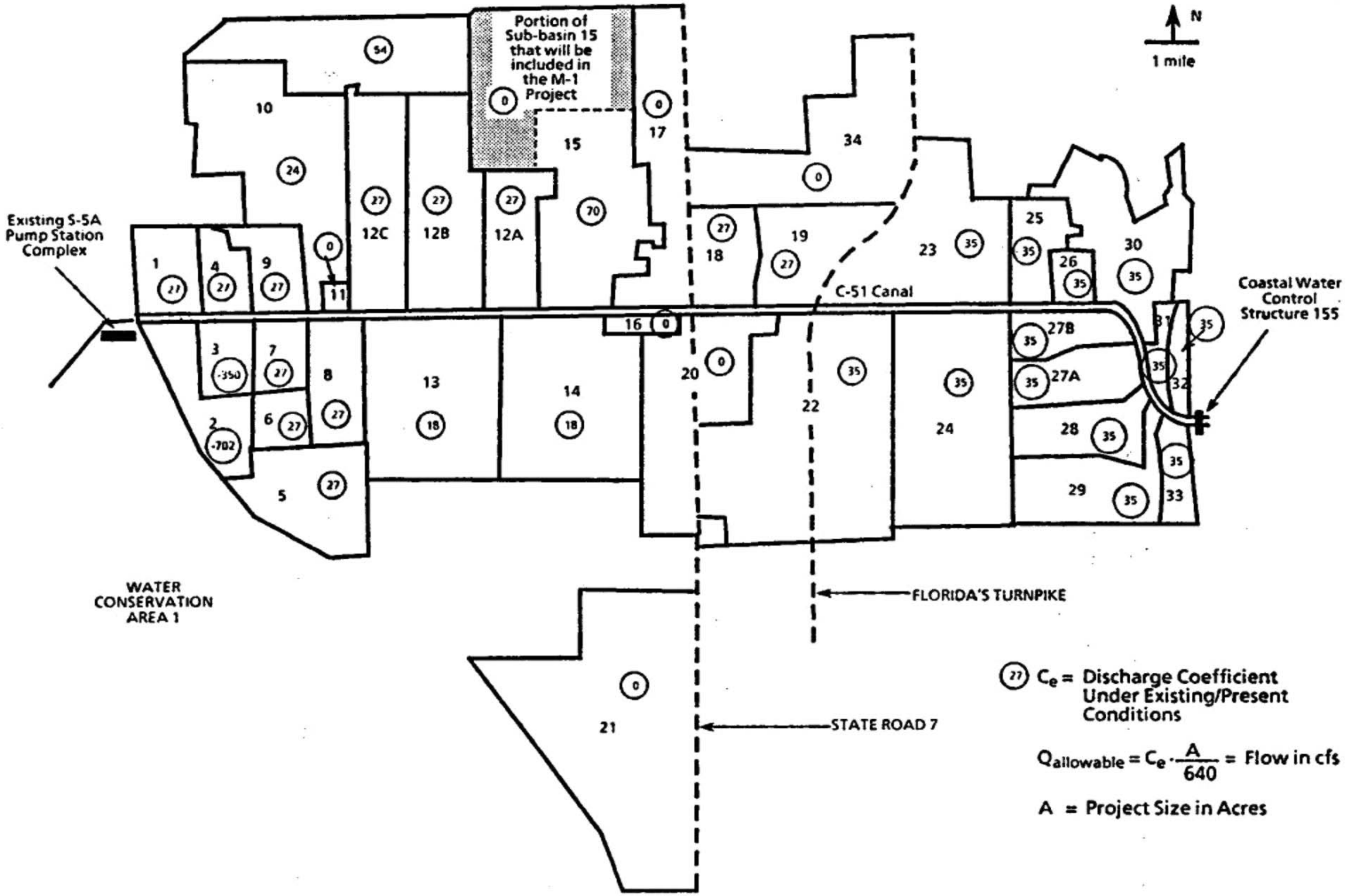
C-51 BASIN
FIGURE 41-5



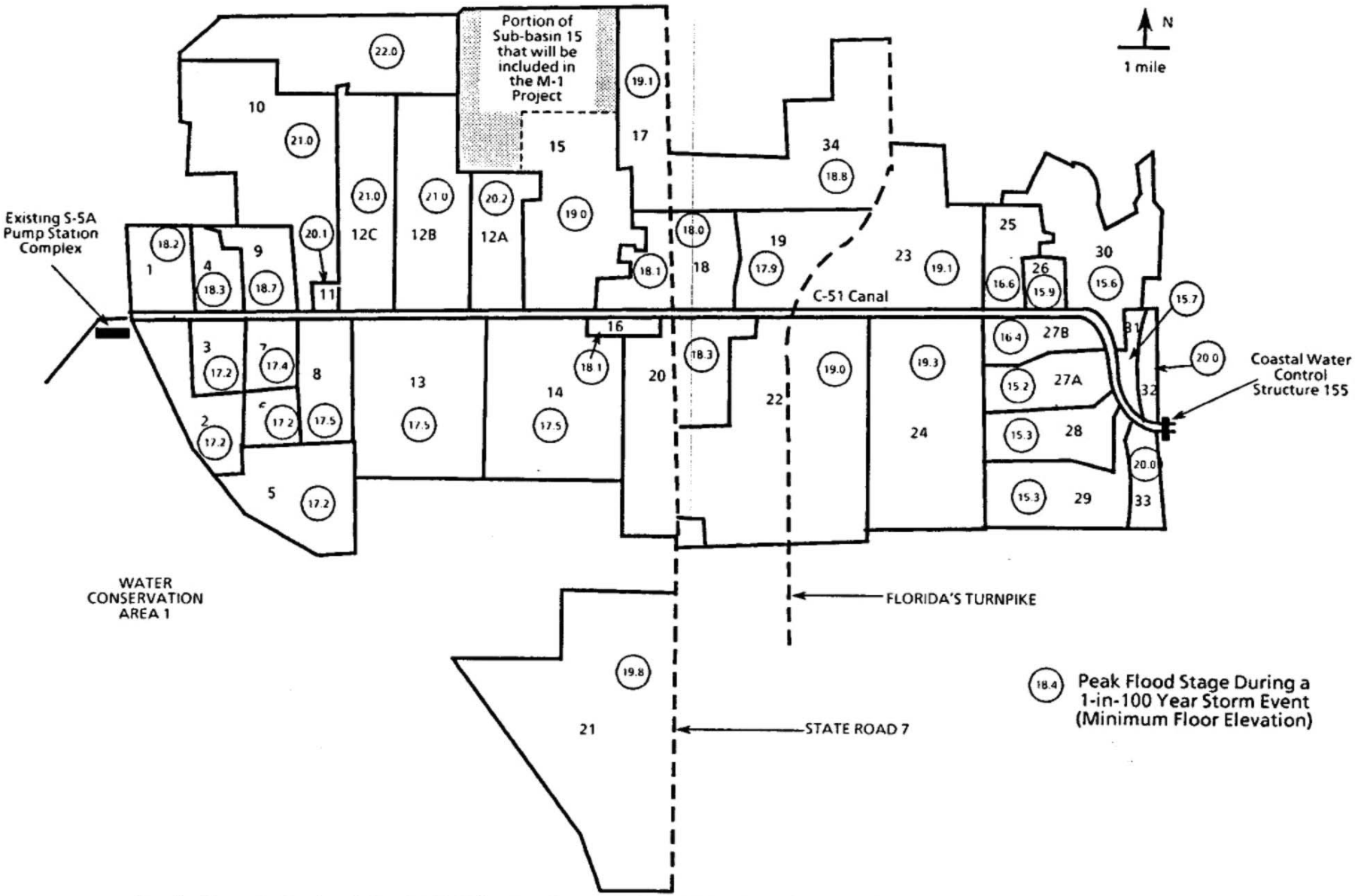
C-51 BASIN
FIGURE 41-6



C-51 BASIN
FIGURE 41-7



Discharge Coefficients for the Sub-basins of the C-51 Basin in Palm Beach County, Florida.
Figure 41-8



Peak Flood Stage (Ft. NGVD) During a 1-in-100 Year Storm Event and Minimum Floor Elevation, Prior to Completion of S-319.

Figure 41-9

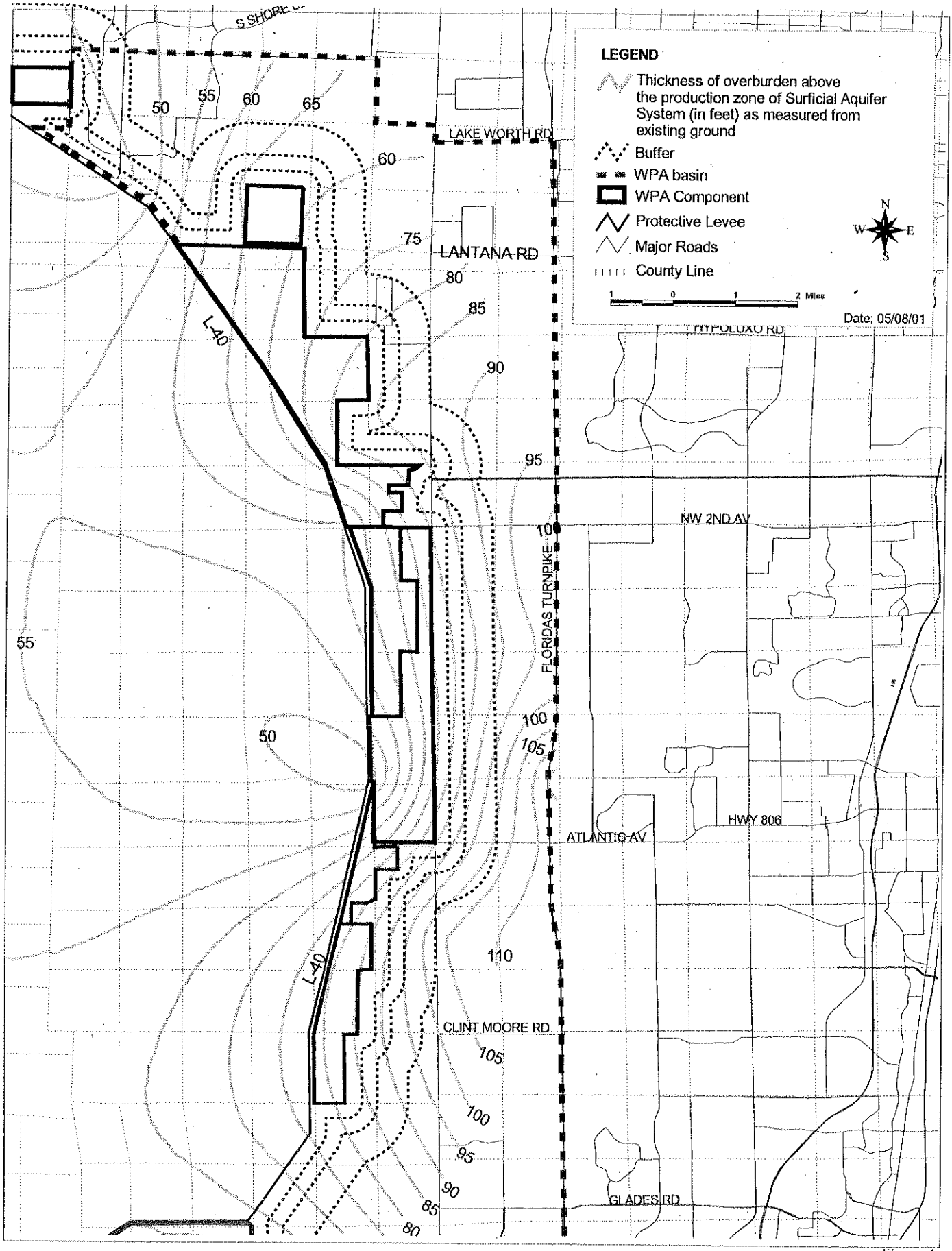

LEGEND
Thickness of overburden above the production zone of Surficial Aquifer System (in feet) as measured from existing ground
Buffer
WPA basin
WPA Component
Protective Levee
Major Roads
County Line
1 0 1 2 Miles
Date: 05/08/01
N
W
E
S
S SHORE
LAKE WORTH RD
LANTANA RD
HYPOLUXO RD
NW 2ND AV
ATLANTIC AV
HWY 806
CLINT MOORE RD
GLADES RD
FLORIDAS TURNPIKE
L-40
L-40
50
55
60
65
60
75
80
85
90
95
100
105
110
105
100
95
90
85
80
55
50

Figure 1

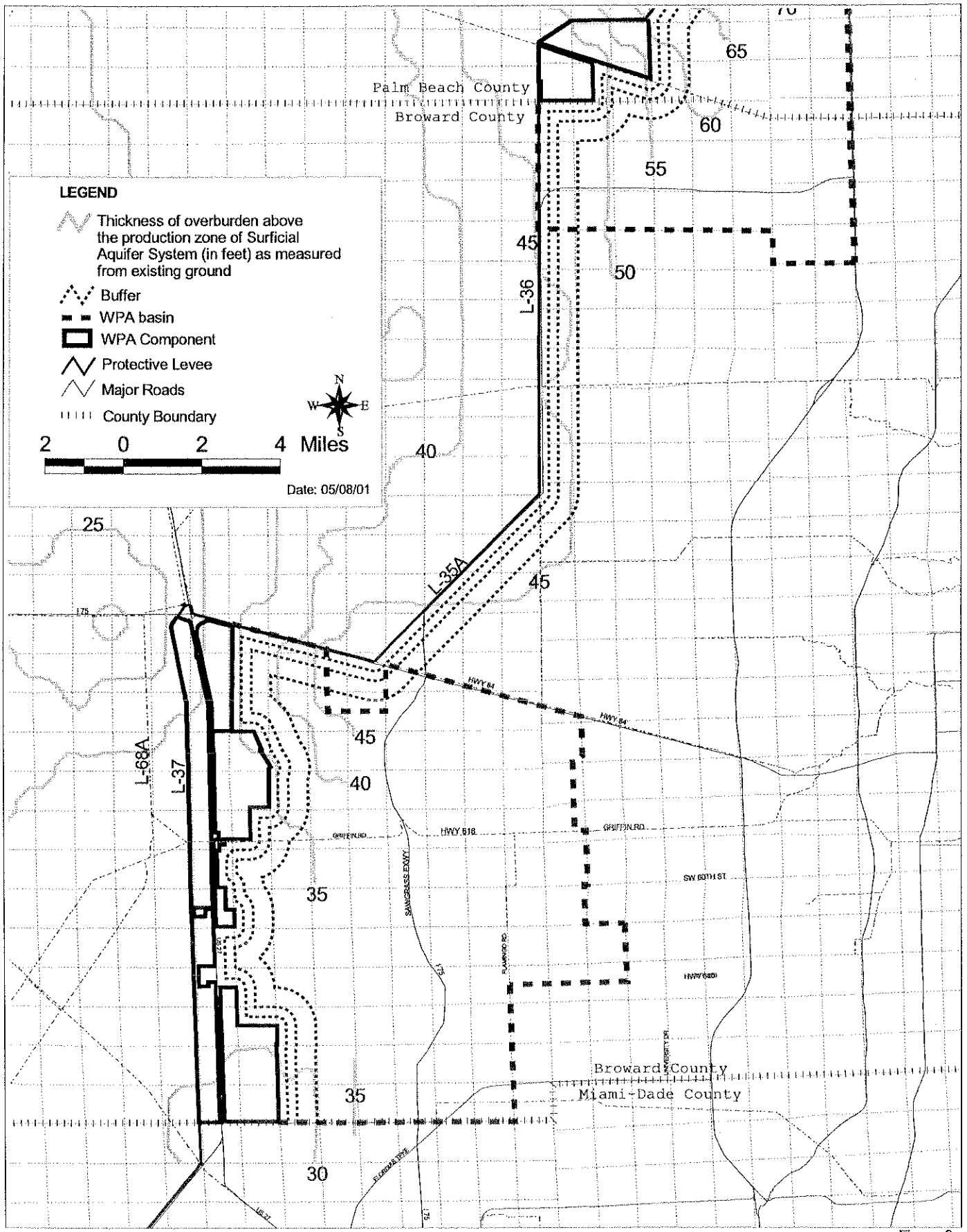

LEGEND
Thickness of overburden above the production zone of Surficial Aquifer System (in feet) as measured from existing ground
Buffer
WPA basin
WPA Component
Protective Levee
Major Roads
County Boundary
N
W
E
S
2 0 2 4 Miles
Date: 05/08/01
Palm Beach County
Broward County
Broward County
Miami-Dade County
L-36
L-35A
L-68A
L-37
65
60
55
50
45
40
35
30
25
HWY 84
HWY 84
GRIFFIN RD
GRIFFIN RD
HWY 616
SW 60TH ST
HWY 869
SAWGRASS EXPY
FLAMINGO RD
UNIVERSITY DR
FLORIDA TPKE
I-75
I-75
I-75
US 27

Figure 2

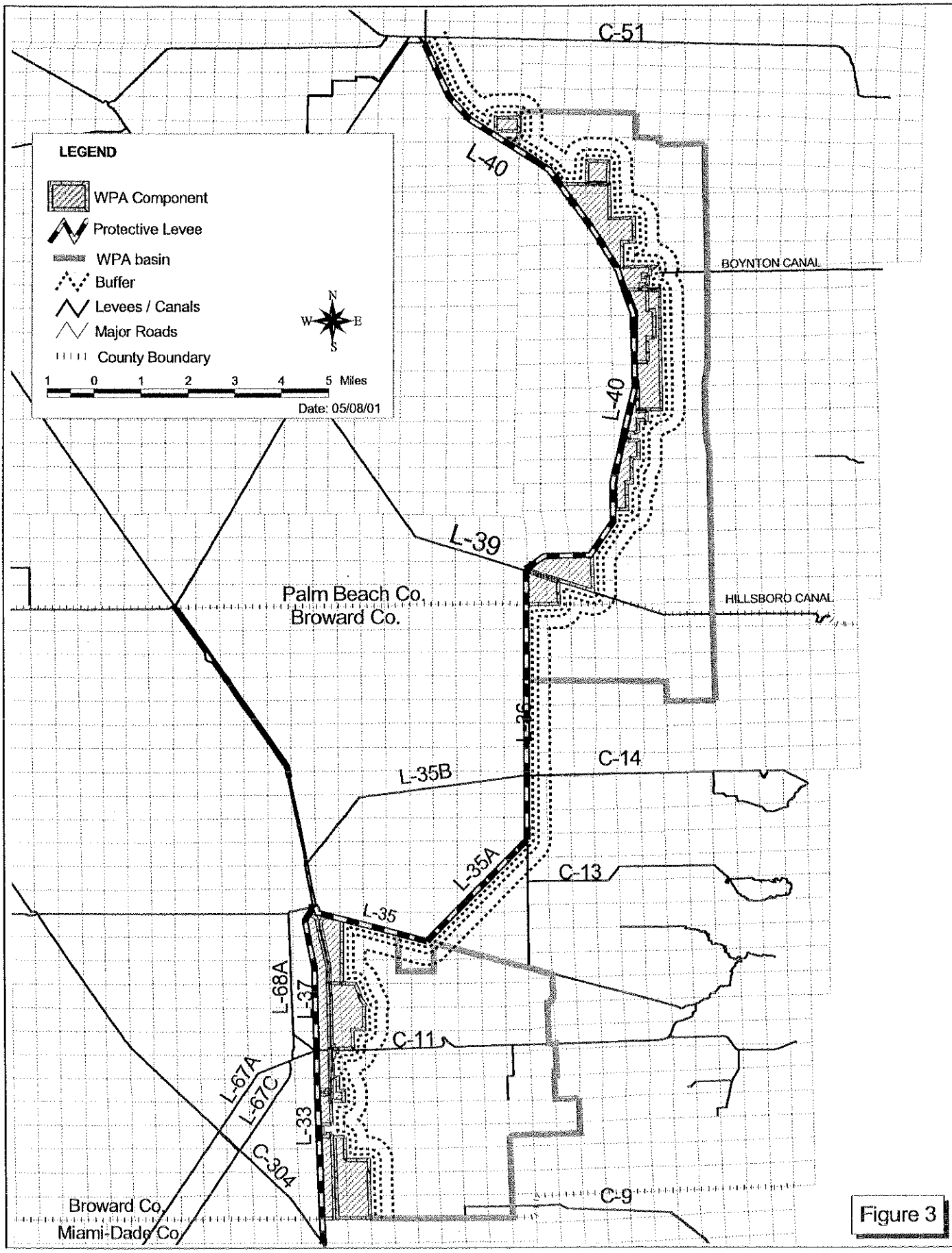

LEGEND
WPA Component
Protective Levee
WPA basin
Buffer
Levees / Canals
Major Roads
County Boundary
1 0 1 2 3 4 5 Miles
Date: 05/08/01
N
W
E
S
C-51
L-40
BOYNTON CANAL
L-40
L-39
Palm Beach Co.
Broward Co.
HILLSBORO CANAL
L-36
C-14
L-35B
L-35A
C-13
L-35
L-68A
L-37
C-11
L-67A
L-67C
L-33
C-304
C-9
Broward Co.
Miami-Dade Co.

Figure 3

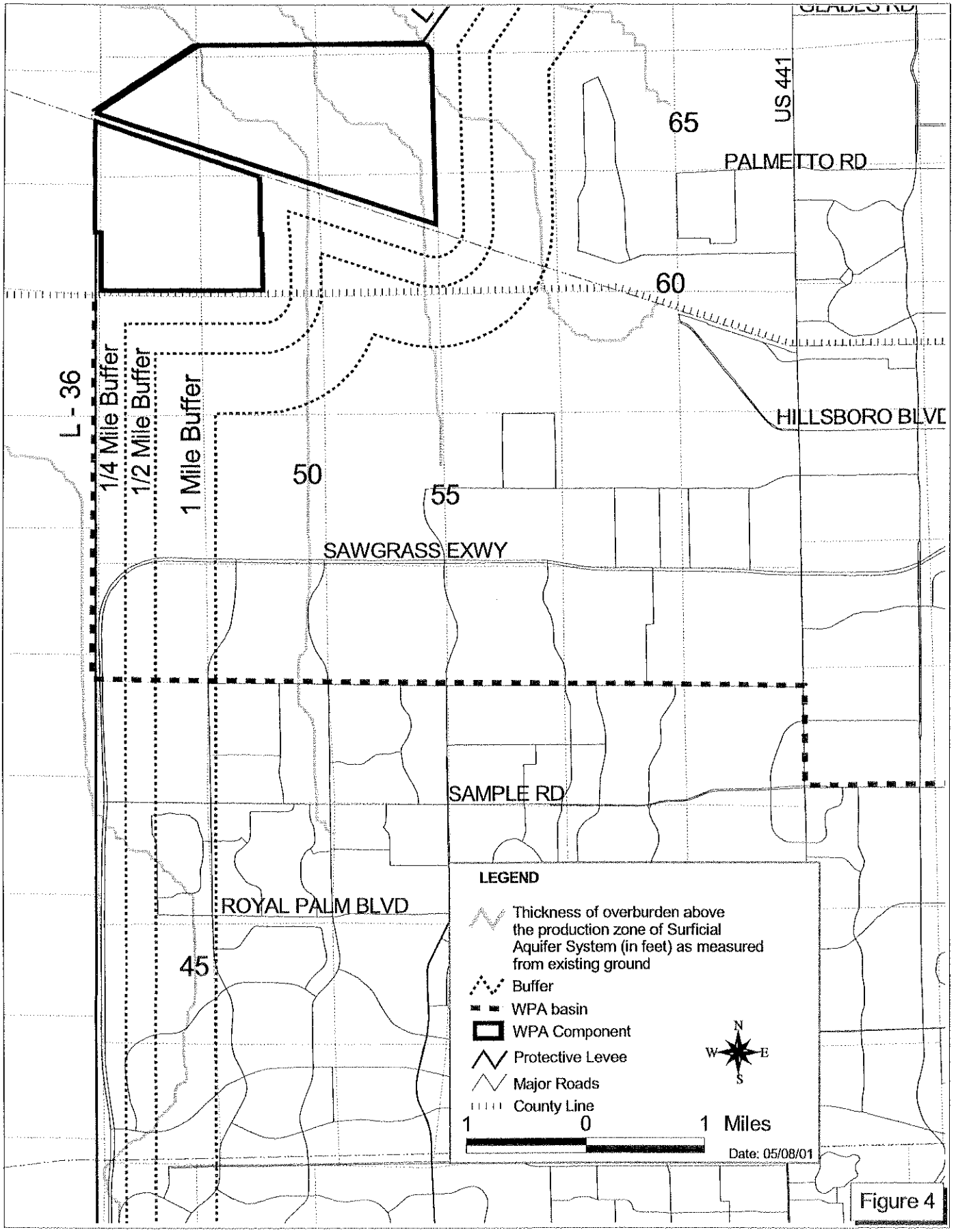

US 441
65
PALMETTO RD
60
HILLSBORO BLVD
L - 36
1/4 Mile Buffer
1/2 Mile Buffer
1 Mile Buffer
50
55
SAWGRASS EXWY
SAMPLE RD
ROYAL PALM BLVD
45
LEGEND
Thickness of overburden above the production zone of Surficial Aquifer System (in feet) as measured from existing ground
Buffer
WPA basin
WPA Component
Protective Levee
Major Roads
County Line
N
W
E
S
1 0 1 Miles
Date: 05/08/01

Figure 4

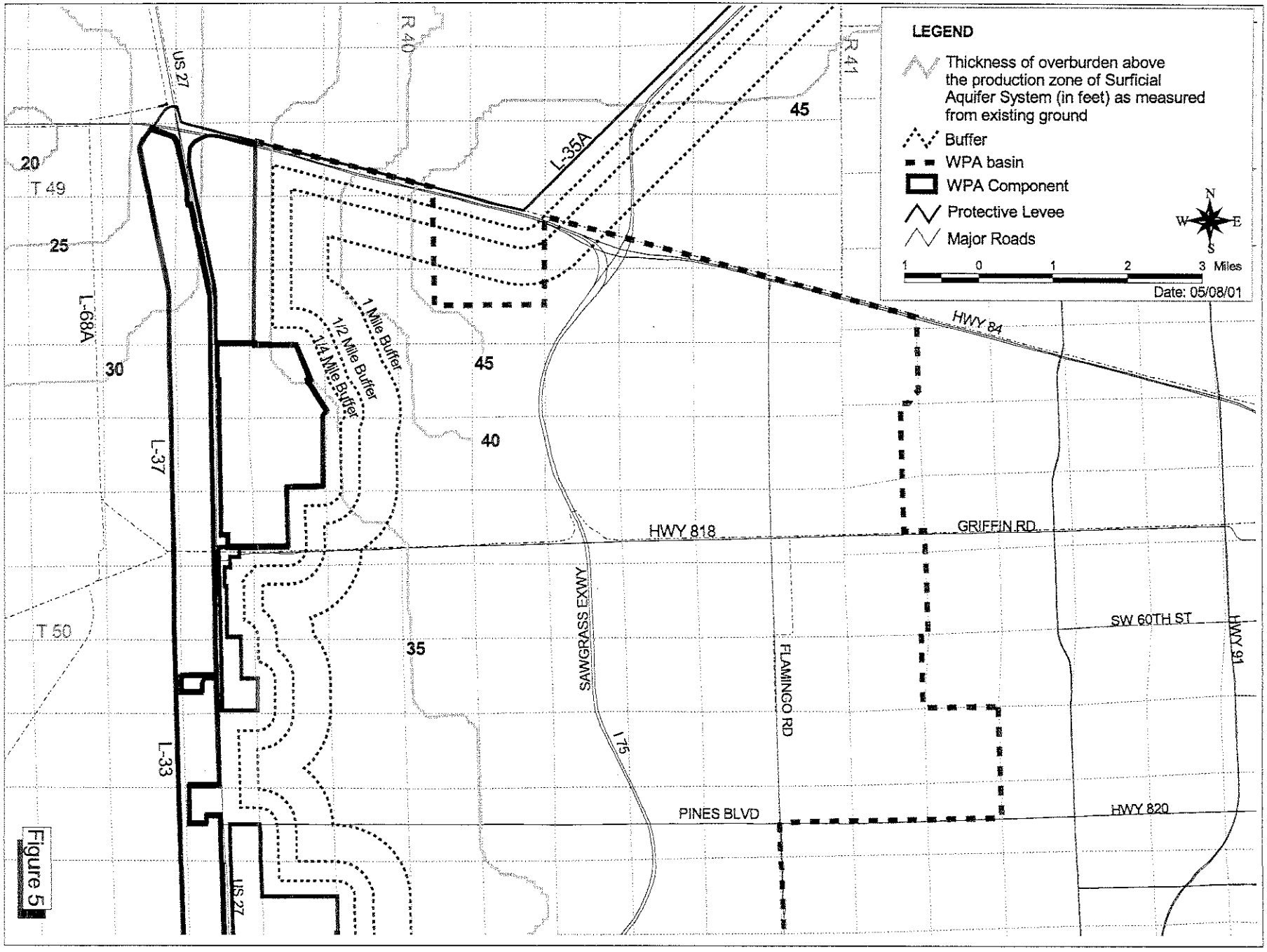

LEGEND
Thickness of overburden above the production zone of Surficial Aquifer System (in feet) as measured from existing ground
Buffer
WPA basin
WPA Component
Protective Levee
Major Roads
N
W
E
S
1 0 1 2 3 Miles
Date: 05/08/01
R 40
R 41
US 27
L-35A
L-68A
L-37
L-33
T 49
T 50
20
25
30
35
40
45
1 Mile Buffer
1/2 Mile Buffer
1/4 Mile Buffer
HWY 84
HWY 818
GRIFFIN RD
SW 60TH ST
HWY 91
SAWGRASS EXWY
I 75
FLAMINGO RD
PINES BLVD
HWY 820

Figure 5

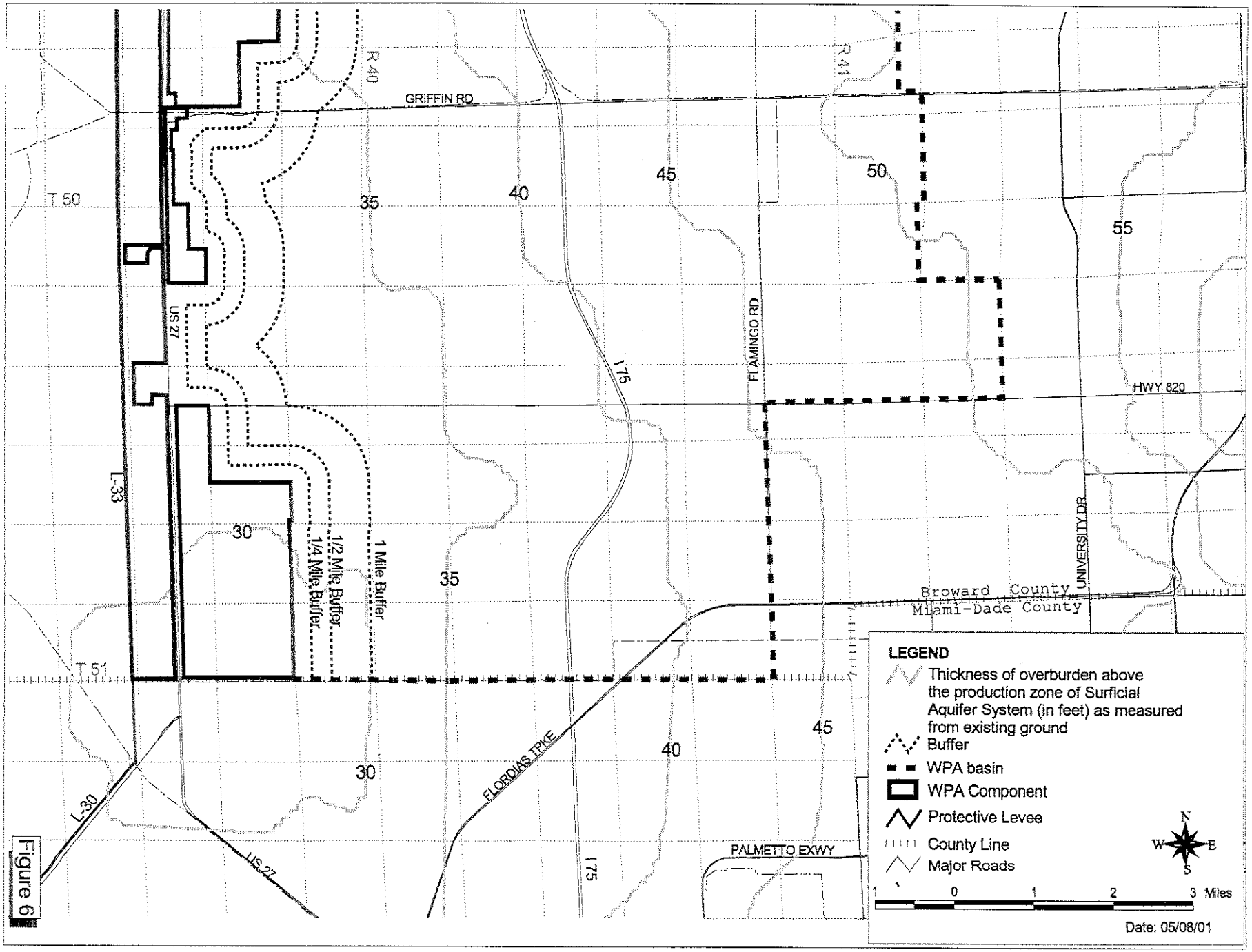

R 40
R 41
GRIFFIN RD
T 50
T 51
US 27
L-33
L-30
I 75
FLAMINGO RD
HWY 820
UNIVERSITY DR
FLORIDAS TPKE
PALMETTO EXWY
Broward County
Miami-Dade County
1/2 Mile Buffer
1/4 Mile Buffer
1 Mile Buffer
30
35
40
45
50
55
LEGEND
Thickness of overburden above the production zone of Surficial Aquifer System (in feet) as measured from existing ground
Buffer
WPA basin
WPA Component
Protective Levee
County Line
Major Roads
N
W
E
S
1 0 1 2 3 Miles
Date: 05/08/01

Figure 6

Chapter 40E-400, F.A.C.
No Notice and Noticed General Environmental Resource Permits

Chapter 40E-400 No Notice and Noticed General Environmental Resource Permits

[Note: The text on this page and the next provides a brief overview of the provisions of Chapter 40E-400, Florida Administrative Code (F.A.C.). The overview text is intended only to provide a basic understanding of the Chapter, and should not be used in place of the duly-adopted rule language or in a manner which is inconsistent with Chapter 40E-400, F.A.C.]

This Chapter sets forth the requirements for qualification by a project for a No Notice General Environmental Resource Permit and for a Noticed General Environmental Resource Permit.

No Notice General Environmental Resource Permits

A project must meet the specific criteria set forth in either Section 40E-400.315 or Section 40E-400.316 to qualify for a No Notice General Environmental Resource Permit. No permit application or other documents or fees are required to be submitted. A project which meets the specified criteria is bound by the conditions set forth in Section 40E-400.215, which is enforceable under Part IV of Chapter 373, F.S. The following types of projects, systems, or activities may qualify for a No Notice General Environmental Resource Permit under this Rule Chapter:

1. All works entirely in uplands which serve projects with less than ten acres total land area and with less than two acres impervious surface, and which will not either be conducted in or impact wetlands or other surface waters on- or off-site, and which meet other criteria listed in Section 40E-400.315, are permitted by this rule, subject to conditions.
2. All works entirely in uplands for road grading which involve no change in road elevation and resurfacing of existing roads, and which do not interrupt or impound the flow of surface waters into wetlands, are permitted by this rule, subject to conditions.
3. All works within Dade County which have been approved by the Dade County Department of Environmental Resource Management, which serve projects with less than 40 acres total land area with a positive storm drainage outfall, or which serve projects with less than 320 acres total land area and less than 160 acres of impervious area with no positive storm drainage discharge outfall, are permitted by this rule, subject to conditions.
4. All works within Collier County which serve projects with less than 40 acres total land area and which have been approved by Collier County, are permitted by this rule, subject to conditions.

Noticed General Environmental Resource Permits

The activities which may qualify for a Noticed General Environmental Resource Permit are listed in Subpart C of this Rule Chapter.

To apply for a noticed general permit under this rule, the applicant must submit one of the following three properly completed forms, any corresponding required supporting items, and the appropriate fee:

1. For activities within the District which serve only minor silvicultural surface water management systems (see further Section 40E-400.500): submit Notice of Intent to Construct a Minor Silvicultural System, Form 0974. These activities are the only ones which may commence as soon as the complete information has been either received by the District or properly mailed to the District. The proposed activities must qualify for the general permit and are subject to conditions.

2. For all other qualifying activities within the District: submit Notice of Intent to Use a Noticed General Environmental Resource Permit, Form 0980.

3. Alternatively, for all those same other qualifying activities within the District: applicants *may* submit Joint Application for Environmental Resource Permit/Authorization to Use State Owned Submerged Lands/Federal Dredge and Fill Permit, Form 0971.

Except as noted in Item 1 above, upon receipt of the required items, the District has 30 days to determine if the proposed activities qualify for a noticed general permit. If the District does not notify the applicant by mail within 30 days of receipt of the original complete submittal that the activities do not qualify, the applicant may conduct the proposed activities, subject to conditions. One exception to this is described in Section 40E-400.475, which applies to certain single family residences and other minor activities. For activities which meet the qualifications in this Section, the District will notify all applicants in writing within the 30-day period whether the proposed activity meets the criteria; the proposed activity may not commence until such written notification is provided.

During the 30-day period, if the District determines that the proposed activities do not qualify for a noticed general permit, and so notifies the applicant, the activities shall not be conducted until the proper authorizations (that is, an individual or a standard general environmental resource permit) have been obtained.

Rules of the South Florida Water Management District

NO NOTICED AND NOTICED GENERAL ENVIRONMENTAL RESOURCE PERMITS

Chapter 40E-400, F.A.C.

Amended April 14, 2003

CHAPTER 40E-400 NO NOTICE AND NOTICED GENERAL ENVIRONMENTAL RESOURCE PERMITS

PART I GENERAL PROVISIONS
40E-400.010 Review of No Notice and Noticed General Environmental Resource Permit Applications.
40E-400.021 Definitions.
PART II GENERAL ENVIRONMENTAL RESOURCE PERMITS
Subpart A Scope of Part II
40E-400.201 Policy and Purpose.
40E-400.211 Processing Procedures for Noticed General Permits.
40E-400.215 General Conditions for All No Notice and Noticed General Permits.
Subpart B No Notice General Environmental Resource Permits
40E-400.315 No Notice General Permit for Activities in Uplands.
40E-400.316 No Notice General Permit for Road Grading and Pavement Resurfacing.
Subpart C Noticed General Environmental Resource Permits
40E-400.417 General Permit for Construction, Alteration or Maintenance of Boat Ramps and Associated Accessory Docks.
40E-400.427 General Permit for Certain Piers and Associated Structures.
40E-400.431 General Permit for Installation of Riprap.
40E-400.437 General Permit for the Installation of Fences.
40E-400.439 General Permit for the Construction or Maintenance of Culverted Driveways or Roadway Crossings and Bridges of Artificial Waterways.
40E-400.443 General Permit to the Florida Department of Transportation, Counties and Municipalities for Minor Bridge Alteration, Replacement, Maintenance and Operation.
40E-400.447 General Permit to the Florida Department of Transportation, Counties and Municipalities for Minor Activities Within Existing FDOT Rights-of-Way or Easements.
40E-400.453 General Permit for the Installation, Maintenance, Repair or Removal of Underground Cables, Conduits, or Pipelines.
40E-400.455 General Permit for the Construction of Aerial Pipeline, Cable, or Conduit Crossings of Certain Waters.
40E-400.457 General Permit for Subaqueous Utility Crossings of Artificial Waterways.
40E-400.463 General Permit for the Construction and Operation of Culverts and Associated Water Control Structures in Mosquito Control Impoundments by Governmental Mosquito Control Agencies.
40E-400.467 General Permit for Breaching Mosquito Control Impoundments by Governmental Mosquito Control Agencies.
40E-400.470 Noticed General Permit for Temporary Agricultural Activities.
40E-400.475 General Permit for Minor Activities.

40E-400.483 General Permit to the Department to Conduct Minor Activities.
40E-400.485 General Permit to the Department for Environmental Restoration or Enhancement Activities.
40E-400.487 General Permit to the Department to Change Operating Schedules for Department or District Water Control Structures.
40E-400.495 General Permit to U.S. Forest Service for Minor Works within National Forests.
40E-400.500 General Permit for Construction, Operation, Maintenance, Alteration, Removal or Abandonment of Minor Silvicultural Surface Water Management Systems.
40E-400.900 Forms and Instructions.

PART I GENERAL PROVISIONS

40E-400.010 Review of No Notice and Noticed General Environmental Resource Permit Applications.

No Notice and Noticed General Environmental Resource permit applications are processed pursuant to the provisions of Section 120.60, F.S., Part VI of Chapter 40E-1, F.A.C., and Chapter 28-107, F.A.C.

Specific Authority 120.54(5), 120.60 FS. Law Implemented 120.54(5), 120.60 FS. History–New 7-2-98.

40E-400.021 Definitions.

The definitions set forth in Rule 40E-4.021, F.A.C., shall apply to this chapter. Additionally, as used in this chapter:

(1) “Canal” means a trench, the bottom of which is normally covered by water, with the upper edges of its two sides normally above water.

(2) “Channel” means a trench, the bottom of which is normally covered entirely by water, with the upper edges of one or both of its sides normally below water.

(3) “Coral” means living stony or soft corals.

(4) “Drainage ditch” or “irrigation ditch” means a man-made trench which is dug for the purpose of draining water from the land or for transporting water for use on the land and which is not built for navigational purposes.

(5) “Forested wetlands” means those wetlands where the canopy coverage by trees with a diameter at breast height of greater than 4 inches is greater than 10 percent, as well as those areas required to be planted with tree species to establish or reestablish forested wetlands pursuant to a permit issued or enforcement action taken, under rules adopted under Part IV of Chapter 373, F.S., and those areas where the canopy has been temporarily removed but are expected to revegetate to a forested wetland if use of the area would remain unchanged.

(6) “Herbaceous wetlands” means those wetlands dominated by non-woody vegetation that have less than a 10 percent canopy coverage of trees with a diameter at breast height of greater than 4 inches.

(7) “Insect control impoundment dikes” means artificial structures, including earthen berms, constructed and used to impound wetlands or other surface waters for the purpose of insect control.

(8) “Materials” means matter of any kind, such as sand, clay, silt, rock, dredged material, construction debris, solid waste, pilings or other structures, ash, and residue from industrial and domestic processes. The term shall not include the temporary use and placement of lobster pots, crab traps, or similar devices or the placement of oyster cultch pursuant to Section 370.16, F.S. or Chapter 62R-6, F.A.C.

(9) “Submerged grassbeds” means any native, herbaceous, submerged vascular plant community that is growing on the bottoms of surface waters waterward of the mean high water line or ordinary high water line.

(10) “Swale” means a man-made trench which:

(a) Has a top width-to-depth ratio of the cross-section equal to or greater than 6:1, or side slopes equal to or greater than 3 feet horizontal to 1 foot vertical;

(b) Contains contiguous areas of standing or flowing water only following a rainfall event;

(c) Is planted with or has stabilized vegetation suitable for soil stabilization, storm-water treatment, and nutrient uptake; and

(d) Is designed to take into account the soil erodibility, soil percolation, slope, slope length, and drainage area so as to prevent erosion and reduce pollutant concentration of any discharge.

Specific Authority 373.044, 373.113, 373.118, 373.171 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95, Amended 4-14-03.

PART II GENERAL ENVIRONMENTAL RESOURCE PERMITS

Subpart A Scope of Part II

40E-400.201 Policy and Purpose.

The purpose of Part II of this chapter is to provide general environmental resource permits for those activities which have been determined to have minimal adverse impacts to the water resources of the district, both individually and cumulatively. Mitigation is neither necessary nor required for activities that qualify for no notice or noticed general permits. Persons wishing to use one or more of the noticed general permits in this chapter shall be subject to the notice provisions of Rule 40E-400.211, F.A.C., before any activity is conducted as authorized herein. The general conditions provided pursuant to Rule 40E-400.215, F.A.C., shall apply to all of the no notice and noticed general permits in this chapter. Strict compliance with all of the terms, conditions, requirements, limitations and

restrictions applicable to a no notice or noticed general permit under this Chapter is required to qualify for such a permit.
Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

40E-400.211 Processing Procedures for Noticed General Permits.

(1) A noticed general permit authorizes the construction, operation, maintenance, alteration, abandonment, or removal of certain minor surface water management systems as set forth in this chapter, after notice is provided to the District. Whenever a noticed general permit specifies procedures different from the procedures in this section, the procedures specified in the noticed general permit will govern.

(2) Any person wishing to construct, operate, maintain, alter, abandon, or remove a surface water management system pursuant to a noticed general permit set forth in this chapter shall provide notice to the District by submitting a complete Notice of Intent to Use a Noticed General Environmental Resource Permit, Form No. 0980, including the appropriate application fee required in Rule 40E-1.607, F.A.C., to the District at least 30 days prior to undertaking construction, operation, maintenance, alteration, abandonment, or removal of the system. For the purposes of this subsection, the application form is only considered submitted when it is actually received by the District.

(3) If the District determines that the system does not qualify for a noticed general permit, the District shall so notify the applicant by mailing a notification within 30 days of receiving Form No. 0980. For the purposes of this subsection, District mailing of notification shall be deemed to occur when the notice is properly addressed, stamped, and deposited in the United States mail, and the postmark date shall be the date of mailing. When the District notifies the applicant that the system does not qualify for a noticed general permit due to an error or omission in the original notice to the District, the applicant shall have 60 days from the date of the notification to amend the notice to use the general permit and submit additional information to correct such error or omission. If the applicant amends the notice to use a noticed general permit and submits additional information correcting the error or omission within the 60 day time limit, no additional application fee will be required for the noticed general permit. If the District does not mail the notice informing the applicant that the system does not qualify for a noticed general permit within 30 days of receipt of the original notice to use the general permit, or receipt of amended notice to use the general permit, the applicant may conduct the activity authorized by the noticed general permit, except as otherwise provided in Rules 40E-400.475 and 40E-400.500, F.A.C.

(4) If the District notifies an applicant that the system for which a noticed general permit is sought does not qualify for the noticed general permit, the applicant may apply for a standard general or individual permit. The application fee for the noticed general permit shall be applied to the application fee for a standard general or individual permit if the applicant applies for such a permit within 60 days of notification by the District.

(5) All construction, operation, maintenance, alteration, abandonment, or removal of any system pursuant to a noticed general permit must comply with the provisions of that general permit.

(6) For systems which qualify for a noticed general permit, the District will not publish, or require the applicant to publish, newspaper notice of the notice submitted to qualify for the permit. However, persons qualifying for a noticed general permit may publish, in a newspaper of general circulation in the affected area, a notice of intent to use a noticed general permit.

(7) A noticed general permit shall also constitute certification of compliance with state water quality standards where necessary pursuant to Section 401, Public Law 92-500, 33 USC Section 1341, for activities that qualify for the noticed general permit and that are performed in accordance with the conditions of the noticed general permit.

(8) For projects located in or seaward of coastal counties, and which have regulated activities in, on, or over wetlands or other surface waters, a noticed general permit shall constitute certification of consistency with the Florida Coastal Management Plan, as provided in Section 307 of the Coastal Zone Management Act and 15 CFR 930, Subpart D, for activities that qualify for the noticed general permit and are conducted in accordance with the conditions of the noticed general permit.

(9) If the Notice of Intent involves activities located in, on or over wetlands or other surface waters, as delineated pursuant to the methodology as ratified in Section 373.4211, F.S., the District shall forward a copy to the appropriate office of the United States Army Corps of Engineers (Corps), unless specifically authorized by the Corps to do otherwise.

(10) At the time that the District has received the notice of intent, it will provide public notice that the notice of intent has been filed. Such public notice shall be sent by regular mail to those people who have previously filed a written request for notification of pending applications within the affected area. The notice of intent for a noticed general permit shall be posted in the District Service
Center responsible for reviewing the notice of intent.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.109, 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95, Amended 7-2-98.

40E-400.215 General Conditions for All No Notice and Noticed General Permits.

(1) The terms, conditions, requirements, limitations, and restrictions set forth in this section are general permit conditions which shall be applicable to, and are binding upon the permittee for all no notice and noticed general permits in this chapter. These conditions are enforceable under Part IV of Chapter 373, F.S.

(2) The general permit is valid only for the specific activity indicated. Any deviation from the specified activity and the conditions for undertaking that activity shall constitute a violation of the permit. A violation of the permit is a violation of Part IV of Chapter 373, F.S., and may result in suspension or revocation of the permittee's right to conduct such

activity under the general permit. The District may begin legal proceedings seeking penalties or other remedies as provided by law for any violation of these conditions.

(3) This general permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations prior to the start of any construction, alteration, operation, maintenance, removal or abandonment authorized by this permit. This general permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the general permit and this chapter.

(4) This general permit does not relieve the permittee from liability and penalties when the permitted activity causes harm or injury to: human health or welfare; animal, plant or aquatic life; or property. It does not allow the permittee to cause pollution in contravention of Florida Statutes and District rules.

(5) The permittee is hereby advised that Section 253.77, F.S., states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the state, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.

(6) The general permit may be modified, suspended or revoked in accordance with Chapter 120 and Section 373.429, F.S.

(7) This permit shall not be transferred to a third party except pursuant to Rule 40E-4.351, F.A.C. The permittee transferring the general permit shall remain liable for any corrective actions that may be required as a result of any permit violations prior to sale, conveyance, or other transfer of ownership or control of the permitted system or the real property at which the permitted system is located.

(8) Upon reasonable notice to the permittee, District staff with proper identification shall have permission to enter, inspect, sample and test the permitted system to insure conformity with the plans and specifications approved by the permit.

(9) The permittee shall maintain any permitted system in accordance with the plans submitted to the District.

(10) A permittee’s right to conduct a specific noticed activity under this noticed general permit is authorized for a duration of five years.

(11) Construction, alteration, operation, maintenance, removal and abandonment approved by this general permit shall be conducted in a manner which does not cause violations of state water quality standards, including any antidegradation provisions of paragraphs 62-4.242(1)(a) and (b), subsections 62-4.242(2) and (3), and Rule 62-302.300, F.A.C., and any special standards for Outstanding Florida Waters and Outstanding National Resource Waters. The permittee shall implement best management practices for erosion, turbidity, and other pollution control to prevent violation of state water quality standards. Temporary erosion control measures such as sodding, mulch-

ing, and seeding shall be implemented and shall be maintained on all erodible ground areas prior to and during construction. Permanent erosion control measures such as sodding and planting of wetland species shall be completed within seven days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into wetlands or other surface waters exists due to the permitted activity. Turbidity barriers shall remain in place and shall be maintained in a functional condition at all locations until construction is completed and soils are stabilized and vegetation has been established. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

(12) The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any system authorized by the general permit.

(13) The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.109, 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95, Amended 7-2-98.

Subpart B No Notice General Environmental Resource Permits

40E-400.315 No Notice General Permit for Activities in Uplands.

(1) A no notice general permit is hereby granted for the construction or alteration of minor systems located entirely within uplands, provided that the proposed system meets all of the following criteria:

(a) The total project area is less than 10 acres;

(b) The total project area involves less than 2 acres of impervious surface;

(c) No activities will impact wetlands or other surface waters;

(d) No activities are conducted in, on, or over wetlands or other surface waters;

(e) Drainage facilities shall not include pipes with diameters greater than 24 inches or the hydraulic equivalent and shall not utilize pumps in any manner;

(f) The project is not part of a larger common plan of development or sale.

(2) A no notice general permit is hereby granted for the construction or alteration of surface water management systems, provided that the surface water management system meets all of the conditions of subsection (a), below, and all thresholds and conditions of at least one of the subsections (b) or (c), below.

(a) General Conditions.

1. The surface water management system design plans must be signed and sealed by a professional engineer or other individual authorized by law;

2. The surface water management system must meet the criteria specified in Rules 40E-4.301 and 40E-4.302, F.A.C.;

3. The project must not be located in natural water bodies, viable wetlands habitat, waters of the state, or a Florida Outstanding Water as listed in Rule 62-302.700, F.A.C.; and

4. The permittee must have obtained a works of the District permit pursuant to Chapter 40E-6, F.A.C., if the project proposes to connect with, place structures in or across or otherwise make use of works of the District.

(b) Thresholds and Additional Conditions Within Dade County.

1. The project must have less than 40 acres total land area with positive stormwater outfall or less than 320 acres total land area and less than 160 acres of impervious area with no positive stormwater outfall.

2. The project and surface water management system must have been approved by the Dade County Department of Environmental Resource Management or its successor agency subsequent to October 2, 1977.

(c) Thresholds and Additional Conditions Within Collier County.

1. The project must have less than 40 acres total land area.

2. The project and surface water management system must have been approved by Collier County subsequent to September 17, 1980.

Specific Authority 373.044, 373.113, 373.118, 373.171, 403.813, 403.814 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History– New 10-3-95, Amended 4-14-03.

40E-400.316 No Notice General Permit for Road Grading and Pavement Resurfacing.

A no notice general permit is hereby granted for road grading which involves no change in existing road surface elevation and pavement resurfacing of existing roads, provided all of the following criteria is met:

(1) The activity is carried out solely in uplands; and

(2) Road grading does not result in the impoundment or interruption of surface waters into wetlands.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

Subpart C Noticed General Environmental Resource Permits

40E-400.417 General Permit for Construction, Alteration or Maintenance of Boat Ramps and Associated Accessory Docks.

(1) A general permit is hereby granted to any person for construction, alteration or maintenance of a boat ramp and the associated accessory docks, provided:

(a) The boat ramp is not exempt from permitting pursuant to Section 403.813(2)(c), F.S. or Rule 40E-4.051, F.A.C.;

(b) The boat ramp is not part of a larger plan of development proposed by the applicant which requires a standard general or individual environmental resource permit;

(c) The construction of a new boat ramp or the widening of an existing boat ramp which would increase the number of boat launching lanes does not occur in waters that are accessible to manatees in the following counties: Broward, Charlotte, Collier, Dade, Lee, Martin, Palm Beach, or St. Lucie, excluding the portions of those waters that are upstream of water control structures that preclude the passage of manatees, and inland waterbodies with no connection to coastal waters; however, the limiting provisions of this paragraph shall not apply to the construction of a new boat ramp at a single family residence when the residence is not part of a larger plan of development proposed by the applicant;

(d) No ramp or accessory dock shall be constructed under this general permit unless navigational access exists to the ramp and accessory docks which provides a minimum depth of two feet below the mean low water level in tidal waters or two feet below the mean annual low water level in non-tidal waters;

(e) There shall be no filling of wetlands or other surface waters, other than the actual boat ramp surface, incidental filling associated with recontouring the land under the ramp to create a level grade, and pilings for associated accessory docks;

(f) Ramps constructed or altered under this general permit shall not exceed a width of 35 feet, including the side slopes. State agencies, counties, municipalities and water management districts defined in subsection 373.019(18), F.S., are authorized to construct or alter a ramp or to widen an existing ramp which does not exceed 50 feet in width;

(g) The construction, alteration or use of the boat ramp and accessory docks shall not significantly impede navigability in the water body;

(h) The above-water portion of the ramp is landward of the mean high water line (for tidal waters) or the ordinary high water line (for non-tidal waters);

(i) Dredging shall be limited to that amount of material necessary to construct the boat ramp surface or restore the ramp to its original configuration and dimension, and the amount of dredged material shall be less than 100 cubic yards;

(j) All spoil material that results from activities authorized by this general permit shall be deposited in an upland spoil site which shall be designed and located to prevent the escape of spoil material into wetlands or other surface waters such that state water quality standards are not violated;

(k) A maximum of two accessory docks, abutting either one or both sides of the boat ramp shall be authorized, and the total square footage of the accessory docks shall be less than 500 square feet over wetlands or other surface waters. State agencies, counties, municipalities and water management districts defined in subsection 373.019(18), F.S., are authorized to construct or alter accessory docks such that the total area of the accessory docks over wetlands or other surface waters does not exceed 1000 square feet and the accessory docks are not more than six feet wide;

(l) There shall be no dredging or filling of submerged grassbeds, or coral communities;

(m) No part of the accessory docks shall be located over submerged grassbeds or coral communities;

(n) The accessory docks shall not be used for overnight mooring, except for accessory docks at a boat ramp at a single family residence;

(2) The construction or alteration of a boat ramp or accessory dock does not obligate the District to approve any subsequent request to dredge for navigational access.

Specific Authority 373.044, 373.113, 373.118, 373.171 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95, Amended 4-14-03.

40E-400.427 General Permit for Certain Piers and Associated Structures.

(1) A general permit is hereby granted to any person to construct, extend, or remove piers and associated structures as described below:

(a) Single-family piers along with boat lifts, boat houses, terminal platforms, and gazebos attached to the pier, where these structures:

1. Do not accommodate the mooring of more than two water craft;

2. Do not, together with existing structures, exceed a total area of 2,000 square feet; and

3. Have a minimum depth of two feet below the mean low water level for tidal waters and two feet below the mean annual low water level for non-tidal waters for all areas designed for boat mooring and navigational access, and;

(b) Public fishing piers that do not exceed a total area of 2,000 sq. ft. provided the structure is designed and built to discourage boat mooring by elevating the fishing pier to a minimum height of 5 ft. above mean high water or ordinary high water, surrounding the pier with handrails, and installing and maintaining signs that state “No Boat Mooring Allowed”.

(2) This general permit shall be subject to the following specific conditions:

(a) Construction or extension of the boat house, boat shelter, boat lift, gazebo, or terminal platforms, shall not occur over submerged grassbeds, coral communities, or wetlands. In addition, the boat mooring location shall not be over submerged grassbeds, coral communities, or wetlands. However, the access walkway portion of the pier may traverse these resources provided it is elevated a minimum of 5 feet above mean high water or ordinary high water, contains handrails that are maintained in such a manner as to prevent use of the access walkways for boat mooring or access, and does not exceed a width of 6 feet, or a width of 4 feet in Aquatic Preserves;

(b) There shall be no wet bars or living quarters over wetlands or other surface waters or on the pier, and no structure authorized by this general permit shall be enclosed by walls or doors;

(c) The structure and its use shall not significantly impede navigability in the water body.

(d) There shall be no dredging or filling associated with construction of the structures authorized herein, other than that required for installation of the actual pilings for the pier, boat lift, boat shelter, gazebo, or terminal platform;

(e) There shall be no fish cleaning facilities, boat repair facilities or equipment, or fueling facilities on the structures authorized by this general permit. In addition, no overboard discharges of trash, human or animal waste, or fuel shall occur from any structures authorized by this general permit;

(f) This general permit shall not authorize the construction of more than one pier per parcel of land or individual lot. For the purposes of this general permit, multi-family living complexes shall be treated as one parcel of property regardless of the legal division of ownership or control of the associated property.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

40E-400.431 General Permit for Installation of Riprap.

(1) A general permit is hereby granted to any person installing riprap at the toe of an existing vertical seawall, provided:

(a) The riprap consists only of natural boulders or clean concrete rubble one to three feet in diameter in average dimensions;

(b) The slope of the riprap is no steeper than 2 horizontal to 1 vertical and the horizontal distance from the toe of the seawall is no more than 8 feet;

(c) There are no reinforcing rods or other similar protrusions in concrete rubble and all rubble or boulders are free of attached sediments;

(d) Neither the distance nor the use of the riprap shall interfere with navigation;

(e) There is no filling or dredging associated with the placement of riprap other than the riprap material itself;

(f) There shall be no filling of submerged grassbeds;

(g) The amount of wetland area filled shall not exceed 100 square feet; and

(h) There shall be no filling of coral communities.

(2) This general permit shall be subject to the following specific conditions:

(a) Installation of the structure does not obligate the District to approve any subsequent request to dredge for navigational access;

(b) There shall be no backfilling to obtain useable upland or to straighten an otherwise sinuous shoreline; and

(c) There shall be no filling or backfilling to reclaim land lost by avulsion or erosion.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

40E-400.437 General Permit for the Installation of Fences.

A general permit is hereby granted to any person installing a fence in wetlands or other surface waters, except in Outstanding Florida Waters, Outstanding National Resource Waters, Aquatic Preserves, Class II waters, or waters approved, conditionally approved, restricted, or conditionally restricted by the department for shellfish harvesting, provided:

(1) The structure shall not block navigation, create a navigational hazard, impede the natural flow of water by itself or through the accumulation of debris;

(2) No fence shall be installed into open waters (areas of water bodies not supporting emergent vegetation) of any navigable river, stream, canal, or tributary thereof, a distance of more than 25 feet or more than twenty percent of the width of the open water, whichever is less, and no fence shall extend more than 15 feet waterward of the landward extent of any lake, including contiguous wetlands;

(3) The fence will be constructed of wire attached to posts which project at least 2 feet above the mean annual flood or ordinary high water elevation of the waterway;

(4) In navigable waters and all lakes, the structure shall be adequately marked with reflectors visible from both directions paralleling the shoreline; and

(5) Dredging or filling performed shall be limited to that necessary to install individual fence posts.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

40E-400.439 General Permit for the Construction or Maintenance of Culverted Driveways or Roadway Crossings and Bridges of Artificial Waterways.

(1) A general permit is hereby granted to any person for the purpose of constructing or maintaining a driveway, roadway or bridge which crosses an artificial waterway provided:

(a) This general permit shall apply only to wholly artificial, non-navigable drainage conveyances;

(b) A culvert or culverts shall be placed under the roadway or driveway;

(c) The size and number of the culvert(s) shall be adequate to pass normal high water stages of the artificial water body being crossed. In no instance shall the culvert(s) provide a smaller cross-sectional area or discharge capacity than any upstream culvert;

(d) The elevation of the culvert invert shall be at the existing bottom grade of the artificial waterway;

(e) The length of the driveway, roadway or bridge crossing the waterway shall not exceed 50 feet top of bank to top of bank;

(f) The top width of the driveway, roadway, or bridge shall not exceed 75 feet, the toe to toe width shall not exceed 100 feet and the side slopes shall not be steeper than 2 horizontal to 1 vertical;

(g) Clean fill used for the crossing must be obtained from uplands or from a dredge site which is in compliance with the permitting requirement of Chapters 40E-4 and 40E-40, F.A.C., as applicable;

(h) There shall be no additional dredging, filling, or construction activities, except as exempted from regulation under Part IV, Chapter 373, F.S., and those directly involved in the construction or maintenance of the proposed crossing or bridge; and

(i) The maintenance of the roadway, driveway or bridge shall continue to provide at least the same volume of discharge through the culvert(s).

(2) This general permit shall be subject to the following specific conditions:

(a) The permittee shall stabilize fill areas and waterway banks disturbed by the activity by revegetation or riprap within 72 hours of completion of construction to prevent erosion, siltation or turbid runoff into wetlands and other surface waters.

(b) If dewatering is performed, all temporary fill dikes and dewatering discharges shall be installed and constructed so that no upstream flooding or impoundment occurs and no siltation, erosion or turbid discharges into wetlands or other surface waters occur in violation of state water quality standards. Any temporary works shall be completely removed and all areas upstream and downstream from the crossing shall be restored to grades, elevations and conditions which existed before construction.

(3) This general permit shall apply only to a maximum of two crossings on a given parcel of property with a minimum distance of 500 feet between crossings. Maintenance shall be allowed at any and all existing structures meeting the specifications of this general permit.

(4) This general permit shall not apply if:

(a) Relocation of all or part of the artificial waterway is required, or

(b) Dredging or filling activities are required, other than for the proposed culvert crossing, except as exempted from regulation under Part IV, Chapter 373, F.S.

(5) This general permit does not authorize any road construction or alteration connecting to a crossing authorized by this general permit.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

40E-400.443 General Permit to the Florida Department of Transportation, Counties and Municipalities for Minor Bridge Alteration, Replacement, Maintenance and Operation.

(1) A general permit is hereby granted to the Florida Department of Transportation, Counties and Municipalities to conduct the activities described below:

(a) The replacement or modification of bridges and approaches where the combined total of dredging and filling, both temporary and permanent, in wetlands and other surface waters does not exceed 0.5 acre.

(b) Channel clearing and shaping, not to exceed a combined total of 0.5 acres of dredging and filling in wetlands and other surface waters, to facilitate maximum hydraulic efficiency of the structures detailed in paragraph (a) above, where the spoil material is used on an upland portion of the project or is deposited on a self-contained, upland spoil

site. Escape of spoil material or return water from the spoil deposition area into wetlands or other surface waters is prohibited.

(2) This general permit shall be subject to the following specific conditions:

(a) In addition to compliance with the notice provisions of Rule 40E-400.211, F.A.C., within 90 days following completion of construction, the permittee will notify by letter the appropriate District Service Center of the date construction activities were completed;

(b) No dredging of access or work channels are authorized by this general permit;

(c) Temporary fill roads shall not be constructed waterward of mean high water or ordinary high water;

(d) All fill placed in wetlands, other than fill on which a bridge or approach described in paragraph (1)(a) is constructed, shall be regraded to the original elevations and these filled wetland areas revegetated with native wetland species endemic to adjoining, undisturbed wetlands, within seven days of completion of construction. Within "clear zones," as described in Chapter 3, Roadside Design Guide (American Association of State Highway and Transportation Officials, October 1988), incorporated by reference in Rule 40E-4.091, F.A.C., revegetation shall be with native herbaceous species endemic to adjoining, undisturbed wetlands. These wetland areas shall be maintained, and planted as necessary, to ensure that satisfactory revegetation occurs. For the purposes of this general permit, "satisfactory revegetation" means that the herbaceous wetlands, and forested wetlands within clear zones that are disturbed by fill shall have achieved not less than 33 percent cover of planted or naturally reestablished herbaceous wetlands within 18 months of completion of construction, and the forested wetlands, other than forested wetlands in clear zones that are disturbed by fill shall achieve a survival rate of not less than 400 wetland trees per acre within 18 months of completion of construction. A maintenance plan must be developed and implemented to ensure the survival of the planted or naturally reestablishing wetland species. Within the revegetated wetland areas, non-native vegetation must be controlled such that it does not constitute more than 10 percent of the areal cover in any stratum at any time for the five year period following the initial planting or restoration of the site;

(e) Hydraulic openings of bridges constructed under paragraph (1)(a) above shall be sufficient to prevent downstream scour, increased downstream water velocities, and increased backwater elevations on the property of others;

(f) Minimum horizontal and vertical navigational clearances on bridges over navigable waters of the United States shall be established in accordance with procedures outlined in the U.S. Coast Guard Bridge Administration Manual, COMDTINST M16590.5, May 7, 1982;

(g) Horizontal and vertical clearances for replacement bridge structures shall meet or exceed those of the bridge being replaced;

(h) Temporary erosion controls for all exposed soils within wetlands and other surface waters shall be completed within seven calendar days of the most recent construction activity;

(i) The fill areas and the banks of the water body shall be stabilized with vegetation or riprap as soon as possible following completion of slope construction. This stabilization is considered a construction priority and completed fill slopes in wetlands and other surface waters shall not remain unstabilized while other construction continues;

(j) This general permit does not authorize the use of dredged material for roadway construction;

(k) The permittee shall use erosion and sediment control best management practices, in strict compliance with the guidelines and specifications described in Chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (Florida Department of Environmental Regulation, 1988), incorporated by reference in Rule 40E-4.091, F.A.C., to prevent violations of state water quality standards;

(l) This general permit authorizes dredging and filling for the replacement or modification of a bridge and approaches for a specific crossing of a wetland or other surface water. Any connecting road expansion or alteration associated with such replacement or modification must be authorized by a separate general or individual permit under Chapter 40E-4, 40E-40, or 40E-400, F.A.C., as applicable, before the start of construction; and

(m) This general permit does not authorize replacement or modification of bridges or approaches which involve the construction of additional traffic lanes.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

40E-400.447 General Permit to the Florida Department of Transportation, Counties and Municipalities for Minor Activities Within Existing FDOT Rights-of-Way or Easements.

(1) A general permit is hereby granted to the Florida Department of Transportation, Municipalities and Counties to conduct the activities described below:

(a) The extension of existing culverts and crossing approaches to accommodate widening of the roadway where excavation or deposition of material shall not exceed 1000 cubic yards in wetlands and other surface waters and the area from which material is excavated or to which material is deposited shall not exceed a total of 0.25 acres at any one location (project site). The 1000 cubic yardage limitation shall be separately applied to excavation and deposition of material.

(b) Relocation, recontouring, widening, or reconstruction of existing highway drainage ditches through uplands provided the floor elevation of the ditch is not deepened below the original design elevation and provided that the work does not cause a change in the hydrology of any wetlands which are connected to or which are adjacent to the ditch.

(c) Culvert placement, replacement and maintenance associated with existing roadways, in streams with an average discharge of less than 10 cubic feet per second at the culvert location or streams draining less than 10 square miles, provided that construction does not cause scour in the downstream waters or increase the velocity of the

water downstream, does not reduce existing flood conveyance of the stream for the 100 year flood flow and does not reduce existing flood storage within the 10 year flood plain. The material excavated or deposited as fill shall not exceed 1000 cubic yards in wetlands and other surface waters. The cross sectional area of the culvert shall not be reduced unless the reduced cross section provides for an equal or greater discharge capability. In the case of a culvert installed as a wildlife crossing, the cross-sectional area shall not be reduced.

(d) Construction of temporary bypass lanes and stream channel diversions necessary to complete projects detailed in paragraph (c) above, provided the area used for the temporary bypass lanes and temporary diversion is restored to its previous contours and elevations.

(e) Channel clearing and shaping, not to exceed a combined total of 0.5 acres of dredging and filling in wetlands and other surface waters, to facilitate maximum hydraulic efficiency of structures authorized by paragraph (c) above, where the spoil material is used on an upland portion of the project or is deposited on a self-contained, upland spoil site. Escape of spoil material or return water from the spoil deposition area into wetlands or other surface waters is prohibited.

(f) Repair of existing concrete bridge pilings by the construction of pile jackets, provided that the permanent outer form is composed of inert materials and the quantity of material shall not exceed 300 cubic yards of dredging or 300 cubic yards of filling per project. Although the bottom sediments within the forms may be removed by jetting or pumping, and may not be recoverable, proper turbidity control measures shall be employed as necessary to prevent violations of state water quality standards.

(g) Ditch bank and bottom stabilization necessary to repair erosion damage to restore previously existing ditch configurations. Authorized repair methods are placement of riprap, sand cement toe walls, clean fill material, poured concrete, geotechnical textiles and other similar stabilization materials. The placement of riprap or other lining materials shall be limited to a length of 500 feet along the axis of the ditch and must not diminish permitted water quality treatment capacity. This general permit shall not be applicable within one-quarter mile along the length of an area, within the same ditch, which has been stabilized under this general permit within a three year period.

(2) This general permit shall be subject to the following specific conditions:

(a) The permittee shall use erosion and sediment control best management practices in strict compliance with the guidelines and specifications described in Chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (Florida Department of Environmental Regulation 1988), incorporated by reference in Rule 40E-4.091, F.A.C., to prevent violation of state water quality standards.

(b) Immediately following completion of slope construction, the fill areas and any disturbed banks of wetlands or other surface waters shall be stabilized with vegetation or riprap to prevent erosion. Temporary erosion controls for all exposed soils within wetlands and other surface waters shall be completed within seven calendar days of the most recent construction activity. Prevention of erosion of exposed earth into wetlands

and other surface waters is a construction priority and completed slopes shall not remain unstabilized while other construction continues.

(c) In addition to complying with the notice provisions of Rule 40E-400.211, F.A.C., at least 90 days prior to commencement of construction, the permittee shall provide written notification to the appropriate District Service Center of the date the permitted construction activities are planned to begin and within 90 days following completion of construction the permittee shall provide written notification to the appropriate District Service Center of the date construction activities are completed.

(d) The permittee shall limit stream channel relocation to streams which have an average annual discharge of 10 cubic feet per second or less. The length of relocated channels or those significantly altered shall be limited to 200 feet per stream. A stream channel shall be altered only when such a measure will reduce the long term adverse water quality impacts and will maintain or restore the stream's natural hydraulic capability.

(e) This general permit shall not apply to ditch construction in Class I or Class II surface waters, Outstanding National Resource Waters or waters designated as Outstanding Florida Waters.

(3) This general permit does not authorize the construction of additional traffic lanes. Systems which require additional traffic lanes must first obtain a general or individual environmental resource permit under Chapters 40E-4 and 40E-40, F.A.C., as applicable, before the start of construction.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95, Amended 6-26-02.

40E-400.453 General Permit for the Installation, Maintenance, Repair or Removal of Underground Cables, Conduits, or Pipelines.

(1) A general permit is hereby granted for the installation, maintenance, repair or removal of underground cables, conduits or pipelines that transmit electricity, communication signals, potable water, raw water, reclaimed water, domestic wastewater, propane gas or natural gas.

(2) This general permit is subject to the following special conditions:

(a) The maximum width of the disturbed corridor in wetlands shall not exceed 30 feet. The maximum width of the excavated trench shall not exceed eight feet, with temporary spoil storage banks not to exceed ten feet in width;

(b) The total area of wetland disturbance shall not exceed 0.5 acres of forested wetlands per ten miles of cable, conduit, or pipeline;

(c) For a trench with a top width greater than three feet wide in herbaceous wetlands, the upper layer of the soil horizon shall initially be scraped and segregated into a spoil bank that is separated from the spoil bank resulting from the excavation of the trench for the utility line. The upper layer of the soil horizon shall be replaced as the last step of restored grades to facilitate natural revegetation;

(d) Maintenance trimming or removal of trees in wetlands will be conducted only within the impacted areas authorized under this general permit and only as necessary to perform repairs on the cable, conduit, or pipeline;

(e) This general permit does not authorize construction in surface waters other than wetlands;

(f) There shall be no net placement of permanent fill resulting from the activities authorized by this general permit;

(g) There shall be no dredging or filling in wetlands to access the work areas authorized by this general permit, except for temporary mats. All temporary mats shall be removed within thirty days after completion of the installation of the line within the wetland portion of the project;

(h) The works authorized by this general permit shall not impede the flow of water in wetlands or other surface waters, except for a maximum period of 30 days during construction, provided that the impeded flow does not cause flooding and shall not adversely affect the wetlands or other surface waters;

(i) Temporary spoil banks shall contain breaches that prevent impoundment or restriction of surface water flows;

(j) This general permit does not authorize the installation of conduits for draining wetlands or other surface waters;

(k) Pre-construction ground elevations and the contours of all disturbed soils, including vehicle ruts in wetlands and other surface waters, shall be restored within 30 days of completion of line installation. Restored grades shall be stabilized within 72 hours following completion of elevation and contour restoration to minimize erosion;

(l) Vehicle usage in wetlands and other surface waters shall be conducted so as to minimize tire rutting and erosion impacts;

(m) For purposes of this general permit, vehicular access in wetlands and other surface waters shall be limited to existing roads, trails, rights-of-way or easements, and to other previously disturbed corridors where they exist;

(n) This general permit shall not apply in Outstanding Florida Waters, Outstanding National Resource Waters, Aquatic Preserves, or Class I waters; and

(o) During the initial clearing event and when conducting subsequent normal maintenance activities, the permittee shall eradicate all Brazilian pepper (Schinus terebinthifolius), Australian pine (Casuarina spp.), and Melaleuca (Melaleuca quinquenervia) from the wetland portions of the utility right of way.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

40E-400.455 General Permit for the Construction of Aerial Pipeline, Cable, or Conduit Crossings of Certain Waters.

(1) A general permit is hereby granted to any person constructing an aerial pipeline, cable, or conduit crossing of artificial waterways (including man-made canals and

drainage ditches as defined in Section 403.803, F.S.), and natural water bodies, where the width of such waterways or waterbodies is no greater than 25 feet; provided:

(a) The crossing is not located in Outstanding Florida Waters, Outstanding National Resource Waters, Aquatic Preserves, Class I waters, Class II waters, or waters approved, conditionally approved, restricted or conditionally restricted by the department for shellfish harvesting. For the purposes of this section, aerial pipeline, cable or conduit crossings include pipelines, cables and conduits transporting the following materials: potable water, raw non-wastewater, including well water and reservoir water, reclaimed water, domestic wastewater, phosphate matrix slurry, phosphatic clay or sand tailings, recirculated water from
beneficiation processes, electrical power cables and conduits that are not subject to the provisions of Sections 403.52-.539, F.S., and telephone and other electronic communication cables and conduits;

(b) There shall be a minimum clearance of five feet between the pipeline, cable or conduit and the elevation of the mean or ordinary high water line, and no pipeline, cable or conduit shall be lower than existing pipeline, cable or conduit structures in the area;

(c) The structure shall not create a navigational hazard or impede the natural flow of water;

(d) Dredging shall be restricted to that quantity necessary for actual installation of the support piles, and no fill other than the support piles shall be placed within wetlands or other surface waters. Any disturbance of the side slopes of the waterway shall be stabilized with native vegetation;

(e) Work activities for the installation of the aerial crossing shall be restricted to a width of no more than thirty (30) feet on each side of the crossing alignment. In cases where multiple pipes, cables or conduits are to be installed along the same alignment the thirty (30) foot width shall commence from the outermost pipes, cables or conduits. For the purposes of this general permit, no more than three pipes shall be placed along a given alignment, and in no case shall the total disturbance area exceed 75 feet in width; and

(f) Construction techniques necessary for the installation of the aerial pipeline, cable, or conduit, including the transport and placement of materials, shall not disturb the adjacent bottoms of the waterbody or adversely affect water quality.

(2) This general permit shall be subject to the following specific conditions:

(a) Any pipeline or conduit transporting authorized materials, other than potable water or raw non-wastewater, shall be subject to the following spill prevention design criteria:

1. Double piping (pipe within a pipe) constructed in such a manner that any leakage from the inside pipe into the outside pipe shall be conveyed to spill detention areas constructed in areas outside of wetlands or other surface waters; and

2. Pressure sensitive devices designed to detect any leak shall be installed proximal to the aerial crossing and shall be designed to allow both visual and audible detection.

(b) The District shall be notified within 24 hours of any leak or failure of any of the pipes associated with the aerial crossing.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

40E-400.457 General Permit for Subaqueous Utility Crossings of Artificial Waterways.

(1) A general permit is hereby granted to any person constructing, repairing or replacing a subaqueous utility crossing of artificial waterways (which are defined for purposes of this rule as residential canal systems and all other bodies of water that have been totally excavated from uplands and which do not overlap wetlands or other surface waters at the location of the crossing and which were not created as a part of a mitigation plan) provided:

(a) The work is not located in Outstanding Florida Waters, Aquatic Preserves, Outstanding National Resource Waters, Class I waters, Class II waters or waters approved, conditionally approved, restricted, or conditionally restricted by the Department for shellfish harvesting;

(b) Such construction shall be limited only to non-navigable watercourses or to those waterways in which navigation can be maintained at all times without the necessity of removing or relocating turbidity control devices to allow boat passage;

(c) No dredging or filling shall be conducted in wetlands or other surface waters, which are located landward of the top of the banks of an artificial waterway. Dredging and back filling of littoral zones and wetland vegetation growing on the side slopes of the artificial waterway may be performed only as is reasonably necessary to install the subaqueous utility line crossing and restore the banks to their original design specifications;

(d) There shall be no dewatering or construction of temporary berms or dikes;

(e) The maximum length of the utility crossing shall not exceed 150 feet from top of bank to top of bank. Excavated trench dimensions shall be limited to a depth of not more than 10 feet below existing bottom contours and a trench top width of not more than 10 feet;

(f) The maximum width of the area disturbed by equipment during construction shall be no more than 30 feet wide;

(g) All previously excavated contours are restored with on site native backfill, coarse sand, or clean, non-toxic rock bedding or cap material, as appropriate, within 72 hours following installation of the utility line;

(h) This general permit shall only authorize utility installations extending from bank to opposite bank on a particular waterway. The placement of utility lines parallelling the watercourse alignment is not authorized; and

(i) Placement of the utility line shall not result in a navigational hazard. Customary navigation through the waterway shall be maintained at all times during installation.

(2) This general permit shall be subject to the following specific conditions:

(a) Measures shall be taken to prevent violations of state water quality standards during and after construction arising from the work, such as the use of turbidity curtains, staked filter cloth, and staked hay bales. Where turbidity curtains, filter cloth, hay bales, and similar structural measures are not sufficient to contain turbid runoff, additional measures, such as restricting work to periods of low flow and dry season months, shall be taken to ensure that construction can be performed in a manner which will not violate water quality standards; and (b) All erodible ground areas and slopes disturbed during construction shall be revegetated with sod, mulch, seed, or wetland species or otherwise stabilized within 72 hours after installation of the utility line and at any other time as necessary to prevent violations of state water quality standards in wetlands or other surface waters;

(c) Temporary or permanent spoil disposal sites shall be located exclusively on uplands and shall be sited or designed to prevent violations of state water quality standards in wetlands or other surface waters;

(d) The utility crossing shall be designed in accordance with generally recognized practices of sound engineering; and

(e) Signs shall be installed and maintained at conspicuous locations to identify the alignment and type of the utility line within wetlands or other surface waters.

(3) For purposes of this section, utility crossings or lines include crossings and lines transporting the following materials: potable water, raw non-wastewater, including well water and reservoir water, domestic wastewater, electric power cables and conduits that are not subject to Sections 403.52-.539, F.S., and telephone and other electronic communication cables and conduits.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

40E-400.463 General Permit for the Construction and Operation of Culverts and Associated Water Control Structures in Mosquito Control Impoundments by Governmental Mosquito Control Agencies.

(1) A general permit is hereby granted to any governmental mosquito control agency to construct and operate culverts and associated water control structures for the control of water levels in mosquito control impoundments, provided:

(a) The construction or operation of the culvert and associated water control structure is done only to provide improved transport of tidal water and organisms between the impounded wetland and adjacent surface waters or between cells within existing mosquito control impoundments for the purpose of improving water quality and the quality of fish and wildlife values;

(b) This general permit does not authorize the construction or operation of culverts and associated water control structures for the purpose of facilitating aquaculture;

(c) The construction or operation of culverts and associated water control structures is not required as mitigation under Part IV of Chapter 373, F.S.;

(d) Access for the construction or operation of the culverts and associated water control structures does not require dredging or filling in wetlands or other surface waters or equipment access through wetlands;

(e) Culverts and associated water control structures shall be installed in locations that restore historic flow patterns, such as at or adjacent to historic locations of tidal creeks, and shall be located and operated such that water quality standards for dissolved oxygen shall not be violated in the receiving waters outside the impoundment;

(f) Culverts and associated water control structures shall either be left open year-round or shall be only seasonally closed as necessary to control mosquito breeding and to minimize the application of pesticides;

(g) This general permit does not constitute authorization to enter upon the property of others to perform activities authorized by this permit; and

(h) This general permit does not authorize the construction of culverts or water control structures in the locations of existing breaches of the impoundment dike.

(2) This general permit shall be subject to the following specific conditions:

(a) Culverts and associated water control structures shall be made of a corrosion resistant material;

(b) The diameter and invert elevation of the culverts and associated water control structures shall be sufficient to maintain flow and prevent scouring under expected hydrologic conditions;

(c) Within 72 hours after construction of each culvert and associated water control structure, and at any other time as necessary to prevent erosion, siltation and turbidity that causes violations of state water quality standards in wetlands or other surface waters, the wetlands disturbed by construction shall be stabilized with indigenous wetland vegetation or clean rip rap, and the uplands disturbed by construction shall be stabilized with vegetation, rip rap, or other means.

(3) A copy of the notice to use this general permit shall be sent to the Chairman of the Subcommittee on Managed Marshes which is established under Section 388.46, F.S.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

40E-400.467 General Permit for Breaching Mosquito Control Impoundments by Governmental Mosquito Control Agencies.

(1) A general permit is hereby granted to any governmental mosquito control agency to breach mosquito control impoundments, provided:

(a) The work is done only to provide improved transport of tidal water and organisms between the impounded wetland and adjacent surface waters or between cells within existing mosquito control impoundments for the purpose of improving water quality and the quality of fish and wildlife values;

(b) The construction of the breaches is not required as mitigation under Part IV, Chapter 373, F.S.;

(c) Access for the construction of the breaches does not require dredging or filling in wetlands or other surface waters, or equipment access through wetlands;

(d) The breaches shall be installed in locations that restore historic flow patterns, such as at or adjacent to historic locations of tidal creeks, and shall be located so as to prevent violations of the water quality standards for dissolved oxygen in the receiving waters outside the impoundment; and

(e) This general permit does not constitute authorization to enter upon the property of others to perform activities authorized by this permit.

(2) This general permit shall be subject to the following specific conditions:

(a) Spoil material excavated during construction of the breaches shall be handled and deposited in such a manner as to prevent violations of the water quality standards for turbidity, pursuant to Rules 62-4.242, 62-302.300 and 62-302.530, F.A.C., and shall be contained in an upland disposal site; and

(b) Within 72 hours after construction of any breach, and at any other time as necessary to prevent erosion, siltation and turbidity that causes violations of state water quality standards in wetlands or other surface waters, the wetlands disturbed by construction shall be stabilized with indigenous wetland vegetation or clean rip rap, and the upland disturbed by construction shall be stabilized with vegetation, riprap, or other means.

(3) A copy of the notice to use this general permit shall be sent to the Chairman of the subcommittee on Managed Marshes which is established under Section 388.46, F.S.

Specific Authority 373.044, 373.113, 373.118, 373.171 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95, Amended 4-14-03.

40E-400.470 Noticed General Permit for Temporary Agricultural Activities.

(1) A noticed general permit is hereby granted to any property owner for temporary agricultural activities, provided all the following criteria are met:

(a) The permittee must satisfy and comply with the general and specific conditions set forth in Rule 40E-400.215, F.A.C.;

(b) Agricultural activities shall be horticultural and limited to seasonal crops. Seasonal crops are harvested in one growing season, which shall not exceed one year;

(c) This permit is valid only for activities in existing improved or semi-improved pastures or fields that have been cultivated within the last five years. For purposes of this section, improved or semi-improved pastures are lands that have been cleared of native plants by mechanical means;

(d) For purposes of this section, the project area and scope is defined as both farmed and detention areas. In order to qualify for a permit under this section, the project area shall not exceed 320 contiguous acres;

(e) The project outfall structure must be located more than 1 mile from Outstanding Florida Waters;

(f) No works or farming activities shall occur within 50 feet of a wetland as defined in Section 373.019(22), F.S. If wetlands are located within the project area, a minimum 50 foot undisturbed buffer must be maintained around the wetland;

(g) Pump rates shall not exceed a volume of 2 inches per day at a rate of 37.7 gallons per minute per acre of farmed area. Pump on/off elevations shall be within 2.5 feet of natural ground within the farmed area. All surface water discharges shall be into detention areas;

(h) Water levels in the detention areas shall not exceed a depth of 1.5 feet above natural ground within the detention area;

(i) Water quality and attenuation requirements shall be met by establishing detention areas at a minimum of fifteen percent of the farmed area;

(j) If wetlands are located within a detention area, then the control elevation of the detention area shall be set at the wetland edge elevation. If no wetlands are located within a detention area, then the control elevation shall be set at natural ground elevation;

(k) Control structures shall be sized according to the following list depending on the project size. The minimum setback between the project edge and the property boundary line shall be 50 feet for all projects:

Project Size	Control Structure
0-25 acres	6" riser and 12" pipe equivalent
26-65 acres	12" riser and 12" pipe equivalent
66-105 acres	18" riser and 18" pipe equivalent
106-145 acres	24" riser and 24" pipe equivalent
146-185 acres	30" riser and 30" pipe equivalent
186-225 acres	36" riser and 36" pipe equivalent
226-265 acres	42" riser and 42" pipe equivalent
266-305 acres	48" riser and 48" pipe equivalent
306-320 acres	54" riser and 54" pipe equivalent;

(l) Discharges shall be to the existing pre-project surface water conveyance pathway. Existing sheetflow, if any, shall be maintained through the use of a spreader swale;

(m) Detention area dikes shall be constructed with a top elevation of 3.5 feet above the control elevation with a minimum 5 foot top width and 2:1 side slopes;

(n) Internal farm ditches shall be no deeper than 3 feet below natural ground elevation (excluding sump areas for pump placement which shall not be deeper than 6 feet below natural ground elevation);

(o) External perimeter berms of the farmed areas shall not exceed 2 feet in height;

(p) Farming areas must be laid out in a manner that will not block or impede offsite flows;

(q) Access to the fields shall be accomplished by existing roads. Roads into or on the project are not part of this authorization.

(2) The applicant must submit a best management plan that addresses sediment control, soil erosion, nutrients, pesticides, herbicides, suspended solids at points of discharge and other agricultural practices appropriate to crop and site conditions. At a minimum the best management plan must include the following best management practices:

(a) Application equipment shall be properly calibrated and in good repair;

(b) Pesticides and fertilizers shall be stored in a secure, contained location, protected from rainfall. Fertilizers and pesticides shall not be stored together;

(c) All mixing and loading operations shall be conducted away from wells, ditches and wetlands;

(d) Pesticide containers shall be rinsed as soon as they are empty. Containers shall be disposed of in accordance with directions on the label;

(e) Equipment shall be utilized that directs chemicals only to a designated target area. Overspray or application into ditches and wetland buffer areas shall be avoided;

(f) Spills shall be cleaned up as soon as possible;

(g) Equipment shall be cleaned and rinsed away from ditches and wetland buffers;

(h) A soil or leaf analysis shall be utilized to determine fertilizer application requirements;

(i) Seed and mulch or use other methods to stabilize the disturbed areas outside of the planted area within 14 days from the completion of planting;

(j) Install silt fences around wetland buffer areas prior to construction; and

(k) Install silt fences, hay bales or equivalent downstream of outfall structure during construction.

(3) The duration of this permit shall not exceed three years. No more than two years of the permit duration shall be dedicated to the planting and harvesting of crops. The remainder of the duration of the permit must be dedicated to fallow time. At the end of the growing season specified in the permit, all works shall be removed from the site and the site returned to the condition that existed prior to permit issuance. The site shall remain fallow the following year. Within 30 days of the permit expiration, the permittee shall provide written notification to the District that the project has been restored to conditions that existed prior to permit issuance.

(4) This permit does not provide authorization to use water or constitute a permit under Part II of Chapter 373, F.S., Chapter 40E-2 or 40E-20, F.A.C.

(5) It is recommended that the permittee consult the USDA Farm Service Agency regarding the applicability of the National Food Security Act, USCA, Title 16 § 3821, to the temporary agricultural activities.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 120.60, 373.118, 373.119, 373.413, 373.416, 373.418, 373.423 FS. History– New 9-6-01.

40E-400.475 General Permit for Minor Activities.

(1) A general permit is hereby granted for the construction, alteration, maintenance, operation, abandonment and removal of the following minor systems:

(a) Piling supported structures of less than 1,000 square feet over wetlands or other surface waters, which are not designated Outstanding Florida Waters;

(b) Piling supported structures of less than 500 square feet over wetlands or other surface waters in an Outstanding Florida Water;

(c) Dredging or filling of less than 100 square feet of wetlands or other surface waters;

(d) Maintenance dredging of 50 cubic yards or less of material from surface waters other than wetlands, provided the dredged material is placed in uplands and turbidity control measures are employed to prevent return water from causing a violation of state water quality standards.

(e) A single family residence that is not part of a larger plan of common development proposed by the applicant, including the associated residential improvements such as a driveway, garage and an onsite sewage disposal system, provided:

1. This paragraph shall not apply to property which was part of a tract of land that was divided into two or more parcels after July 1, 1994;

2. This paragraph shall not apply to construction or alteration in surface waters other than isolated wetlands or any wetlands in an Area of Critical State Concern;

3. Dredging and filling of isolated wetlands shall be limited to only those areas required for siting the portions of the residence and associated residential improvements which cannot be sited in uplands because there is an insufficient unrestricted area of uplands within the contiguous ownership of the applicant on which the residence and associated residential improvements can be located. Applicants are encouraged to construct structures that must be located in isolated wetlands on pilings to minimize the area of isolated wetlands filled for the residence and associated residential improvements. On-site sewage disposal systems shall be constructed in uplands unless there is an insufficient unrestricted area of upland within the contiguous ownership of the applicant on which such disposal system can be located. For the purposes of this paragraph, “unrestricted area of uplands” means an area of uplands which is not restricted by easement, deed restriction, local government regulation, or similar restriction which would prevent the activities authorized under this paragraph (e) and which is configured such that all or part of the residence and associated residential improvements can be constructed in the uplands. An area of uplands will only be considered restricted if all available variance or waiver procedures have been exhausted; and

4. The total area of dredging or filling in isolated wetlands for the residence and associated residential improvements shall not exceed 4,000 square feet; and the total area of clearing in wetlands (including the dredging or filling for the residence and associated residential improvements) shall not exceed 6,000 square feet on the contiguous property owned by the applicant.

(2) In order to qualify for this general permit, an applicant must provide reasonable assurance that the proposed system:

(a) Does not significantly impede navigation and does not entail the construction of a structure for the launching or mooring of a boat when navigational access to the structure does not currently exist;

(b) Does not cause a violation of state water quality standards;

(c) Does not impede the conveyance of a stream, river or other watercourse in a manner that would increase off-site flooding;

(d) Does not adversely impact aquatic or wetland dependent listed species;

(e) Does not cause the drainage of wetlands;

(f) Is not located in, on or over a coral community, macro-marine algae or submerged grassbed community. For the purposes of this general permit, macro-marine algae community shall not include algae unattached to the bottom, nor shall it include algae growing landward of the mean high water line or growing as an epiphyte on woody plants.

(3) Persons wishing to qualify for this general permit must file a written request, describing the proposed activities and providing plans and other information necessary to evaluate the potential for adverse impacts from the proposed activities. Any persons proposing a system described in paragraph (1)(f) above, shall submit tax parcel information or other documentation, sufficient to establish that the property is not part of a tract of land that was divided into two or more parcels after July 1, 1994. The District will provide written notification to the applicant whether the proposed activity qualifies for this general permit within 30 days of submittal of the written request. The proposed activity may not commence until the District has provided written notice that the applicant qualifies for the general permit.

(4) A determination that an activity qualifies for a General Permit for a minor activity applies only to the site specific activity, location, method of construction or operation of the specific activity and the other design and operation features of the authorized activity.

(5) This general permit shall not be applicable to any parcel of property which has been the subject of the successive filing of
notices under this section within a three year period where the combination of activities to be conducted pursuant thereto exceeds the thresholds in subsection 40E-400.475(1), F.A.C.

(6) The provisions of paragraph (1)(e) do not supersede the exemption set forth in subsection 403.813(2)(g), F.S.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

40E-400.483 General Permit to the Department to Conduct Minor Activities.

A general permit is hereby granted to the Department to conduct the activities described below:

(1) the repair, replacement or alteration of any existing bridge, levee, dam, pump station, lock, culvert, spillway, weir, or any other water control structure with structures of the same design or of a comparable design, provided that the maximum discharge rate capacity and control elevation do not exceed that of the structure to be replaced. Minor deviations in the structure's design are authorized, including those due to changes in materials, construction techniques, or current construction codes or safety standards. Associated construction activities authorized by this permit include: temporary fill plugs or cofferdams; upland bypass channels; channel shaping needed to accommodate the repair, replacement, or alteration of the structure; and channel and bank stabilization, including riprap within 200 feet of the structure. Replacement may occur at the same site, or adjacent to the original structure. The area of wetlands or other surface waters from which material is to be dredged or filled shall not exceed a total of 0.5 acre for any one structure;

(2) canal bank and bottom stabilization necessary to repair erosion damage and restore previously existing canal configurations. Authorized repair methods include placement of riprap, sand cement toe walls, clean fill material, poured concrete, geotechnical textiles or other similar stabilization materials. The distance to be restored or repaired shall not exceed 2000 feet at any one location along canal banks and 500 feet along canal bottoms; and

(3) aerial pipeline crossings (including support piles) of man-made canals consistent with the provisions of Rule 40E-400.455, F.A.C., except that the width of the crossing may be up to 200 feet.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95, Amended 4-14-03.

40E-400.485 General Permit to the Department for Environmental Restoration or Enhancement Activities.

(1) A general permit is hereby granted to the Department for the construction, alteration, operation, maintenance, removal and abandonment of systems to implement Department or District environmental restoration or enhancement projects.

(2) In order to qualify for this general permit, the environmental restoration or enhancement project must comply with any one of the following procedures:

(a) The project is part of a Surface Water Improvement And Management Plan developed pursuant to Section 373.453, F.S., that is reviewed by the Department and approved by a Water Management District in accordance with Section 373.456, F.S.; or

(b) The project is approved by the Secretary of the Department after conducting at least one public meeting; or

(c) The project is wholly or partially funded by the Department through the Water Resources Restoration and Preservation Act pursuant to Section 403.0615, F.S.

(3) This general permit shall be subject to the following specific conditions:

(a) A project under this general permit shall not significantly impede navigation.

(b) All erodible ground areas and slopes disturbed during construction shall be revegetated with sod, mulch, seed, wetland species, or otherwise appropriately stabilized within 72 hours after completion of the activity authorized under this general permit and at any other time as necessary to prevent violations of state water quality standards. *Specific Authority 373.044, 373.113, 373.118, 373.171 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95, Amended 4-14-03.*

40E-400.487 General Permit to the Department to Change Operating Schedules for Department or District Water Control Structures.

(1) A general permit is hereby granted to the Department to change the operating schedules for existing water control structures that are owned or operated by the Department when such changes are for the purpose of environmental restoration or enhancement.

(2) The Department shall hold at least one public meeting concerning the proposed operating schedule prior to its approval.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.416 FS. History–New 10-3-95.

40E-400.495 General Permit to U.S. Forest Service for Minor Works within National Forests.

A general permit is hereby granted to the U.S. Forest Service to conduct the works described below:

(1) Bathing beach restoration at developed recreation sites where maintenance dredging is less than 100 cubic yards per year and less than 100 cubic yards per single occurrence;

(2) Dock construction, replacement and maintenance for docks of up to 1000 square feet of surface area over wetlands and other surface waters, in Outstanding Florida Waters and Outstanding National Resource Waters, subject to restrictions listed in Section 403.813(2)(b) and (d), Florida Statutes.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

40E-400.500 General Permit for Construction, Operation, Maintenance, Alteration, Removal or Abandonment of Minor Silvicultural Surface Water Management Systems.

(1) Subject to the requirements of this section, a general permit is hereby granted to:

(a) Any person constructing, operating, maintaining (including repairing or replacing), altering, abandoning, or removing surface water management systems which:

1. Are not exempt under Rule 40E-4.051, F.A.C.;

2. Meet the permit thresholds set forth in Rule 40E-4.041, F.A.C.;

3. Meet the terms and conditions specified in subsections (4), (5) and (6) of this section; and

4. Are designed to place the property into silvicultural use or to perpetuate the maintenance of this property in silvicultural use.

(b) The U.S. Forest Service to construct, operate, maintain, alter, abandon, or remove surface water management systems which:

1. Are not exempt under Rule 40E-4.051, F.A.C.;

2. Meet the permit thresholds set forth in Rule 40E-4.041, F.A.C.;

3. Meet the terms and conditions specified in subsections (4), (5) and (6) of this section.

(2) No construction, operation, maintenance (including repair or replacement), alteration, abandonment, or removal of the minor silvicultural surface water management system described in subsection (1) of this section, shall commence until a completed Notice of Intent to Construct a Minor Silvicultural System, Form No. 0974, is received by the District or said Notice of Intent is properly addressed and stamped and deposited in the United States mail, in which case the postmark date shall be the date of receipt. Applicants may also submit annual schedules of proposed silvicultural surface water management systems that meet the requirements of this chapter, including completed permit applications for each activity. The construction, operation, maintenance, alteration, abandonment or removal shall only be authorized when the Notice of Intent is received by the District and provided the proposed activity qualifies for the general permit pursuant to this section and the conditions of issuance are followed.

(3) The Notice of Intent to Construct a Minor Silvicultural System shall include the information contained in District Form No. 0974.

(4) This general permit shall be for any of the following minor silvicultural surface water management systems:

(a) A permanent culverted fill road with a road surface of 28 feet or less in width placed in or crossing a stream or other watercourse of less than ten (10) cubic feet per second average discharge at the location of the work or with a drainage area upstream of the work of less than ten (10) square miles. The design of the work must allow for conveyance of normal flows and for overtopping during large storm events, and any fill placed in wetlands associated with the stream or other watercourse must be less than one-half (1/2) acre in area. Under this paragraph, the fill material shall be no more than twenty-four (24) inches above culvert structures. The fill material on the road approaches shall be no more than twenty-four (24) inches above grade, except within an area of one hundred (100) feet from either side of a culvert. The road must be designed with culvert inlets positioned at or below the natural grade of the bed of the stream or other watercourse to prevent the permanent impoundment of water, and to provide an overflow area or areas which will prevent erosion and adverse effects to water levels upstream and downstream of the road.

(b) A temporary culverted fill road or a temporary bridge up to 50 feet long, with a road surface of 28 feet or less in width placed in or crossing a stream or other watercourse of less than ten (10) cubic feet per second average discharge at the location of the work or a drainage area upstream of the work of less than ten (10) square miles. The design of the work must allow for conveyance of existing flow during the period of use and any fill placed in wetlands associated with the stream or other watercourse must be less than one-half (1/2) acre in area. The work must be designed only to facilitate the temporary movement of equipment and must be removed immediately after the operation for which the crossing was needed is complete or within thirty (30) months of the filing of the Notice of Intent in subsection (3), whichever is sooner.

(c) A permanent bridge up to 100 feet in length and 28 feet or less in width supported on pilings or trestles, placed in or crossing a stream or other watercourse of less than ten (10) cubic feet per second average discharge at the location of the work or with a drainage area upstream of the work of less than ten (10) square miles. The design of the work and associated approach roads, if any, must allow for conveyance of normal flows and for overtopping during large storm events and any fill placed in wetlands associated with the stream or other watercourse must be less than one-half (1/2) acre in area. The height limitation for fill on the bridge approach roads shall be a maximum of twenty-four (24) inches above natural grade.

(d) A permanent culverted fill road or bridge with a road surface of 28 feet or less in width, placed in or crossing a wetland or other impoundment, excluding reservoirs created by dams, where the road surface area over the wetland or other impoundment is less than one half (1/2) acre. Such crossings are not authorized when the landowner can construct a road which avoids filling in wetlands. Such crossings must be located in a manner which minimize the area of wetlands being filled. Fill material for crossings of isolated wetlands or other isolated impoundments may be excavated from the wetland being crossed, provided that all excavation takes place immediately adjacent to the road surface and that the excavated area consists only of narrow trenches which are not connected to ditches constructed or maintained for drainage purposes. In addition, such excavations shall not result in drainage from the wetland.

(e) Temporary stream channel diversions necessary to complete the works described in paragraphs (4)(a), (b), or (c) above, provided that the area used for the temporary diversion is restored to its previous contours and elevations.

(f) Clearing and snagging in a stream or other watercourse within fifty (50) feet of the center line of a culverted fill road or a bridge described in paragraphs (4)(a), (b), or (c) above, necessary to construct said work.

(g) A permanent low water, hard surfaced crossing in a stream, other watercourse, wetland or other impoundment consisting of the placement of rock or similar material no more than twelve (12) inches higher than the bed of the stream, other watercourse or impoundment. Such crossings must be designed only to facilitate the movement of equipment by creating a stable foundation in shallow streams, other watercourses, wetlands or other impoundments. Temporary low water, hard surfaced

crossings may be constructed using logs, but must be removed immediately following the completion of the silvicultural operation or within thirty (30) months of the filing of the Notice of Intent in subsection (3), whichever is sooner.

(h) Upland field ditches of a temporary nature to facilitate only harvesting, site preparation, and planting, with a maximum cross-sectional area of eighteen (18) square feet spaced no closer than six hundred and sixty (660) feet from any other parallel ditch. After seedling establishment, the ditches shall be allowed to revegetate naturally. The permittee will not be required to fill field
ditches after seedling establishment.

(i) Above grade, unpaved, upland silvicultural roads with an average road surface width of twenty-eight (28) feet or less within a construction corridor up to fifty (50) feet in width. These roads must also incorporate sufficient culverts at grade to prevent alteration of natural sheet flow and may have associated borrow ditches. Road ditches shall be constructed only to obtain road material for the associated road and to provide only enough storage to maintain a dry road surface. Such road ditches must not provide drainage to the tract adjoining the road, other than to provide drainage of the road surface and minor, incidental drainage of abutting lands. These road ditches may be connected to other roadside ditches that were constructed pursuant to this section but must not connect directly or indirectly to any works on-site or off-site which are designed or constructed to provide drainage or conveyance. Road ditches must be separated from wetlands and other surface waters by a buffer strip of indigenous ground cover and a water turnout prior to said buffer strip. However, road ditches may discharge directly to a wetland when the slope of the uplands within 1000 feet of the edge of the wetland is equal to or less than two (2) percent, provided the ditch does not result in drainage of the wetland and provided that the ditch does not create a hydrologic connection between two or more wetlands. The width of the buffer strip shall be no less than 35 feet, or 50 feet when located adjacent to an Outstanding Florida Water, an Outstanding National Resource Water, or Class I waters.

(j) Upland borrow areas needed to obtain fill material for crossings authorized by this noticed general permit of streams, other watercourses, wetlands and other impoundments. These upland areas must not provide drainage and must not be hydrologically connected to roadside ditches or field ditches.

(5) In order to qualify for this general permit, the systems identified in subsection (4) of this section must meet the following performance standards:

(a) Except for those areas to be filled for crossings as provided in this section, the proposed activities must not convert wetlands or other surface waters to uplands.

(b) A road or bridge must be designed to convey normal water flow while being adequately stabilized to allow for overtopping during storm events without washing out.

(c) A permanent road or bridge placed in or crossing a stream, other watercourse, wetland or other impoundment may be placed no closer than one half (1/2) mile from any traversing work which traverses the same stream, other watercourse, wetland or impoundment. A low water crossing or temporary road or bridge placed in or crossing a

stream, other watercourse, wetland or other impoundment may be placed no closer than one quarter (1/4) mile from any traversing work which traverses the same stream, other watercourse, wetland, or other impoundment. The spacing limitation shall be measured along the stream, other water course, wetland or other impoundment. Notwithstanding the spacing limitation in this paragraph, at least one low water crossing, road or bridge crossing of any stream, other watercourse, wetland or other impoundment may be constructed to each upland area being managed for silviculture that would not otherwise be accessible if these spacing limitations were met.

(d) A low water crossing, road, or bridge placed in or crossing a stream, other watercourse or impoundment must not cause increased velocities downstream of the work that would cause scour outside of the area of clearing and snagging described in paragraph (4)(e) above.

(e) A low water crossing, road, or bridge placed in or crossing a stream, other watercourse or impoundment must not cause increased flooding on property not owned by the permittee.

(f) Erosion control measures must be undertaken to limit the transfer of suspended solids into the receiving waterbody during and after construction of the proposed work. After removing any temporary crossing, disturbed portions of the stream bank and stream channel shall be restored to approximate their original shape and flow capacity. Erodible ground area associated with the crossing shall be stabilized with rip rap, mulch or seeded for appropriate ground cover vegetation within 72 hours after removal.

(g) Upland field ditches may connect only to works which are permitted by the District or are exempt from permitting by the District and only if the connection will not cause the work to exceed its conveyance capacity or to increase flooding on property now owned by the permittee; however, this section does not authorize connection to works without the consent of the owner of the work. Field ditches will be presumed to meet the erosion control requirements of paragraph (5)(f), above when they are separated from streams, other watercourses, wetlands or other impoundments by a buffer strip of undisturbed vegetation and provided the integrity of this buffer is maintained. The width of the buffer strip shall be the width of the total Special Management Zone (primary zone and secondary zone) as described in the “Silviculture Best Management Practices Manual” referenced in paragraph (h). However, field ditches may discharge directly to a wetland when the slope of the uplands within 1000 feet of the edge of the wetland is equal to or less than two (2) percent, provided the ditch does not result in drainage of the wetland and provided that the ditch does not create a hydrologic connection between two or more wetlands.

(h) In addition to the performance standards set forth in paragraphs (a)-(g) above, the applicant, in undertaking the activities authorized herein, must utilize the best management practices set forth in “Silviculture Best Management Practices Manual” (1993) published by the Division of Forestry, Florida Department of Agriculture and Consumer Services.

(i) If climatic or flow conditions prevent the removal of a temporary crossing within the time frame specified in this section, the applicant may submit another Notice of Intent to extend the time periods for removal and restoration of the temporary crossing. The applicant must provide a written explanation and evidence supporting the need to reauthorize the crossing and must specify the additional time needed to remove the crossing, which may not exceed one year.

(6) The duration of the general permit authorized in this section is:

(a) For construction, alteration, abandonment, or removal of the silvicultural surface water management system: one (1) year to complete the permitted activity;

(b) For operation or maintenance of the silvicultural surface water management system: permanent.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

40E-400.900 Forms and Instructions.

Forms and instructions are set forth in Rule 40E-1.659, F.A.C., and are incorporated by reference in this rule.

Specific Authority 373.044, 373.113, 373.118 FS. Law Implemented 373.118, 373.413, 373.416, 373.426 FS. History–New 10-3-95.

Selections from Chapter 403, F.S., and Title 62, F.A.C.

Selected Materials from
Chapter 403, Florida Statutes;
And
From Title 62, Florida Administrative Code

The parts of Chapter 403, F.S., and of Title 62, F.A.C. - the rules and regulations of the Florida Department of Environmental Protection - which follow contain other relevant rule criteria which must be considered as part of the District's review of ERP applications.

Sections 403.9321 - 403.9333, F.S., Mangrove Trimming and Preservation Act - If an application for an ERP includes proposed activities in a permitted mangrove mitigation area or an existing mangrove area, the District will utilize the criteria in sections 403.9321 - 403.9333 to determine the permittability of the activities. The District does not permit the actual trimming of mangroves.

Chapter 62-112, F.A.C., Project Certification Procedures for Coordinated Agency Review in the Florida Keys Area of Critical State Concern - Good coordination between DEP and the District is essential during any coordinated review of a project in the Keys Area of Critial State Concern. Chapter 62-112 is included so that persons who have a need to examine the written review procedures and timeframes for the two agencies may do so by consulting only one book. Corresponding District rules are in Section 40E-1.615, F.A.C.

Chapter 62-302, F.A.C., Surface Water Quality Standards - In Section 40E-4.301, F.A.C., Conditions for Issuance of Permits, one condition is that an applicant must provide reasonable assurance that the proposed activities will not adversely affect the quality of receiving waters such that the water quality standards set forth in Chapter 62-302, F.A.C., will be violated. Chapter 62-302 is included so those who have a need to examine those standards may do so by consulting only one book.

Chapter 62-340, F.A.C., Delineation of the Landward Extent of Wetlands and Surface Waters - Subsection 373.421(2), F.S., allows the District to provide a formal process to delineate wetlands and surface waters according to a unifiied state methodology. The District has established such a process in the *Basis of Review*. The process description includes the requirement that delineation will be based on the unified statewide methodology contained in Chapter 62-340.

Sections 403.9321 - 403.9334, F.S.
"Mangrove Trimming and Preservation Act"

The “Mangrove Trimming and Preservation Act”

Sections of Chapter 403, Florida Statutes, Environmental Control

403.9321 Short title.--Sections 403.9321-403.9333 may be cited as the "Mangrove Trimming and Preservation Act."

History.--s. 1, ch. 95-299.

403.9322 Legislative findings.--

(1) The Legislature finds that there are over 555,000 acres of mangroves now existing in Florida. Of this total, over 80 percent are under some form of government or private ownership or control and are expressly set aside for preservation or conservation purposes.

(2) The Legislature finds that mangroves play an important ecological role as habitat for various species of marine and estuarine vertebrates, invertebrates, and other wildlife, including mammals, birds, and reptiles; as shoreline stabilization and storm protection; and for water quality protection and maintenance and as food-web support. The mangrove forest is a tropical ecosystem that provides nursery support to the sports and commercial fisheries. Through a combination of functions, mangroves contribute to the economies of many coastal counties in the state.

(3) The Legislature finds that many areas of mangroves occur as narrow riparian mangrove fringes that do not provide all the functions of mangrove forests or provide such functions to a lesser degree.

(4) The Legislature finds that scientific studies have shown that mangroves are amenable to standard horticultural treatments and that waterfront property owners can live in harmony with mangroves by incorporating such treatments into their landscaping systems.

(5) The Legislature finds that the trimming of mangroves by professional mangrove trimmers has a significant potential to maintain the beneficial attributes of mangrove resources and that professional mangrove trimmers should be authorized to conduct mangrove trimming, under certain circumstances, without prior government authorization.

History.--s. 2, ch. 95-299; s. 1, ch. 96-206.

403.9323 Legislative intent.--

(1) It is the intent of the Legislature to protect and preserve mangrove resources valuable to our environment and economy from unregulated removal, defoliation, and destruction.

(2) It is the intent of the Legislature that no trimming or alteration of mangroves may be permitted on uninhabited islands which are publicly owned or on lands set aside for conservation and preservation, or mitigation, except where necessary to protect the public health, safety, and welfare, or to enhance public use of, or access to, conservation areas in accordance with approved management plans.

(3) It is the intent of the Legislature to provide waterfront property owners their riparian right of view, and other rights of riparian property ownership as recognized by s. 253.141 and any other provision of law, by allowing mangrove trimming in riparian mangrove

fringes without prior government approval when the trimming activities will not result in the removal, defoliation, or destruction of the mangroves.

(4) It is the intent of the Legislature that ss. 403.9321-403.9333 shall be administered so as to encourage waterfront property owners to voluntarily maintain mangroves, encourage mangrove growth, and plant mangroves along their shorelines.

(5) It is the intent of the Legislature that all trimming of mangroves pursuant to this act conducted on parcels having multifamily residential units result in an equitable distribution of the riparian rights provided herein.

(6) It is the intent of the Legislature to grandfather certain historically established mangrove maintenance activities.

History.--s. 3, ch. 95-299; s. 2, ch. 96-206.

403.9324 Mangrove protection rule; delegation of mangrove protection to local governments.--

(1) Sections 403.9321-403.9333 and any lawful regulations adopted by a local government that receives a delegation of the department's authority to administer and enforce the regulation of mangroves as provided by this section shall be the sole regulations in this state for the trimming and alteration of mangroves on privately or publicly owned lands. All other state and local regulation of mangrove is as provided in subsection (3).

(2) The department shall delegate its authority to regulate the trimming and alteration of mangroves to any local government that makes a written request for delegation, if the local government meets the requirements of this section. To receive delegation, a local government must demonstrate that it has sufficient resources and procedures for the adequate administration and enforcement of a delegated mangrove-regulatory program. When a county receives delegation from the department, it may, through interlocal agreement, further delegate the authority to administer and enforce regulation of mangrove trimming and alteration to municipalities that meet the requirements of this section. In no event shall more than one permit for the alteration or trimming of mangroves be required within the jurisdiction of any delegated local government.

(3) A local government that wants to establish a program for the regulation of mangroves may request delegation from the department at any time. However, all local government regulation of mangroves, except pursuant to a delegation as provided by this section, is abolished 180 days after this section takes effect.

(4) Within 45 days after receipt of a written request for delegation from a local government, the department shall grant or deny the request in writing. The request is deemed approved if the department fails to respond within the 45-day time period. In reviewing requests for delegation, the department shall limit its review to whether the request complies with the requirements of subsection (2). The department shall set forth in writing with specificity the reasons for denial of a request for delegation. The department's determination regarding delegation constitutes final agency action and is subject to review

under chapter 120.

(5) The department may biannually review the performance of a delegated local program and, upon a determination by the department that the delegated program has failed to properly administer and enforce the program, may seek to revoke the authority under which the program was delegated. The department shall provide a delegated local government with written notice of its intent to revoke the authority to operate a delegated program. The department's revocation of the authority to operate a delegated program is subject to review under chapter 120.

(6) A local government that receives delegation of the department's authority to regulate mangroves shall issue all permits required by law and in lieu of any departmental permit provided for by ss. 403.9321-403.9333. The availability of the exemptions to trim mangroves in riparian mangrove fringe areas provided in s. 403.9326 may not be restricted or qualified in any way by any local government. This subsection does not preclude a delegated local government from imposing stricter substantive standards or more demanding procedural requirements for mangrove trimming or alteration outside of riparian mangrove fringe areas.

History.--s. 4, ch. 95-299; s. 3, ch. 96-206.

403.9325 Definitions.--For the purposes of ss. 403.9321-403.9333, the term:

(1) "Alter" means anything other than trimming of mangroves.

(2) "Local government" means a county or municipality.

(3) "Mangrove" means any specimen of the species *Laguncularia racemosa* (white mangrove), *Rhizophora mangle* (red mangrove), or *Avicennia germinans* (black mangrove).

(4) "Mangroves on lands that have been set aside as mitigation" means mangrove areas on public or private land which have been created, enhanced, restored, or preserved as mitigation under a dredge and fill permit issued under [1]ss. 403.91-403.929, Florida Statutes (1984 Supplement, as amended), or a dredge and fill permit, management and storage of surface waters permit, or environmental resource permit issued under part IV of chapter 373, applicable dredge and fill licenses or permits issued by a local government, a resolution of an enforcement action, or a conservation easement that does not provide for trimming.

(5) "Professional mangrove trimmer" means a person who meets the qualifications set forth in s. 403.9329.

(6) "Public lands set aside for conservation or preservation" means:

(a) Conservation and recreation lands under chapter 259;

(b) State and national parks;

(c) State and national reserves and preserves, except as provided in s. 403.9326(3);

(d) State and national wilderness areas;

(e) National wildlife refuges (only those lands under Federal Government ownership);

(f) Lands acquired through the Water Management Lands Trust Fund, Save Our Rivers Program;

(g) Lands acquired under the Save Our Coast program;

(h) Lands acquired under the environmentally endangered lands bond program;

(i) Public lands designated as conservation or preservation under a local government comprehensive plan;

(j) Lands purchased by a water management district, the Fish and Wildlife Conservation Commission, or any other state agency for conservation or preservation purposes;

(k) Public lands encumbered by a conservation easement that does not provide for the trimming of mangroves; and

(l) Public lands designated as critical wildlife areas by the Fish and Wildlife Conservation Commission.

(7) "Riparian mangrove fringe" means mangroves growing along the shoreline on private property, property owned by a governmental entity, or sovereign submerged land, the depth of which does not exceed 50 feet as measured waterward from the trunk of the most landward mangrove tree in a direction perpendicular to the shoreline to the trunk of the most waterward mangrove tree. Riparian mangrove fringe does not include mangroves on uninhabited islands, or public lands that have been set aside for conservation or preservation, or mangroves on lands that have been set aside as mitigation, if the permit, enforcement instrument, or conservation easement establishing the mitigation area did not include provisions for the trimming of mangroves.

(8) "Trim" means to cut mangrove branches, twigs, limbs, and foliage, but does not mean to remove, defoliate, or destroy the mangroves.

History.--s. 5, ch. 95-299; s. 4, ch. 96-206; s. 215, ch. 99-245.

[1]**Note.**--Sections 403.91-403.925 and 403.929 were repealed by s. 45, ch. 93-213, and s. 403.913, as amended by s. 46, ch. 93-213, was transferred to s. 403.939 and subsequently repealed by s. 18, ch. 95-145. The only section remaining within the cited range is s. 403.927.

403.9326 Exemptions.--

(1) The following activities are exempt from the permitting requirements of ss. 403.9321-403.9333 and any other provision of law if no herbicide or other chemical is used to remove mangrove foliage:

(a) Mangrove trimming in riparian mangrove fringe areas that meet the following criteria:

1. The riparian mangrove fringe must be located on lands owned or controlled by the person who will supervise or conduct the trimming activities or on sovereign submerged lands immediately waterward and perpendicular to the lands.

2. The mangroves that are the subject of the trimming activity may not exceed 10 feet in pretrimmed height as measured from the substrate and may not be trimmed so that the overall height of any mangrove is reduced to less than 6 feet as measured from the substrate.

This exemption applies to property with a shoreline of 150 feet or less. Owners of property with a shoreline of more than 150 feet may not trim, under an exemption, more than 65 percent of the mangroves along the shoreline.

(b) Mangrove trimming supervised or conducted exclusively by a professional mangrove trimmer, as defined in s. 403.9325, in riparian mangrove fringe areas that meet the following criteria:

1. The riparian mangrove fringe must be located on lands owned or controlled by the professional mangrove trimmer or by the person contracting with the professional mangrove trimmer to perform the trimming activities, or on sovereign submerged lands immediately waterward and perpendicular to such lands.

2. The mangroves that are the subject of the trimming activity may not exceed 24 feet in pretrimmed height and may not be trimmed so that the overall height of any mangrove is reduced to less than 6 feet as measured from the substrate.

3. The trimming of mangroves that are 16 feet or greater in pretrimmed height must be conducted in stages so that no more than 25 percent of the foliage is removed annually.

4. A professional mangrove trimmer that is trimming red mangroves for the first time under the exemption provided by this paragraph must notify the department or delegated local government in writing at least 10 days before commencing the trimming activities.

This exemption applies to property with a shoreline of 150 feet or less. Owners of property with a shoreline of more than 150 feet may not trim, under an exemption, more than 65 percent of the mangroves along the shoreline.

(c) Mangrove trimming in riparian mangrove fringe areas which is designed to reestablish or maintain a previous mangrove configuration if the mangroves to be trimmed do not exceed 24 feet in pretrimmed height. The reestablishment of a previous mangrove configuration must not result in the destruction, defoliation, or removal of mangroves. Documentation of a previous mangrove configuration may be established by affidavit of a person with personal knowledge of such configuration, through current or past permits from the state or local government, or by photographs of the mangrove configuration. Trimming activities conducted under the exemption provided by this paragraph shall be conducted by a professional mangrove trimmer when the mangroves that are the subject of the trimming activity have a pretrimmed height which exceeds 10 feet as measured from the substrate. A person trimming red mangroves for the first time under the exemption provided by this paragraph must notify the department or delegated local government in writing at least 10 days before commencing the trimming activities.

(d) The maintenance trimming of mangroves that have been previously trimmed in accordance with an exemption or government authorization, including those mangroves that naturally recruited into the area and any mangrove growth that has expanded from the area subsequent to the authorization, if the maintenance trimming does not exceed the height and configuration previously established. Historically established maintenance trimming is grandfathered in all respects, notwithstanding any other provisions of law. Documentation of established mangrove configuration may be verified by affidavit of a person with personal knowledge of the configuration or by photographs of the mangrove configuration.

(e) The trimming of mangrove trees by a state-licensed surveyor in the performance of her or his duties, if the trimming is limited to a swath of 3 feet or less in width.

(f) The trimming of mangrove trees by a duly constituted communications, water, sewerage, electrical, or other utility company, or by a federal, state, county, or municipal agency, or by an engineer or a surveyor and mapper working under a contract with such utility company or agency, when the trimming is done as a governmental function of the agency.

(g) The trimming of mangrove trees by a duly constituted communications, water, sewerage, electrical, or other utility company in or adjacent to a public or private easement or right-of-way, if the trimming is limited to those areas where it is necessary for the maintenance of existing lines or facilities or for the construction of new lines or facilities in furtherance of providing utility service to its customers and if work is conducted so as to avoid any unnecessary trimming of mangrove trees.

(h) The trimming of mangrove trees by a duly constituted communications, water, sewerage, or electrical utility company on the grounds of a water treatment plant, sewerage treatment plant, or electric power plant or substation in furtherance of providing utility service to its customers, if work is conducted so as to avoid any unnecessary trimming of mangrove trees.

(2) Any rule, regulation, or other provision of law must be strictly construed so as not to limit directly or indirectly the exemptions provided by this section for trimming in riparian mangrove fringe areas except as provided in s. 403.9329(7)(b). Any rule or policy of the department, or local government regulation, that directly or indirectly serves as a limitation on the exemptions provided by this section for trimming in riparian mangrove fringe areas is invalid.

(3) The designation of riparian mangrove fringe areas as aquatic preserves or Outstanding Florida Waters shall not affect the use of the exemptions provided by this section.

History.--s. 6, ch. 95-299; s. 5, ch. 96-206; s. 1012, ch. 97-103.

403.9327 General permits.--

(1) The following general permits are created for the trimming of mangroves that do not qualify for an exemption provided by s. 403.9326:

(a) A general permit to trim mangroves for riparian property owners, if:

1. The trimming is conducted in an area where the department has not delegated the authority to regulate mangroves to a local government;

2. The trimming is supervised or conducted exclusively by a professional mangrove trimmer;

3. The mangroves subject to trimming under the permit do not extend more than 500 feet waterward as measured from the trunk of the most landward mangrove tree in a direction perpendicular to the shoreline;

4. No more than 65 percent of the mangroves along the shoreline which exceed 6 feet in pretrimmed height as measured from the substrate will be trimmed, and no mangrove will be trimmed so that the overall height of any mangrove is reduced to less than 6 feet as measured from the substrate; and

5. No herbicide or other chemical will be used for the purpose of removing leaves of a mangrove.

(b) A general permit for the limited trimming of mangroves within existing navigational channels, basins, or canals to provide clearance for navigation of watercraft, if:

1. The trimming is conducted in an area where the department has not delegated the authority to regulate mangroves to a local government;

2. The trimming is supervised or conducted exclusively by a professional mangrove trimmer;

3. The mangroves are located on lands owned or controlled by the professional mangrove trimmer or by the person contracting with the professional mangrove trimmer to perform the trimming activities, or on sovereign submerged lands immediately waterward and perpendicular to such lands;

4. The trimming is limited to those portions of branches or trunks of mangroves which extend into the navigation channel beyond a vertical plane of the most waterward prop root or root system; and

5. No herbicide or other chemical will be used for the purpose of removing leaves of a mangrove.

(2) The department may establish additional general permits for mangrove trimming.

(3) The general permits under this section are subject to the following conditions:

(a) A general permit may be used only once on any parcel of property to achieve a mangrove height of no less than 6 feet;

(b) Trimming must be conducted in stages so that no more than 25 percent of the foliage is removed annually; and

(c) The height and configuration of mangroves trimmed under these general permits may be maintained under s. 403.9326(1)(d).

(4) Notice of intent to use a general permit must be made in writing to the department and must contain sufficient information to enable the department to determine the scope of the proposed trimming and whether the activity will comply with the conditions of this section.

(5) The department shall grant or deny in writing each request for a general permit within 30 days after receipt, unless the applicant agrees to an extension. If the applicant does not agree to an extension and the department fails to act on the request within the 30-day period, the request is approved. The department's denial of a request for a general permit is subject to review under chapter 120. The department's action may not receive a presumption of validity in any administrative or judicial proceeding for review.

(6) Trimming that does not qualify for an exemption under s. 403.9326 or a general permit under this section requires a permit as provided in s. 403.9328.

(7) If a local government receives delegation of the department's authority to regulate mangroves, the delegated local government shall issue permits for mangrove trimming in lieu of a general permit from the department, but the local government may not directly or indirectly limit the use of the exemptions in s. 403.9326. A delegated local government may impose stricter substantive standards than those of the department for the issuance of a permit authorized by this section; however, such regulations may not prohibit all mangrove trimming.

History.--s. 7, ch. 95-299; s. 6, ch. 96-206.

403.93271 Applicability to multifamily residential units.--

(1) When trimming under s. 403.9327(1)(a) occurs on property developed for multifamily residential use, the 65-percent shoreline trimming limit must be equitably distributed so that each owner's riparian view is similarly affected.

(2) If it is necessary to trim more than 65 percent of the mangroves along the shoreline in order to provide a water view from each unit, the department or delegated local government may authorize a greater percentage of trimming under s. 403.9327(1)(a). This subsection applies only to property on which multifamily residential units exist as of June 1, 1996.

History.--s. 7, ch. 96-206.

403.9328 Alteration and trimming of mangroves; permit requirement.--

(1) A person may not alter or trim, or cause to be altered or trimmed, any mangrove within the landward extent of wetlands and other surface waters, as defined in chapter 62-340.200(19), Florida Administrative Code, using the methodology in s. 373.4211 and chapter 62-340, Florida Administrative Code, when the trimming does not meet the criteria in s. 403.9326 or s. 403.9327 except under a permit issued under this section by the department or a delegated local government or as otherwise provided by ss. 403.9321-403.9333. Any violation of ss. 403.9321-403.9333 is presumed to have occurred with the knowledge and consent of any owner, trustee, or other person who directly or indirectly

has charge, control, or management, either exclusively or with others, of the property upon which the violation occurs. However, this presumption may be rebutted by competent, substantial evidence that the violation was not authorized by the owner, trustee, or other person.

(2)(a) The department, when deciding to issue or deny a permit for mangrove alteration or trimming under this section, shall use the criteria in s. 373.414(1) and (8). If the applicant is unable to meet these criteria, the department and the applicant shall first consider measures to reduce or eliminate the unpermittable impacts. If unpermittable impacts still remain, the applicant may propose, and the department shall consider, measures to mitigate the otherwise unpermittable impacts. A request for a permit to alter mangroves must be submitted in writing with sufficient specificity to enable the department to determine the scope and impacts of the proposed alteration activities.

(b) The department shall issue or deny a permit for mangrove alteration in accordance with chapter 120 and s. 403.0876.

(3) The use of herbicides or other chemicals for the purposes of removing leaves from a mangrove is strictly prohibited.

(4) If a local government receives delegation of the department's authority to regulate mangroves, the delegated local government shall issue permits for mangrove trimming when the trimming does not meet the criteria in s. 403.9326 or for mangrove alteration in lieu of a departmental permit. A delegated local government may impose stricter substantive standards than those of the department for the issuance of a permit authorized by this section but may not prohibit all mangrove trimming.

(5) A permit is not required under ss. 403.9321-403.9333 to trim or alter mangroves if the trimming or alteration is part of an activity that is exempt under s. 403.813 or is permitted under part IV of chapter 373. The procedures for permitting under part IV of chapter 373 will control in those instances.

History.--s. 8, ch. 95-299; s. 8, ch. 96-206; s. 38, ch. 97-98.

403.9329 Professional mangrove trimmers.--

(1) For purposes of ss. 403.9321-403.9333, the following persons are considered professional mangrove trimmers:

(a) Certified arborists, certified by the International Society of Arboriculture;

(b) Professional wetland scientists, certified by the Society of Wetland Scientists;

(c) Certified environmental professionals, certified by the Academy of Board Certified Environmental Professionals;

(d) Certified ecologists certified by the Ecological Society of America;

(e) Persons licensed under part II of chapter 481. The Board of Landscape Architecture shall establish appropriate standards and continuing legal education requirements to assure the competence of licensees to conduct the activities authorized under ss.

403.9321-403.9333. Trimming by landscape architects as professional mangrove trimmers is not allowed until the establishment of standards by the board. The board shall also establish penalties for violating ss. 403.9321-403.9333. Only those landscape architects who are certified in the state may qualify as professional mangrove trimmers under ss. 403.9321-403.9333, notwithstanding any reciprocity agreements that may exist between this state and other states;

(f) Persons who have conducted mangrove trimming as part of their business or employment and who are able to demonstrate to the department or a delegated local government, as provided in subsection (2) or subsection (3), a sufficient level of competence to assure that they are able to conduct mangrove trimming in a manner that will ensure the survival of the mangroves that are trimmed; and

(g) Persons who have been qualified by a delegated local government through a mangrove-trimming qualification program as provided in subsection (7).

(2) A person who seeks to assert professional mangrove trimmer status under paragraph (1)(f) to trim mangroves under the exemptions and general permits provided in ss. 403.9326 and 403.9327, in areas where a local government has not established a professional mangrove trimmer qualification program as provided in subsection (7), must request in writing professional mangrove trimmer status from the department. The department shall grant or deny any written request for professional mangrove trimmer status within 60 days after receipt of the request. If professional mangrove trimmer status has been granted by the department, no additional requests for professional mangrove trimmer status need be made to the department to trim mangroves under the exemptions provided in s. 403.9326. Persons applying for professional mangrove trimmer status must provide to the department a notarized sworn statement attesting:

(a) That the applicant has successfully completed a minimum of 10 mangrove-trimming projects authorized by the department or a local government program. Each project must be separately identified by project name and permit number;

(b) That a mangrove-trimming or alteration project of the applicant is not in violation of ss. 403.9321-403.9333 or any lawful rules adopted thereunder; and

(c) That the applicant possesses the knowledge and ability to correctly identify mangrove species occurring in this state.

(3) A person asserting professional mangrove trimmer status who wishes to use a general permit authorized under s. 403.9327 must complete and sign a notice of intent to use the general permit, along with the individual who owns or controls the property, and provide a copy of the department's qualification of professional mangrove trimmer status as provided for in subsection (2). A professional mangrove trimmer signing a notice of intent to use the general permit must conduct or supervise the trimming at the site specified in the notice.

(4) The department may deny a request for professional mangrove trimmer status if the department finds that the information provided by the applicant is incorrect or incomplete,

or if the applicant has demonstrated a past history of noncompliance with the provisions of ss. 403.9321-403.9333 or any adopted mangrove rules.

(5) A professional mangrove trimmer status granted by the department may be revoked by the department for any person who is responsible for any violations of ss. 403.9321-403.9333 or any adopted mangrove rules.

(6) The department's decision to grant, deny, or revoke a professional mangrove trimmer status is subject to review under chapter 120.

(7)(a) A local government that receives delegation of the department's mangrove regulatory authority may establish criteria for qualification of persons as professional mangrove trimmers working within the jurisdiction of the local government. A delegated local government that establishes a program shall provide procedures and minimum qualifications and may develop training programs for those persons wishing to become qualified as professional mangrove trimmers. A delegated local government may establish criteria for disciplining persons qualified as professional mangrove trimmers working within its jurisdiction.

(b) A delegated local government may require that any person qualifying as a professional mangrove trimmer within the jurisdiction of the local government:

1. Be registered with the local government.

2. Pay an annual registration fee that may not exceed $500.

3. Provide prior written notice to the delegated local government before conducting the trimming activities authorized under the exemptions provided by s. 403.9326.

4. Be onsite when mangrove-trimming activities are performed.

(c) The department may require a person who qualifies as a professional mangrove trimmer and works in an area where a local government has not received delegation to provide written notice to the department 10 days before conducting trimming activities under the exemptions and general permits provided in ss. 403.9326 and 403.9327 and to be onsite when mangrove-trimming activities are performed.

(d) Any person who qualifies as a professional mangrove trimmer under this subsection may conduct trimming activities within the jurisdiction of a delegated local government if the person registers and pays any appropriate fee required by a delegated local government. A delegated local government that wishes to discipline persons licensed under part II of chapter 481 for mangrove-trimming or alteration activities may file a complaint against the licensee as provided for by chapter 481 and may take appropriate local disciplinary action. Any local disciplinary action imposed against a licensee is subject to administrative and judicial review.

(e) A locally registered mangrove trimmer may use the exemptions and general permits in ss. 403.9326 and 403.9327 only within the jurisdiction of delegated local governments in which the mangrove trimmer is registered. Nothing in ss. 403.9321-403.9333 shall prevent any person who qualifies as a professional mangrove trimmer under subsection (1)

from using the exemptions and general permits in ss. 403.9326 and 403.9327 outside the jurisdiction of delegated local governments.

(f) Any local governmental regulation imposed on professional mangrove trimmers that has the effect of limiting directly or indirectly the availability of the exemptions provided by s. 403.9326 is invalid.

History.--s. 9, ch. 95-299; s. 9, ch. 96-206.

403.9331 Applicability; rules and policies.--

(1) The regulation of mangrove protection under ss. 403.9321-403.9333 is intended to be complete and effective without reference to or compliance with other statutory provisions.

(2) Any rule or policy applicable to permits provided for by s. 403.9327 or s. 403.9328 which establishes a standard applicable to mangrove trimming or alteration is invalid unless a scientific basis for the rule or policy is established. Such rules or policies shall not receive a presumption of validity in any administrative or judicial proceeding for review. Any such rule or policy must be demonstrated to substantially advance a fundamental purpose of the statute cited as authority for the rule or policy or shall be invalid.

History.--s. 10, ch. 95-299.

403.9332 Mitigation and enforcement.--

(1)(a) Any area in which 5 percent or more of the trimmed mangrove trees have been trimmed below 6 feet in height, except as provided in s. 403.9326(1)(c), (d), (f), (g), and (h), destroyed, defoliated, or removed as a result of trimming conducted under s. 403.9326 or s. 403.9327 must be restored or mitigated. Restoration must be accomplished by replanting mangroves, in the same location and of the same species as each mangrove destroyed, defoliated, removed, or trimmed, to achieve within 5 years a canopy area equivalent to the area destroyed, removed, defoliated, or trimmed; or mitigation must be accomplished by replanting offsite, in areas suitable for mangrove growth, mangroves to achieve within 5 years a canopy area equivalent to the area destroyed, removed, defoliated, or trimmed. Where all or a portion of the restoration or mitigation is not practicable, as determined by the department or delegated local government, the impacts resulting from the destruction, defoliation, removal, or trimming of the mangroves must be offset by donating a sufficient amount of money to offset the impacts, which must be used for the restoration, enhancement, creation, or preservation of mangrove wetlands within a restoration, enhancement, creation, or preservation project approved by the department or delegated local government; or by purchasing credits from a mitigation bank created under s. 373.4135 at a mitigation ratio of 2-to-1 credits to affected area. The donation must be equivalent to the cost, as verified by the department or delegated local government, of creating mangrove wetlands at a 2-to-1, created versus affected ratio, based on canopy area. The donation may not be less than $4 per square foot of created wetland area.

(b) In all cases, the applicant, permittee, landowner, and person performing the trimming

are jointly and severally liable for performing restoration under paragraph (a) and for ensuring that the restoration successfully results in a variable mangrove community that can offset the impacts caused by the removal, destruction, or defoliation of mangroves. The applicant, landowner, and person performing the trimming are also jointly and severally subject to penalties.

(c) If mangroves are to be trimmed or altered under a permit issued under s. 403.9328, the department or delegated local government may require mitigation. The department or delegated local government shall establish reasonable mitigation requirements that must include, as an option, the use of mitigation banks created under s. 373.4135, where appropriate. The department's mitigation requirements must ensure that payments received as mitigation are sufficient to offset impacts and are used for mangrove creation, preservation, protection, or enhancement.

(d) Any replanting for restoration and mitigation under this subsection must result in at least 80 percent survival of the planted mangroves 1 year after planting. If the survival requirement is not met, additional mangroves must be planted and maintained until 80 percent survival is achieved 1 year after the last mangrove planting.

(2) The department or delegated local government shall enforce the provisions of ss. 403.9321-403.9333 in the same manner and to the same extent provided for in ss. 403.141 and 403.161 for the first violation.

(3) For second and subsequent violations, the department or delegated local government, in addition to the provisions of ss. 403.141 and 403.161, shall impose additional monetary penalties for each mangrove illegally trimmed or altered as follows:

(a) Up to $100 for each mangrove illegally trimmed; or

(b) Up to $250 for each mangrove illegally altered.

(4) In addition to the penalty provisions provided in subsections (1)-(3), for second and all subsequent violations by a professional mangrove trimmer, the department or delegated local government shall impose a separate penalty upon the professional mangrove trimmer up to $250 for each mangrove illegally trimmed or altered.

(5) This section does not limit or restrict a delegated local government from enforcing penalty, restoration, and mitigation provisions under its local authority.

History.--s. 11, ch. 95-299; s. 10, ch. 96-206.

403.9333 Variance relief.--Upon application, the department or delegated local government may grant a variance from the provisions of ss. 403.9321-403.9333 if compliance therewith would impose a unique and unnecessary hardship on the owner or any other person in control of the affected property. Relief may be granted upon demonstration that such hardship is not self-imposed and that the grant of the variance will be consistent with the general intent and purpose of ss. 403.9321-403.9333. The department or delegated local government may grant variances as it deems appropriate.

History.--s. 55, ch. 84-338; s. 44, ch. 93-213; s. 12, ch. 95-299.

Note.--Former s. 403.938.

403.9334 Effect of ch. 96-206.--Nothing in chapter 96-206, Laws of Florida, shall invalidate any permit or order related to mangrove activities which has been approved by the department or any other governmental entity, nor shall it affect any application for permits related to mangrove activities deemed sufficient and substantially complete prior to July 1, 1996.

History.--s. 11, ch. 96-206.

Chapter 62-112, F.A.C.
Project Certification Procedures for Coordinated Agency Review in the Florida Keys Area of Critical State Concern

DEP 1996 PROJECT CERTIFICATION PROCEDURES FOR CHAPTER 62-112 COORDINATED AGENCY REVIEW IN THE FLORIDA KEYS AREA OF CRITICAL STATE CONCERN
(Effective 11-13-96)

62-112.010 Short Title. (Repealed)
62-112.020 Declarations and Intent. (Repealed)
62-112.030 Procedures for Certification and Agency Review.
62-112.040 Agency Review. (Repealed)

62-112.030 Procedures for Certification and Agency Review.

(1) Only applications received from the Department of Community Affairs Permit Coordinator with a statement clearly requesting certification pursuant to Section 380.051, F.S., shall be processed by the Department for coordinated review under this rule.

(2) Receipt by the Department of an application for certification pursuant to this rule shall initiate coordinated review procedures of Section 380.051, F.S., permitting procedures of Section 403.0876, F.S., and the licensing procedures of Section 120.60(2), F.S. The procedures and time limits of Section 120.60(2), F.S., and Section 403.0876, F.S., shall govern the coordinated review process except for the 90 days final action time limit specified in those statutes. The Department may issue or deny a permit in lieu of concluding the coordinated review if such action can be taken within the 60 days time limit established by this Rule.

(3) The Department will initially review the application and if appropriate request additional information within 30 days of receipt of application pursuant to Section 120.60(2). Such a timely request for additional information will toll the time clocks for the permitting decision and the certification decision by DEP.

(4) All applications for coordinated review certification shall be accompanied by the appropriate application fees necessary for permit application processing as provided by the rules of the Department.

(5) After receipt of an application for coordinated review certification the Department shall notify or send to the Department of Community Affairs Permit Coordinator the following:

(a) The date of any request to the applicant for any additional information needed to complete the application,

(b) The date the application becomes complete,

(c) Written notice, in the event the Department has insufficient time to review modifications to a complete application within the 60 days time limit established by this chapter, and

(d) Notice of the Department's coordinated review certification decision. This notice shall also be forwarded to each agency involved in the coordinated review.

(6) The Department shall be represented at the coordinated agency review meeting. If requested to do so by the Department of Community Affairs Permit Coordinator, an employee of the Department of Environmental Protection shall attend the meeting as the Department representative. The representative shall be familiar with the projects to be discussed and shall be prepared for a comprehensive review of the proposed development plan, including any modifications that would make permit issuance more likely.

(7) Certification shall be issued or denied within 60 days of receipt by the Department of a complete application.

(8) The applicant may withdraw from the coordinated agency review procedure at any time.

(9) Upon completion of coordinated review of a proposed development requesting certification pursuant to Section 380.051, F.S., the Department shall:

(a) Grant certification, if the agency finds that the proposed location, densities, intensity of use, character, design features, and environmental impacts of the proposed development are consistent with the agency's statutes and rules. Certification may include conditions that the agency deems necessary to meet these standards, or

(b) Deny certification if the agency finds the above characteristics are not consistent with the Department's statutes and rules.

The agency shall state the reason for denial.

(10) The Department certification shall remain in effect until final agency action is taken on the permit application upon which the certification was based, or until this permit application is withdrawn by the applicant.

(11) Certification does not replace required Department permits. Certification creates a rebuttal presumption that a permit will be issued by the Department. Upon reviewing a permit application, the Department may deviate from the certification if new information received or developed within the permit period of Section 120.60(2), F.S., dictates such action.

Specific Authority 380.051 FS. Law Implemented 380.051 FS. History–New 9-21-87, Formerly 17-112.030, Amended 11-13-96.

Effective 11-13-96

Chapter 62-302, F.A.C.
Surface Water Quality Standards

Florida Department of Environmental Protection
Rules

SURFACE WATER QUALITY STANDARDS
Chapter 62-302, F.A.C.

Amended December 11, 2003

(This page is intentionally blank.)

CHAPTER 62-302 SURFACE WATER QUALITY STANDARDS

62-302.100 Findings, Declaration and Intent. (Repealed)
62-302.200 Definitions.
62-302.300 Findings, Intent, and Antidegradation Policy for Surface Water Quality.
62-302.400 Classification of Surface Waters, Usage, Reclassification, Classified Waters.
62-302.500 Surface Waters: Minimum Criteria, General Criteria.
62-302.510 Surface Waters: General Criteria. (Repealed)
62-302.520 Thermal Surface Water Criteria.
62-302.530 Table: Surface Water Quality Criteria.
62-302.600 Classified Waters. (Repealed)
62-302.700 Special Protection, Outstanding Florida Waters, Outstanding National Resource Waters.
62-302.800 Site Specific Alternative Criteria.

62-302.200 Definitions.

(1) “Acute Toxicity” shall mean the presence of one or more substances or characteristics or components of substances in amounts which:

(a) Are greater than one-third (1/3) of the amount lethal to 50% of the test organisms in 96 hours (96 hr LC_{50}) where the 96 hr LC_{50} is the lowest value which has been determined for a species significant to the indigenous aquatic community; or

(b) May reasonably be expected, based upon evaluation by generally accepted scientific methods, to produce effects equal to those of the concentration of the substance specified in (a) above.

(2) “Annual Average Flow” is the long-term harmonic mean flow of the receiving water, or an equivalent flow based on generally accepted scientific procedures in waters for which such a mean cannot be calculated. For waters for which flow records have been kept for at least the last three years, “long-term” shall mean the period of record. For all other waters, “long-term” shall mean three years (unless the Department finds the data from that period not representative of present flow conditions, based on evidence of land use or other changes affecting the flow) or the period of records sufficient to show a variation of flow of at least three orders of magnitude, whichever period is less. For nontidal portions of rivers and streams, the harmonic mean (Q_{hm}) shall be calculated as

$$Q_{hm} = \frac{n}{\frac{1}{Q_1} + \frac{1}{Q_2} + \frac{1}{Q_3} + \frac{1}{Q_4} + \ldots + \frac{1}{Q_n}}$$

in which each Q is an individual flow record and n is the total number of records. In lakes and reservoirs, the annual average flow shall be based on the hydraulic residence time,

which shall be calculated according to generally accepted scientific procedures, using the harmonic mean flows for the inflow sources. In tidal estuaries and coastal systems or tidal portions of rivers and streams, the annual average flow shall be determined using methods described in EPA publication no. 600/6-85/002b pages 142-227, incorporated by reference in paragraph 62-4.246(9)(k), F.A.C., or by other generally accepted scientific procedures, using the harmonic mean flow for any freshwater inflow. If there are insufficient data to determine the harmonic mean then the harmonic mean shall be estimated by methods as set forth in the EPA publication *Technical Support Document for Water Quality-Based Toxics Control* (March 1991), incorporated by reference in paragraph 62-4.246(9)(d), F.A.C., or other generally accepted scientific procedures. In situations with seasonably variable effluent discharge rates, hold-and-release treatment systems, and effluent-dominated sites, annual average flow shall mean modeling techniques that calculate long-term average daily concentrations from long-term individual daily flows and concentrations in accordance with generally accepted scientific procedures.

(3) “Background” shall mean the condition of waters in the absence of the activity or discharge under consideration, based on the best scientific information available to the Department.

(4) “Chronic Toxicity” shall mean the presence of one or more substances or characteristics or components of substances in amounts which:

(a) Are greater than one-twentieth (1/20) of the amount lethal to 50% of the test organisms in 96 hrs (96 hr LC_{50} where the 96 hr LC_{50} is the lowest value which has been determined for a species significant to the indigenous aquatic community; or

(b) May reasonably be expected, based upon evaluation by generally accepted scientific methods, to produce effects equal to those of the concentration of the substance specified in (a) above.

(5) “Commission” shall mean the Environmental Regulation Commission.

(6) “Compensation Point for Photosynthetic Activity” shall mean the depth at which one percent of the light intensity at the surface remains unabsorbed. The light intensities at the surface and subsurface shall be measured simultaneously by irradiance meters such as the Kahlsico Underwater Irradiameter, Model No. 268 WA 310 or other devices having a comparable spectral response.

(7) “Department” shall mean the Department of Environmental Protection.

(8) “Designated Use” shall mean the present and future most beneficial use of a body of water as designated by the Environmental Regulation Commission by means of the Classification system contained in this Chapter.

(9) “Dissolved Metal” shall mean the metal fraction that passes through a 0.45 micron filter.

(10) “Effluent Limitation” shall mean any restriction established by the Department on quantities, rates or concentrations of chemical, physical, biological or other constituents which are discharged from sources into waters of the State.

(11) “Exceptional Ecological Significance” shall mean that a water body is a part of an ecosystem of unusual value. The exceptional significance may be in unusual species, productivity, diversity, ecological relationships, ambient water quality, scientific or educational interest, or in other aspects of the ecosystem’s setting or processes.

(12) “Exceptional Recreational Significance” shall mean unusual value as a resource for outdoor recreation activities. Outdoor recreation activities include, but are not limited to, fishing, boating, canoeing, water skiing, swimming, scuba diving, or nature observation. The exceptional significance may be in the intensity of present recreational usage, in an unusual quality of recreational experience, or in the potential for unusual future recreational use or experience.

(13) “Existing Uses” shall mean any actual beneficial use of the water body on or after November 28, 1975.

(14) “Man-induced conditions which cannot be controlled or abated” shall mean conditions that have been influenced by human activities, and

(a) Would remain after removal of all point sources,

(b) Would remain after imposition of best management practices for non-point sources, and

(c) Cannot be restored or abated by physical alteration of the water body, or there is no reasonable relationship between the economic, social and environmental costs and the benefits of restoration or physical alteration.

(15) “Natural Background” shall mean the condition of waters in the absence of man-induced alterations based on the best scientific information available to the Department. The establishment of natural background for an altered waterbody may be based upon a similar unaltered waterbody or on historical pre-alteration data.

(16) “Nuisance Species” shall mean species of flora or fauna whose noxious characteristics or presence in sufficient number, biomass, or areal extent may reasonably be expected to prevent, or unreasonably interfere with, a designated use of those waters.

(17) “Nursery Area of Indigenous Aquatic Life” shall mean any bed of the following aquatic plants, either in monoculture or mixed: *Halodule wrightii*, *Halophila* spp., *Potamogeton* spp. (pondweed), *Ruppia maritima* (widgeon-grass), *Sagittaria* spp. (arrowhead), *Syringodium filiforme* (manatee-grass), *Thalassia testudinum* (turtle grass), or *Vallisneria* spp. (eel-grass), or any area used by the early-life stages, larvae and post-larvae, of aquatic life during the period of rapid growth and development into the juvenile states.

(18) “Outstanding Florida Waters” shall mean waters designated by the Environmental Regulation Commission as worthy of special protection because of their natural attributes.

(19) “Outstanding National Resources Waters” shall mean waters designated by the Environmental Regulation Commission that are of such exceptional recreational or ecological significance that water quality should be maintained and protected under all circumstances, other than temporary lowering and the lowering allowed under Section 316 of the Federal Clean Water Act.

(20) “Pollution” shall mean the presence in the outdoor atmosphere or waters of the state of any substances, contaminants, noise, or man-made or man-induced alteration of the chemical, physical, biological or radiological integrity of air or water in quantities or levels which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property, including outdoor recreation.

(21) “Predominantly Fresh Waters” shall mean surface waters in which the chloride concentration at the surface is less than 1,500 milligrams per liter.

(22) “Predominantly Marine Waters” shall mean surface waters in which the chloride concentration at the surface is greater than or equal to 1,500 milligrams per liter.

(23) “Propagation” shall mean reproduction sufficient to maintain the species’ role in its respective ecological community.

(24) “Secretary” shall mean the Secretary of the Department of Environmental Protection.

(25) “Shannon-Weaver Diversity Index” shall mean: negative summation (from i = 1 to s) of (ni/N) log2 (ni/N) where s is the number of species in a sample, N is the total number of individuals in a sample, and ni is the total number of individuals in species i.

(26) “Special Waters” shall mean water bodies designated in accordance with Rule 62-302.700, F.A.C., by the Environmental Regulation Commission for inclusion in the Special Waters Category of Outstanding Florida Waters, as contained in Rule 62-302.700, F.A.C. A Special Water may include all or part of any water body.

(27) “Surface Water” means water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused. Water from natural springs shall be classified as surface water when it exits from the spring onto the earth’s surface.

(28) “Total Recoverable Metal” shall mean the concentration of metal in an unfiltered sample following treatment with hot dilute mineral acid.

(29) “Water quality criteria” shall mean elements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports the present and future most beneficial uses.

(30) “Water quality standards” shall mean standards composed of designated present and future most beneficial uses (classification of waters), the numerical and narrative criteria applied to the specific water uses or classification, the Florida antidegradation policy, and the moderating provisions contained in this rule and in Chapter 62-4, F.A.C., adopted pursuant to Chapter 403, F.S.

(31) “Waters” shall be as defined in Section 403.031(13), Florida Statutes.

(32) “Zone of Mixing” or “Mixing Zone” shall mean a volume of surface water containing the point or area of discharge and within which an opportunity for the mixture of wastes with receiving surface waters has been afforded.

Specific Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804, 403.805 FS. Law Implemented 403.021, 403.031, 403.061, 403.085, 403.086, 403.087, 403.088, 403.502, 403.802 FS. History–New 5-29-90, Amended 2-13-92, Formerly 17-302.200, Amended 1-23-95, 5-15-02.

62-302.300 Findings, Intent, and Antidegradation Policy for Surface Water Quality.

(1) Article II, Section 7 of the Florida Constitution requires abatement of water pollution and conservation and protection of Florida’s natural resources and scenic beauty.

(2) Congress, in Section 101(a)(2) of the Federal Water Pollution Control Act, as amended, declares that achievement by July 1, 1983, of water quality sufficient for the protection and propogation of fish, shellfish, and wildlife, as well as for recreation in and on the water, is an interim goal to be sought whenever attainable. Congress further states in Section 101(a)(3), that it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited.

(3) The present and future most beneficial uses of all waters of the State have been designated by the Department by means of the classification system set forth in this Chapter pursuant to Section 403.061(10), F.S. Water quality standards are established by the Department to protect these designated uses.

(4) Because activities outside the State sometimes cause pollution of Florida’s waters, the Department will make every reasonable effort to have such pollution abated.

(5) Water quality standards apply equally to and shall be uniformly enforced in both the public and private sector.

(6) Public interest shall not be construed to mean only those activities conducted solely to provide facilities or benefits to the general public. Private activities conducted for private purposes may also be in the public interest.

(7) The Commission, recognizing the complexity of water quality management and the necessity to temper regulatory actions with the technological progress and the social and

economic well-being of people, urges, however, that there be no compromise where discharges of pollutants constitute a valid hazard to human health.

(8) The Commission requests that the Secretary seek and use the best environmental information available when making decisions on the effects of chronically and acutely toxic substances and carcinogenic, mutagenic, and teratogenic substances. Additionally, the Secretary is requested to seek and encourage innovative research and developments in waste treatment alternatives that might better preserve environmental quality or at the same time reduce the energy and dollar costs of operation.

(9) The criteria set forth in this Chapter are minimum levels which are necessary to protect the designated uses of a water body. It is the intent of this Commission that permit applicants should not be penalized due to a low detection limit associated with any specific criteria.

(10)(a) The Department's rules that were adopted on March 1, 1979, regarding water quality standards are designed to protect the public health or welfare and to enhance the quality of waters of the State. They have been established taking into consideration the use and value of waters of the State for public water supplies, propogation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.

(b) Under the approach taken in the formulation of the rules adopted in this proceeding:

1. The Department's rules that were adopted on March 1, 1979, regarding water quality standards are based upon the best scientific knowledge related to the protection of the various designated uses of waters of the State; and

2. The mixing zone, zone of discharge, site specific alternative criteria, exemption, and equitable allocation provisions are designed to provide an opportunity for the future consideration of factors relating to localized situations which could not adequately be addressed in this proceeding, including economic and social consequences, attainability, irretrievable conditions, natural background, and detectability.

(c) This is an even-handed and balanced approach to attainment of water quality objectives. The Commission has specifically recognized that the social, economic and environmental costs may, under certain special circumstances, outweigh the social, economic and environmental benefits if the numerical criteria are enforced statewide. It is for that reason that the Commission has provided for mixing zones, zones of discharge, site specific alternative criteria, exemptions and other provisions in Chapters 62-302, 62-4, and 62-6, F.A.C. Furthermore, the continued availability of the moderating provisions is a vital factor providing a basis for the Commission's determination that water quality standards applicable to water classes in the rule are attainable taking into consideration environmental, technological, social, economic and institutional factors. The companion provisions of Chapters 62-4 and 62-6, F.A.C., approved simultaneously with these Water Quality Standards are incorporated herein by reference as a substantive

part of the State's comprehensive program for the control, abatement and prevention of water pollution.

(d) Without the moderating provisions described in (b)2. above, the Commission would not have adopted the revisions described in (b)1. above nor determined that they are attainable as generally applicable water quality standards.

(11) Section 403.021, Florida Statutes, declares that the public policy of the State is to conserve the waters of the State to protect, maintain, and improve the quality thereof for public water supplies, for the propagation of wildlife, fish and other aquatic life, and for domestic, agricultural, industrial, recreational, and other beneficial uses. It also prohibits the discharge of wastes into Florida waters without treatment necessary to protect those beneficial uses of the waters.

(12) The Department shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources, and all cost-effective and reasonable best management practices for nonpoint source control. For the purposes of this rule, highest statutory and regulatory requirements for new and existing point sources are those which can be achieved through imposition of effluent limits required under Sections 301(b) and 306 of the Federal Clean Water Act (as amended in 1987) and Chapter 403, F.S. For the purposes of this rule, cost-effective and reasonable best management practices for nonpoint source control are those nonpoint source controls authorized under Chapters 373 and 403, F.S., and Department rules.

(13) The Department finds that excessive nutrients (total nitrogen and total phosphorus) constitute one of the most severe water quality problems facing the State. It shall be the Department's policy to limit the introduction of man-induced nutrients into waters of the State. Particular consideration shall be given to the protection from further nutrient enrichment of waters which are presently high in nutrient concentrations or sensitive to further nutrient concentrations and sensitive to further nutrient loadings. Also, particular consideration shall be given to the protection from nutrient enrichment of those waters presently containing very low nutrient concentrations: less than 0.3 milligrams per liter total nitrogen or less than 0.04 milligrams per liter total phosphorus.

(14) Existing uses and the level of water quality necessary to protect the existing uses shall be fully maintained and protected. Such uses may be different or more extensive than the designated use.

(15) Pollution which causes or contributes to new violations of water quality standards or to continuation of existing violations is harmful to the waters of this State and shall not be allowed. Waters having water quality below the criteria established for them shall be protected and enhanced. However, the Department shall not strive to abate natural conditions.

(16) If the Department finds that a new or existing discharge will reduce the quality of the receiving waters below the classification established for them or violate any Department rule or standard, it shall refuse to permit the discharge.

(17) If the Department finds that a proposed new discharge or expansion of an existing discharge will not reduce the quality of the receiving waters below the classification established for them, it shall permit the discharge if such degradation is necessary or desirable under federal standards and under circumstances which are clearly in the public interest, and if all other Department requirements are met. Projects permitted under Part IV of Chapter 373, F.S., shall be considered in compliance with this subsection if those projects comply with the requirements of subsection 373.414(1), F.S.; also projects permitted under the grandfather provisions of Sections 373.414(11) through (16), F.S., or permitted under Section 373.4145, F.S., shall be considered in compliance with this subsection if those projects comply with the requirements of subsection 62-312.080(2), F.A.C.

(18)(a) Except as provided in subparagraphs (b) and (c) of this paragraph, an applicant for either a general or generic permit or renewal of an existing permit for which no expansion of the discharge is proposed is not required to show that any degradation from the discharge is necessary or desirable under federal standards and under circumstances which are clearly in the public interest.

(b) If the Department determines that the applicant has caused degradation of water quality over and above that allowed through previous permits issued to the applicant, then the applicant shall demonstrate that this lowering of water quality is necessary or desirable under federal standards and under circumstances which are clearly in the public interest. These circumstances are limited to cases where it has been demonstrated that degradation of water quality is occurring due to the discharge.

(c) If the new or expanded discharge was initially permitted by the Department on or after October 4, 1989, and the Department determines that an antidegradation analysis was not conducted, then the applicant seeking renewal of the existing permit shall demonstrate that degradation from the discharge is necessary or desirable under federal standards and under circumstances which are clearly in the public interest.

Specific Authority 403.061, 403.062, 403.087, 403.088, 403.504, 403.704, 403.804, 403.805 FS. Law Implemented 373.414, 403.021, 403.061, 403.085, 403.086, 403.087, 403.088, 403.101, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708, 403.802 FS. History–Formerly 17-3.041, Amended 1-28-90, Formerly 17-3.042, 17-302.300, Amended 12-19-94, 1-23-95, 12-26-96, 5-15-02.

62-302.400 Classification of Surface Waters, Usage, Reclassification, Classified Waters.

(1) All surface waters of the State have been classified according to designated uses as follows:

CLASS I	Potable Water Supplies
CLASS II	Shellfish Propagation or Harvesting
CLASS III	Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife

CLASS IV Agricultural Water Supplies
CLASS V Navigation, Utility and Industrial Use

(2) Classification of a water body according to a particular designated use or uses does not preclude use of the water for other purposes.

(3) The specific water quality criteria corresponding to each surface water classification are listed in Rules 62-302.500 and 62-302.530, F.A.C.

(4) Water quality classifications are arranged in order of the degree of protection required, with Class I water having generally the most stringent water quality criteria and Class V the least. However, Class I, II, and III surface waters share water quality criteria established to protect recreation and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife.

(5) Criteria applicable to a classification are designed to maintain the minimum conditions necessary to assure the suitability of water for the designated use of the classification. In addition, applicable criteria are generally adequate to maintain minimum conditions required for the designated uses of less stringently regulated classifications. Therefore, unless clearly inconsistent with the criteria applicable, the designated uses of less stringently regulated classifications shall be deemed to be included within the designated uses of more stringently regulated classifications.

(6) Any person regulated by the Department or having a substantial interest in this chapter may seek reclassification of waters of the State by filing a petition with the Secretary in the form required by Rule 62-103.040, F.A.C.

(7) A petition for reclassification shall reference and be accompanied by the information necessary to support the affirmative finding required in this section to support the proposed reclassification.

(8) All reclassifications of waters of the State shall be adopted, after public notice and public hearing, only upon an affirmative finding by the Environmental Regulation Commission that:

(a) The proposed reclassification will establish the present and future most beneficial use of the waters; and

(b) Such a reclassification is clearly in the public interest.

(9) Reclassification of waters of the State which establishes more stringent criteria than presently established by this chapter shall be adopted, only upon additional affirmative finding by the Environmental Regulation Commission that the proposed designated use is attainable, upon consideration of environmental, technological, social, economic, and institutional factors.

(10) The surface waters of the State of Florida are classified as Class III – Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife, except for certain waters which are described in this subsection 62-302.400(12), F.A.C. A water body may be designated as an Outstanding Florida Water or an Outstanding National Resource Water in addition to being classified as Class I, Class II, or Class III. A water body may also have special standards applied to it. Outstanding Florida Waters and Outstanding National Resource Waters are listed in Rule 62-302.700, F.A.C.

(11) Unless otherwise specified, the following shall apply:

(a) The landward extent of a classification shall coincide with the landward extent of waters of the state, as defined in Rule 62-301.400, F.A.C.

(b) Water quality classifications shall be interpreted to include associated water bodies such as tidal creeks, coves, bays and bayous.

(12) Exceptions to Class III:

(a) All secondary and tertiary canals wholly within agricultural areas are classified as Class IV and are not individually listed as exceptions to Class III. “Secondary and tertiary canals” shall mean any wholly artificial canal or ditch which is behind a control structure and which is part of a water control system that is connected to the works (set forth in Section 373.086, F.S.) of a water management district created under Section 373.069, F.S., and that is permitted by such water management district pursuant to Section 373.103, 373.413, or 373.416, F.S. Agricultural areas shall generally include lands actively used solely for the production of food and fiber which are zoned for agricultural use where county zoning is in effect. Agricultural areas exclude lands which are platted and subdivided or in a transition phase to residential use;

(b) The following listed water bodies are classified as Class I, Class II, or Class V:

1. Alachua County – none.
2. Baker County – none.
3. Bay County

Class I

Bayou George and Creek – Impoundment to source.
Bear Creek – Impoundment to source.
Big Cedar Creek – Impoundment to source.
Deer Point Impoundment – Dam to source.
Econfina Creek – Upstream of Deer Point Impoundment.

Class II

East Bay and Tributaries – East of U.S. Highway 98 to, but excluding Wetappo Creek.

North Bay and Tributaries – North of U.S. Highway 98 to Deer Point Dam excluding Alligator Bayou and Fanning Bayous north of
an east-west line through Channel Marker 3.
West Bay and Tributaries – West of North Bay (line from West Bay Point on the north to Shell Point on the South) except West
Bay Creek (northwest of Channel Marker 27C off Goose Point), Crooked Creek (north of a line from Crooked Creek Point to Doyle
Point), and Burnt Mill Creek (north of a line from Graze Point to Cedar Point).
4. Bradford County – none.
5. Brevard County

Class I

St. Johns River and Tributaries – Lake Washington Dam south through and including Sawgrass Lake, Lake Hellen Blazes, to Indian River County Line.
Class II Goat Creek.
Indian River – South from a line due east of Barnes Blvd. (SR 502) to South Section Line of Section 29, T26S, R37E, Palm Shores.
Indian River – From a line from Cape Malabar northeastward through Intracoastal Waterway marker 16, to shore, then southward to S. Brevard County Line.
Indian River – N. Brevard County Line south to Florida East Coast Railroad Crossing (vicinity of Jay Jay).
Kid Creek.
Mosquito Lagoon – North Brevard County Line south to Beach Road.
Trout Creek.
Indian River – The east side of the Intracoastal Waterway from SR 405 northward, to a line from the southern point of land at the
mouth of Brock Creek to Intracoastal Waterway Channel Marker 33.
Indian River – From SR 405 south to SR 528.
6. Broward County – none.
7. Calhoun County

Class I

Bear Creek.
Econfina Creek.
8. Charlotte County

Class I

Alligator Creek – North and South Prongs from headwaters to the water control structure downstream of SR 765-A.
Port Charlotte Canal System – Surface waters lying upstream of, or directly connected to, Fordham Waterway upstream of Conway Boulevard.
Prairie Creek – DeSoto County Line and headwaters to Shell Creek.
Shell Creek – Headwaters to Hendrickson Dam (east of Myrtle Slough, in Section 20, T40S, R24E).

Class II

Lemon Bay, Placida Harbor, and Tributaries – N. Charlotte County Line south to Gasparilla Sound and bounded on the east by SR 775.
Charlotte Harbor, Myakka River, and Gasparilla South – Waters except Peace River upstream from the northeastern point of
Myakka Cutoff to the boat ramp in Ponce de Leon Park in south Punta Gorda, Catfish Creek north of N. Lat. 26º50'56", and
Whidden Creek north of N. Lat. 26º 51'15".
9. Citrus County
Class II Coastal Waters – From the southern side of the Cross Florida Barge Canal southward to the Hernando County line, with the exception of Crystal River (from the southern shore at the mouth of Cedar Creek to Shell Point to the westernmost tip of Fort Island), Salt River (portion generally east and southward along the eastern edge of the islands bordering the Salt River and Dixie Bay to St. Martins River), and St. Martins River from its mouth to Greenleaf Bay.
10. Clay County – none.
11. Collier County

Class II

Cocohatchee River.
Connecting Waterways – From Wiggins Pass south to Outer Doctors Bay.
Dollar Bay.
Inner and Outer Clam Bay.
Inner and Outer Doctors Bay.
Little Hickory Bay.
Tidal Bays and Passes – Naples Bay and south and easterly through Rookery Bay and the Ten Thousand Islands to the Monroe
County Line.
Wiggins Pass.
12. Columbia County – none.
13. Dade County – none.
14. DeSoto County

Class I

Horse Creek – From the northern border of Section 14, T38S, R23E, southward to Peace River.
Prairie Creek – Headwaters to Charlotte County Line.
15. Dixie County

Class II

Coastal Waters – From an east-west line through Stuart Point southward to the County line, excluding the mouth of the Suwannee

River and its passes.

16. Duval County

Class II

Ft. George River and Simpson Creeks – Ft. George Inlet north to Nassau Sound.
Intracoastal Waterway and Tributaries – Confluence of Nassau and Amelia Rivers south to Flashing Marker 73 thence eastward along Ft. George River to Ft. George Inlet and includes Garden Creek.
Nassau River and Creek – From the mouth of Nassau Sound, (a line connecting the northeasternmost point of Little Talbot Island to the southeasternmost tip of Amelia Island westerly to a north-south line through Seymore Point.
Pumpkinhill Creek.
17. Escambia County

Class II

Escambia Bay – Louisville and Nashville Railroad Trestle south to Pensacola Bay (Line from Emanuel Point east northeasterly to Garcon Point).
Pensacola Bay – East of a line connecting Emanuel Point on the north to the south end of the Pensacola Bay Bridge (U.S. Highway 98).
Santa Rosa Sound – East of a line connecting Gulf Breeze approach to Pensacola Beach (Bascule Bridge), and Sharp Point with exception of the Navarre Beach area from a north-south line through Channel Marker 106 to Navarre Bridge.
18. Flagler County

Class II

Matanzas River (Intracoastal Waterway) – N. Flagler County Line south to an east-west line through Fl. Marker 109.
Pellicer Creek.
19. Franklin County

Class II

Alligator Harbor – East from a line from Peninsula Point north to St. James Island to mean high water.
Apalachicola Bay – with exception of an area encompassed within a 2-mile radius from Apalachicola entrance of John Gorrie Memorial Bridge.
East Bay and Tributaries – with the exception of area encompassed within 2-mile radius from Apalachicola entrance of John Gorrie Memorial Bridge.
Gulf of Mexico – North of a line from Peninsula Point on Alligator Point to the southeastern tip of Dog Island and bounded on the east by Alligator Harbor and west by St. George Sound.
Ochlockonee Bay – From the confluence of Sopchoppy and Ochlockonee Rivers eastward to a line through the two flashing beacons marking the end of the main channel and south channel, to the shoreline south of Bald Point north to the county line.
St. George Sound – Gulf of Mexico westerly to Apalachicola Bay.

St. Vincent Sound – Apalachicola Bay to Indian Pass.
20. Gadsden County

Class I

Holman Branch – SR 270-A to source.
Mosquito Creek – U.S. Highway 90 north to Florida State Line.
Quincy Creek – SR 65 to source.
21. Gilchrist County – none.
22. Glades County

Class I

Lake Okeechobee.
23. Gulf County

Class II

Indian Lagoon – West of Indian Pass and St. Vincent Sound.
St. Joseph Bay – South of a line from St. Joseph Point due east, excluding an area that is both within an arc 2.9 miles from the center of the mouth of Gulf County Canal and east of a line from St. Joseph Point to the northwest corner of section 13, T8S, R11W.
24. Hamilton County – none.
25. Hardee County – none.
26. Hendry County

Class I

Lake Okeechobee.
27. Hernando County – none.
28. Highlands County – none.
29. Hillsborough County

Class I

Cow House Creek – Hillsborough River to source.
Hillsborough River – City of Tampa Water Treatment Plant Dam to Flint Creek.

Class II

Old Tampa Bay – Waters within Hillsborough County between SR 60 (Courtney Campbell Parkway), and Interstate 275 (Howard Frankland Bridge), to the line of mean high water.
Old Tampa Bay and Mobbly Bay – Beginning at the intersection of the north shore of SR 60 (Courtney Campbell Parkway) and Longitude 82º35'45" west, thence due north to the line of mean high water, thence westward along the line of mean high water, (except Rocky and Double Branch Creeks which are included only to SR 580), and up Channel A

to a line connecting the lines of mean high water on the outer sides of the canal banks, to the county line, thence southerly along the county line to SR 60, thence along the north shore of SR 60 to the point of beginning.
Tampa Bay – Beginning at Gadsden Point, thence along a line connecting Gadsden Point and the intersection of Gadsden Point Cut and Cut “A” to a point one-half nautical mile inside said intersection, thence westward along a line one-half nautical mile inside and parallel to Gadsden Point Cut, Cut “G”, Cut “J”, Cut “J2”, and Cut “K”, to the line of mean high water, thence along the line of mean high water to the point of beginning.
Tampa Bay – Beginning at the intersection of the Hillsborough County Line and the line of mean high water, thence to the rear range marker of Cut “D”, thence northerly along the line of Cut “D” range to a point one-half nautical mile inside the southern boundary of Cut “C”, thence along a line one-half mile inside and parallel to Cut “C”, Cut “D”, and Cut “E” to a point with Latitude 27º45'40'' north and Longitude 82º30'40'' west, thence to a point Latitude 27º47' north and Longitude 82º27' west, thence on a true bearing of 140º to the line of mean high water, thence along the line of mean high water southward to the western tip of Mangrove Point, thence to the northwestern tip of Tropical Island, thence eastward along the line of mean high water to the eastern tip of Goat Island, thence due south to the line of mean high water, thence generally southward along the line of mean high water to the point of beginning.
Tampa Bay – Hillsborough County portion west of the Sunshine Skyway (excluding Tampa Harbor Channel) up to the line of mean high water.
30. Holmes County – none.
31. Indian River County

Class I

St. Johns River and Tributaries – Brevard County Line south through and including Blue Cypress Lake to SR 60.
Class II Indian River – Indian River County Line south to SR 510 east of the Intracoastal Waterway channel centerline.
Indian River – SR 510 south to an east-west line from the north side of the North Relief Canal.
Indian River – From an east-west line through the northernmost point of Round Island south to county line and east of Intracoastal
Waterway centerline.
32. Jackson County

Class I

Econfina Creek – Bay County to source.
33. Jefferson County

Class II

Coastal Waters – Within the county, excluding the mouth of Aucilla River.
34. Lafayette County – none.
35. Lake County – none.

36. Lee County

Class I

Caloosahatchee River – E. Lee County Line to South Florida Water Management District Structure 79.

Class II

Charlotte Harbor.
Matanzas Pass, Hurricane Bay, and Hell Peckish (Peckney) Bay – From San Carlos Bay to a line from Estero Island through the southernmost tip of the unnamed island south of Julies Island, northeastward to the southernmost point of land in section 27, T46S, R24E.
Matlacha Pass – Charlotte Harbor to San Carlos Bay.
Pine Island Sound – Charlotte Harbor to San Carlos Bay.
San Carlos Bay – From a line from point Ybel to Bodwitch Point northward to a line from the eastern point at the mouth of Punta Blanca Creek, southeast through the southern point of Big Shell Island to the mainland and westward to Pine Island Sound.
37. Leon County – none.
38. Levy County

Class II

Coastal Waters and Tidal Creeks – Within the county excluding:
a. The mouth of the Suwannee River, and its passes;
b. Alligator Pass to a line connecting the seawardmost points of the islands connecting Alligator Pass with the Gulf;
c. Cedar Key area – from SR 24 bridge at the northernmost point of Rye Key, southwestward to the northernmost point of Gomez Key, then southward to the westernmost point of Seahorse Key, then along the southern shoreline of Seahorse Key to its easternmost point, then northeastward to the southernmost point of Atsena Otie Key, then northward along the eastern shoreline of Atsena Otie Key to its northeasternmost point, then northward to the southernmost point of Dog Island, northwestward to the westernmost point of Scale Key, northwestward to the boundary marker piling, then northward to the point of beginning;
d. The mouth of the Withlacoochee River.
39. Liberty County – none.
40. Madison County – none.
41. Manatee County

Class I

Manatee River – From Rye Bridge Road to the sources thereof, including but not limited to the following tributaries: the East Fork of the Manatee River, the North Fork of the Manatee River, Boggy Creek, Gilley Creek, Poley Branch, Corbit Branch, Little Deep Branch, Fisher Branch, Ft. Crawford Creek, Webb Branch, Clearwater Branch, Craig Branch, and Guthrey Branch.

Lake Evers (Ward Lake) and Braden River – City of Bradenton Water Treatment Dam to SR 675, excluding upland cut irrigation or drainage ditches and including the following tributaries:

Tributary	Upstream Limit(s)
a. Rattlesnake Slough	Lockwood Ridge Road in Section 28, Township 35 South, Range 18 East.
b. Cedar Creek	West Branch Whitfield Avenue in Section 27, Town ship 35 South, Range 18 East.
Central Branch	Country Club Way in Section 34, Township 35 South, Range 18 East.
East Branch	To a point where an east-west line lying 1200 feet south of the section line between Sections 23 and 26 (Township 35 South, Range 18 East) crosses the tributary.
c. Cooper Creek	
West Branch	
(Foley Branch)	South Boundary of Section 1, Township 36 South, Range 18 East.
East Branch	East Boundary of Section 31, Township 35 South, Range 19 East.
d. Nonsense Creek	To a point where an east-west line lying 800 feet North of the section line between Sections 14 and 23 (Township 35 South, Range 18 East) crosses the creek.
e. Hickory Hamock	To a point where an east-west line lying 1000 feet South of the section line between Sections 17 and 20 (Township 35 South, Range 19 East) crosses the creek.
f. Wolf Slough	East Boundary of Section 16, Township 35 South, Range 19 East.
g. Unnamed Tributary 1	To a point where an east-west line lying 2300 feet south of the section line between Sections 21 and 28 (Township 35 South, Range 19 East) crosses the tributary.
h. Unnamed Tributary 2	East Boundary of Section 14, Township 35 South, Range 19 East.
i. Unnamed Tributary 3	West Boundary of Section 25, Township 35 South, Range 19 East.

j. Unnamed Tributary 4	To a point where a north-south line lying 200 feet East of the section line between Sections 23 and 24 (Township 35 South, Range 19 East) crosses the tributary.

Class II

Gulf and Coastal Waters of Tampa Bay – (Including, but not limited to Terra Ceia Bay, Perico Bayou, Palma Sola Bay, and Sarasota Bay), excluding waters northward of a line from the southern shore of the mouth of Little Redfish Creek northwesterly through the red marker (approximately one nautical mile away) to the county line; Manatee River upstream of a line from Emerson Pt. to Mead Pt.
Gulf Waters – North of 27º31' N. Lat.
42. Marion County – none.
43. Martin County

Class I

Lake Okeechobee.

Class II

Great Pocket – St. Lucie River to Peck's Lake.
Indian River – N. Martin County Line south to the mouth of St. Lucie Inlet, east of the Intracoastal Waterway Channel centerline.
Loxahatchee River – West of the Florida East Coast Railroad Bridge including Southwest, Northwest, and North Forks.
44. Monroe County

Class II

Monroe County Coastline – From Collier and Dade County Lines southward to and including that part of Florida Bay within Everglades National Park.
45. Nassau County

Class II

Alligator Creek.
Nassau River and Creek – From the mouth of Nassau Sound (a line connecting the northeasternmost point of Little Talbot Island to the southeasternmost point of Amelia Island) westerly to Seymore Point.
South Amelia River – Nassau River north to a line from the northern shore of the mouth of Alligator Creek to the northernmost shore of Harrison Creek.
Waters between South Amelia River and Alligator Creek.
46. Okaloosa County

Class II

Choctahatchee Bay and Tributaries – From a line from White Point southwesterly through Fl. Light Marker 2 of the Intracoastal Waterway, eastward to the county line, including East Pass.
Rocky Bayou – Choctahatchee Bay (from a line extending due east from Shirk Point) to Rocky Creek.
Santa Rosa Sound – From a north-south line through Manatee Point west to the Santa Rose County Line.
47. Okeechobee County

Class I

Lake Okeechobee.
48. Orange County – none.
49. Osceola County – none.
50. Palm Beach County

Class I

Canal C-18 (freshwater portion).
City of West Palm Beach Water Catchment Area.
Clear Lake, Lake Mangonia, and the waterway connecting them.
Lake Okeechobee.
M-Canal – L-8 to Lake Mangonia.

Class II

Canal C-18 – Salinity barrier to Loxahatchee River.
Loxahatchee River – Upstream of Florida East Coast railroad bridge including South-west, Northwest, and North Forks.
51. Pasco County – none.
52. Pinellas County

Class II

Old Tampa Bay, Mobbly Bay and Tampa Bay – South and westward to Sunshine Skyway (SR 55), except Safety Harbor north of an east-west line through Phillipi Point.
Tampa Bay and Gulf waters – West of Sunshine Skyway (SR 55), excluding waters north of SR 682 and waters that are both west of Pinellas Bayway and north of an east-west line through the southernmost point of Pine Key.
53. Polk County – none.
54. Putnam County – none.
55. St. Johns County

Class II

Guano River and Tributaries – From Guano Lake Dam south to Tolomato River.

Matanzas River, Intracoastal Waterway and Tributaries, excluding Treasure Beach Canal System – From Intracoastal Waterway Marker number 29, south to Flagler County Line.
Pellicer Creek.
Salt Run – Waters south of an east-west line connecting Lighthouse Park boat ramp with Conch Island.
Tolomato River (North River) and Tributaries – From a line connecting Spanish Landing to Booth Landing, south to an east-west line through Intracoastal Waterway Marker number 55.
56. St. Lucie County

Class II

Indian River – From Middle Point south to S. St. Lucie County Line, east of Intracoastal Waterway Channel centerline.

Indian River – N. St. Lucie County Line south to an east-west line through the southern point of Fishhouse Cove.

57. Santa Rosa County

Class II

Blackwater Bay – From a line connecting Robinson's Point to Broad River south to East Bay (line due west from Escribano Point).
East Bay and Tributaries – Blackwater Bay (line due west from Escribano Point) southerly to Pensacola Bay (line from Garcon Point on the north to Redfish Point on the south).
Escambia Bay – Louisville and Nashville Railroad Trestle south to Pensacola Bay (Line from Emanuel Point east northeasterly to Garcon Point).
Pensacola Bay – East of a line connecting Emanuel Point on the north to the south end of the Pensacola Bay Bridge (U.S. Highway 98).
Santa Rosa Sound – From a line connecting Gulf Breeze approach to Pensacola Beach, (Bascule Bridge), and Sharp Point, east to Santa Rosa/Okaloosa County line with exception of the Navarre Beach area from a north-south line through Channel Marker 106 eastward to Navarre Beach Toll Road.
58. Sarasota County

Class I

Big Slough Canal – South to U.S. 41.
Cooper Creek (Foley Branch) upstream to the South boundary of Section 1, Township 36 South, Range 18 East.
Myakka River – From the Manatee County line southwesterly through Upper and Lower Myakka Lakes to Manhattan Farms (north line of Section 6 T39S, R20E).

Class II

Lemon Bay – From a line eastward from the northern shore of the mouth of Forked Creek south to Charlotte County Line.
Myakka River – From the western line of section 35, T39S, R20E south to Charlotte County Line.
Sarasota Bay – West of the Intracoastal Waterway Channel centerline.
59. Seminole County – none.
60. Sumter County – none.
61. Suwannee County – none.
62. Taylor County

Class V

Fenholloway River. Repealed effective December 31, 1997.
63. Union County – none.
64. Volusia County

Class II

Indian River North, Indian River Lagoon, and Mosquito Lagoon from an east-west line through Intracoastal Waterway Channel Marker 57 south to S. Volusia County Line.
Indian River – North of County Line.
65. Wakulla County

Class II

Coastal Waters and Tributaries – From Jefferson County Line westward with the exception of Spring Creek and the portion of King Bay (Dickerson Bay) west and north of a line from the westernmost tip of Porter Island south to Hungry Point, and Walker Creek north of a line from Live Oak Point southwest across the Creek to the closest tip of Shell Point.
66. Walton County

Class II

Choctawhatchee Bay and Tributaries – Except waters north of a line from Alaqua Point to Wheeler Point.
67. Washington County

Class I

Econfina Creek.

Specific Authority 403.061, 403.062, 403.087, 403.088, 403.504, 403.704, 403.804 FS. Law Implemented 403.021, 403.061, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.504, 403.702, 403.708 FS. History–Formerly 28-5.06, 17-3.06, Amended and Renumbered 3-1-79, Amended 1-1-83, 2-1-83, Formerly 17-3.081, Amended 4-25-93, Formerly 17-302.400, Amended 12-26-96, 8-24-00.

62-302.500 Surface Waters: Minimum Criteria, General Criteria.

(1) Minimum Criteria. All surface waters of the State shall at all places and at all times be free from:

(a) Domestic, industrial, agricultural, or other man-induced non-thermal components of discharges which, alone or in combination with other substances or in combination with other components of discharges (whether thermal or non-thermal):

1. Settle to form putrescent deposits or otherwise create a nuisance; or

2. Float as debris, scum, oil, or other matter in such amounts as to form nuisances; or

3. Produce color, odor, taste, turbidity, or other conditions in such degree as to create a nuisance; or

4. Are acutely toxic; or

5. Are present in concentrations which are carcinogenic, mutagenic, or teratogenic to human beings or to significant, locally occurring, wildlife or aquatic species, unless specific standards are established for such components in subsection 62-302.500(2) or Rule 62-302.530, F.A.C.; or

6. Pose a serious danger to the public health, safety, or welfare.

(b) Thermal components of discharges which, alone, or in combination with other discharges or components of discharges (whether thermal or non-thermal):

1. Produce conditions so as to create a nuisance; or

2. Do not comply with applicable provisions of subsection 62-302.500(3), F.A.C.

(c) Silver in concentrations above 2.3 micrograms/liter in predominently marine waters.

(2) General Criteria.

(a) The criteria of surface water quality provided in subsection 62-302.500(2) and Rule 62-302.530, F.A.C., shall apply to all surface waters outside zones of mixing except:

1. Where inconsistent with the limitations of Section 403.061(7), F.S.; or

2. Where relief from such criteria has been granted pursuant to other applicable rules of the Department.

(b) The Department may establish a Technical Advisory Committee on request or on its own initiative, to review and advise the Department about the sufficiency and validity of data or methodologies and the need for revision of numerical surface water quality crite-

ria established in this rule chapter. The committee shall be appointed by the Secretary and consist of professionals knowledgeable about the specific criteria to be reviewed. The committee shall be chaired by a representative of the Department and shall meet at the call of the chair. Any findings, conclusions, or recommendations of the commmittee shall be conveyed to the Secretary and to the chair of the Commission but shall not bind the Department.

(c) Effluent limits may be established for pollutants for which analytical detection limits are higher than the established water quality criteria based upon computation of concentrations in the receiving waters. Effluent limits will be established on site-specific conditions in the context of a Department permit. Monitoring reports and permit applications shall specify the detection limits and indicate non-detectable results in such cases. Unless otherwise specified, such non-detectable results shall be accepted as demonstrating compliance for that pollutant as long as specified effluent limits are met.

(d) Criteria for metals in Rule 62-302.530 and paragraph 62-302.500(1)(c), F.A.C., are measured as total recoverable metal. However, cadmium, chromium, copper, lead, nickel, silver, and zinc may be applied as dissolved metals when, as part of a permit application, a dissolved metals translator has been established according to the procedures described in the document, “Guidance for Establishing a Metals Translator”, Florida Department of Environmental Protection, December 17, 2001.

(e) A violation of any surface water quality criterion as set forth in this chaper constitutes pollution. For certain pollutants, numeric criteria have been established to protect human health from an unacceptable risk of additional cancer caused by the consumption of water or aquatic organisms. These numeric criteria are based on annual average flow conditions. However, this allowable annual average does not relieve any activity from complying with subsection 62-302.500(1), Rule 62-302.530, F.A.C., or any other provision of water quality standards.

(f) Notwithstanding the specific numerical criteria applicable to individual classes of water, dissolved oxygen levels that are attributable to natural background conditions or man-induced conditions which cannot be controlled or abated may be established as alternative dissolved oxygen criteria for a water body or portion of a water body. Alternative dissolved oxygen criteria may be established by the Secretary or a Director of District Management in conjunction with the issuance of a permit or other Department action only after public notice and opportunity for public hearing. The determination of alternative criteria shall be based on consideration of the factors described in subparagraphs 62-302.800(1)(a)1.-4., F.A.C. Alternative criteria shall not result in a lowering of dissolved oxygen levels in the water body, water body segment or any adjacent waters, and shall not violate the minimum criteria specified in subsection 62-302.500(1), F.A.C. Daily and seasonal fluctuations in dissolved oxygen levels shall be maintained.

Specific Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804 FS. Law Implemented 403.021, 403.061, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708 FS. History–Formerly 28-5.02, 17-3.02, Amended 10-28-78, Amended

and Renumbered 3-1-79, Amended 1-1-83, 10-4-89, Formerly 17-3.051, Amended 4-25-93, Formerly 17-302.500, Amended 1-15-96, 12-26-96, 5-15-02.

62-302.520 Thermal Surface Water Criteria.

All discharges or proposed discharges of heated water into receiving bodies of water (RBW) which are controlled by the State shall be subjected to a thorough study to assess the consequences of the discharge upon the environment. The State shall be divided into two general climatological zones: Peninsular Florida, which varies from tropical in nature to temperate but is modified by the peninsular configuration and is the area south of latitude 30º N (excluding Gulf and Franklin Counties): and Northern Florida which is temperate and continental and is the area above latitude 30º N plus the portions of Gulf and Franklin Counties which lie below 30º N.

(1) Heated water discharges existing on July 1, 1972:

(a) Shall not increase the temperature of the RBW so as to cause substantial damage or harm to the aquatic life or vegetation therein or interfere with beneficial uses assigned to the RBW,

(b) Shall be monitored by the discharger to ensure compliance with this rule, and

(c) If the Department, pursuant to notice and opportunity for hearing, finds by a preponderance of the evidence that a discharge has caused substantial damage, it may require conversion of such discharge to offstream cooling or approved alternate methods. In making determinations regarding such conversions, the Department may consider:

1. The nature and extent of the existing damage;

2. The projected lifetime of the existing discharge;

3. Any adverse economic and environmental (including non-water quality) impacts which would result from such conversion; and

4. Such other factors as may be appropriate.

(2) Heated water sources proposed for future discharges into RBW controlled by the State shall not increase the water temperature by more than the monthly temperature limits prescribed for the particular type and location of the RBW. New sources shall include all expansions, modifications, alterations, replacements, or repairs which result in an increased output of ten percent (10%) or more of the level of energy production which existed on the date this rule became effective. Water temperatures shall be measured by procedures approved by the Florida Department of Environmental Protection (DEP). In all cases where a temperature rise above ambient is allowed and a maximum RBW temperature is also prescribed, the lower of the two limitations shall be the control temperature.

(3) Definitions.

(a) Ambient (natural) temperature of a RBW shall mean the existing temperature of the receiving water at a location which is unaffected by man-made thermal discharges and a location which is also of a depth and exposure to winds and currents which typify the most environmentally stable portions of the RBW.

(b) Coastal waters shall be all waters in the State which are not classified as fresh waters or as open waters.

(c) A cooling pond is a body of water enclosed by natural or constructed restraints which has been approved by the Florida DEP for purposes of controlling heat dissipation from thermal discharges.

(d) An existing heat source is any thermal discharge (a) which is presently taking place, or (b) which is under construction or for which a construction or operation permit has been issued prior to the effective date of this rule.

(e) Fresh waters shall be all waters of the State which are contained in lakes and ponds, or are in flowing streams above the zone in which tidal actions influence the salinity of the water and where the concentration of chloride ions is normally less than 1500 milligrams per liter.

(f) Open water shall be all waters in the State extending seaward from the most seaward 18-foot depth contour line (three-fathom bottom depth contour) which is offshore from any island; exposed or submerged bar or reef; or mouth of any embayment or estuary which is narrowed by headlands. Contour lines shall be determined from Coast and Geodetic Survey Charts.

(g) The point of discharge (POD) for a heated water discharge shall be primarily that point at which the effluent physically

leaves its carrying conduit (open or closed), and discharges into the waters of the state, or, in the event it is not practicable to measure temperature at the end of the discharge conduit, a specific point designated by the Florida DEP for that particular thermal discharge.

(h) Heated water discharges are the effluents from commercial or industrial activities or processes in which water is used for the purpose of transporting waste heat, and which constitute heat sources of one million British Thermal Units per hour (1,000,000 BTU/HR.), or greater.

(i) Blowdown shall mean the minimum discharge of recirculating cooling water for the purpose of discharging materials contained in the water, the further buildup of which could cause concentrations in amounts exceeding limits established by best engineering practice.

(j) Recirculating cooling water shall mean water which is used for the purpose of removing waste heat and then passed through a cooling system for the purpose of removing such heat from the water and then, except for blowdown, is used again to remove waste heat.

(4) Monthly and Maximum Temperature Limits.

(a) Fresh Waters – Heated water with a temperature at the POD more than 5º F higher than the ambient (natural) temperature of any stream shall not be discharged into such stream. At all times under all conditions of stream flow the discharge temperature shall be controlled so that at least two-thirds (2/3) of the width of the stream's surface remains at ambient (natural) temperature. Further, no more than one-fourth (1/4) of the cross-section of the stream at a traverse perpendicular to the flow shall be heated by the discharge. Heated water with a temperature at the POD more than 3º F higher than the ambient (natural) temperature of any lake or reservoir shall not be discharged into such lake or reservoir. Further, no heated water with a temperature above 90º F shall be discharged into any fresh waters in Northern Florida regardless of the ambient temperature of the RBW. In Peninsular Florida, heated waters above 92º F shall not be discharged into fresh waters.

(b) Coastal Waters – Heated water with a temperature at the POD more than 2º F higher than the ambient (natural) temperature of the RBW shall not be discharged into coastal waters in any zone during the months of June, July, August, and September. During the remainder of the year, heated water with a temperature at the POD more than 4º F higher than the ambient (natural) temperature of the RBW shall not be discharged into coastal waters in any zone. In addition, during June, July, August, and September, no heated water with a temperature above 92º F shall be discharged into coastal waters. Further, no heated water with a temperature above 90º F shall be discharged into coastal waters during the period October thru May.

(c) Open Waters – Heated water with a temperature at the POD up to 17º F above ambient (natural) temperature of the RBW may be discharged from an open or closed conduit into open waters under the following restraints: The surface temperature of the RBW shall not be raised to more than 97º F and the POD must be sufficient distance offshore to ensure that the adjacent coastal waters are not heated beyond the temperatures permitted in such waters.

(d) Cooling Ponds – The temperature for heated water discharged from a cooling pond shall be measured at the POD from the pond, and the temperature limitation shall be that specified for the RBW.

(5) General.

(a) Daily and seasonal temperature variations that were normal to the RBW before the addition of heat from other than natural causes shall be maintained.

(b) Recapitulation of temperature limitations prescribed above:

COASTAL

ZONE	STREAMS	LAKES	SUMMER	REMAINDER	OPEN
NORTH.	90º F Max.	90º F Max.	92º F Max.	90º F Max.	97ºF Max.
	AM + 5º F	AM + 3º F	AM + 2º F	AM + 4º F	AM + 17º F
PENIN.	92º F Max.	92º F Max.	92º F Max.	90º F Max.	97º F Max.
	AM + 5º F	AM + 3º F	AM + 2º F	AM + 4º F	AM + 17º F

(6) Upon application on a case-by-case basis, the Department may establish a zone of mixing beyond the POD to afford a reasonable opportunity for dilution and mixture of heated water discharges with the RBW, in the following manner:

(a) Zones of mixing for thermal discharges from non-recirculated cooling water systems and process water systems of new sources shall be allowed if supported by a demonstration, as provided in Section 316(a), Public Law 92-500 and regulations promulgated thereunder, including 40 C.F.R. Part 122, by an applicant that the proposed mixing zone will assure the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in and on the body of water into which the discharge is to be made and such demonstration has not been rebutted. It is the intent of the Commission that to the extent practicable, proceedings under this provision should be conducted jointly with proceedings before the federal government under Section 316(a), Public Law 92-500.

(b) Zones of mixing for blowdown discharges from recirculated cooling water systems, and for discharges from non-recirculated cooling water systems of existing sources, shall be established on the basis of the physical and biological characteristics of the RBW.

(c) When a zone of mixing is established pursuant to this subsection 62-302.520(6), F.A.C., any otherwise applicable temperature limitations contained in Rule 62-302.520, F.A.C., shall be met at its boundary; however, the Department may also establish maximum numerical temperature limits to be measured at the POD and to be used in lieu of the general temperature limits in Rule 62-302.520, F.A.C., to determine compliance by the discharge with the established mixing zone and the temperature limits in Rule 62-302.520, F.A.C.

Specific Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804 FS. Law Implemented 403.021, 403.061, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708 FS. History–Formerly 28-5.02, 17-3.02, Amended 10-28-70, Amended and Renumbered 3-1-79, Formerly 17-3.05, 17-3.050, 17-302.520.

62-302.530 Table: Surface Water Quality Criteria.

The following table contains both numeric and narrative surface water quality criteria to be applied except within zones of mixing. The left-hand column of the Table is a list of constituents for which a surface water criterion exists. The headings for the water quality classifications are found at the top of the Table. Applicable criteria lie within the Table. The individual criteria should be read in conjunction with other provisions in water quality standards, including Rule 62-302.500, F.A.C. The criteria contained in Rule 62-302.500,

F.A.C., also apply to all waters unless alternative or more stringent criteria are specified in Rule 62-302.530, F.A.C. Unless otherwise stated, all criteria express the maximum not to be exceeded at any time. In some cases, there are separate or additional limits, which apply independently of the maximum not to be exceeded at any time. For example, annual average (denoted as “annual avg.” in the Table) means the maximum concentration at average annual flow conditions (see subsection 62-302.200(2), F.A.C.).

62-302.530, Criteria for Surface Water Quality Classifications

Class III: Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife							
Parameter	**Units**	**Class I: Potable Water Supply**	**Class II: Shellfish Propagation or Harvesting**	**Predominantly Fresh Waters**	**Predominantly Marine Waters**	**Class IV: Agricultural Water Supplies**	**Class V: Navigation, Utility, and Industrial Use**
(1) Alkalinity	Milligrams/L as $CaCO_3$	Shall not be depressed below 20		Shall not be depressed below 20		≤ 600	
(2) Aluminum	Milligrams/L		≤ 1.5		≤ 1.5		
(3) Ammonia (un-ionized)	Milligrams/L as NH_3	≤ 0.02		≤ 0.02			
(4) Antimony	Micrograms/L	≤ 14.0	≤ 4,300	≤ 4,300	≤ 4,300		
(5) (a) Arsenic (total)	Micrograms/L	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50
(5) (b) Arsenic (trivalent)	Micrograms/L measured as total recoverable Arsenic		≤ 36		≤ 36		

Notes: (1) "ln H" means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L. (2) This criterion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see 62-302.500(2)(d), F.A.C.

(6) Bacterio-logical Quality (Fecal Coli-form Bacteria)	Number per 100 ml (Most Probable Num-ber (MPN) or Membrane Fil-ter (MF))	MPN or MF counts shall not exceed a monthly aver-age of 200, nor exceed 400 in 10% of the samples, nor exceed 800 on any one day. Monthly aver-ages shall be expressed as geometric means based on a minimum of 5 samples taken over a 30 day period.	MPN shall not exceed a median value of 14 with not more than 10% of the samples exceeding 43, nor exceed 800 on any one day.	MPN or MF counts shall not exceed a monthly aver-age of 200, nor exceed 400 in 10% of the samples, nor exceed 800 on any one day. Monthly aver-ages shall be expressed as geometric means based on a minimum of 10 samples taken over a 30 day period.	MPN or MF counts shall not exceed a monthly aver-age of 200, nor exceed 400 in 10% of the samples, nor exceed 800 on any one day. Monthly aver-ages shall be expressed as geometric means based on a minimum of 10 samples taken over a 30 day period.		

Notes: (1) “ln H” means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L. (2) This crite-rion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see 62-302.500(2)(d), F.A.C.

(7) Bacterio-logical Quality (Total Coliform Bacteria)	Number per 100 ml (Most Probable Number (MPN) or Membrane Filter (MF))	≤ 1,000 as a monthly avg., nor exceed 1,000 in more than 20% of samples examined during any month, nor exceed 2,400 at any time, using either MPN or MF counts.	Median MPN shall not exceed 70, and not more than 10% of the samples shall exceed an MPN of 230.	≤ 1,000 as a monthly average; nor exceed 1,000 in more than 20% of the samples examined during any month; ≤ 2,400 at any time. Monthly averages shall be expressed as geometric means based on a minimum of 10 samples taken over a 30 day period, using either the MPN or MF counts.	≤ 1,000 as a monthly average; nor exceed 1,000 in more than 20% of the samples examined during any month; ≤ 2,400 at any time. Monthly averages shall be expressed as geometric means based on a minimum of 10 samples taken over a 30 day period, using either the MPN or MF counts.		
(8) Barium	Milligrams/L	≤ 1					
(9) Benzene	Micrograms/L	≤ 1.18	≤ 71.28 annual avg.	≤ 71.28 annual avg.	≤ 71.28 annual avg.		

Notes: (1) “ln H” means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L. (2) This criterion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see 62-302.500(2)(d), F.A.C.

(10) Beryllium	Micrograms/L	≤ 0.0077 annual avg.	≤ 0.13 annual avg.	≤ 0.13 annual avg.	≤ 0.13 annual avg.	≤ 100 in waters with a hardness in mg/L of $CaCO_3$ of less than 250 and shall not exceed 500 in harder waters	
(11) Biological Integrity	Per cent reduction of Shannon-Weaver Diversity Index	The Index for benthic macroinvertebrates shall not be reduced to less than 75% of background levels as measured using organisms retained by a U. S. Standard No. 30 sieve and collected and composited from a minimum of three Hester-Dendy type artificial substrate samplers of 0.10 to 0.15 m^2 area each, incubated for a period of four weeks.	The Index for benthic macroinvertebrates shall not be reduced to less than 75% of established background levels as measured using organisms retained by a U. S. Standard No. 30 sieve and collected and composited from a minimum of three natural substrate samples, taken with Ponar type samplers with minimum sampling area of 225 cm^2.	The Index for benthic macroinvertebrates shall not be reduced to less than 75% of established background levels as measured using organisms retained by a U. S. Standard No. 30 sieve and collected and composited from a minimum of three Hester-Dendy type artificial substrate samplers of 0.10 to 0.15 m^2 area each, incubated for a period of four weeks.	The Index for benthic macroinvertebrates shall not be reduced to less than 75% of established background levels as measured using organisms retained by a U. S. Standard No. 30 sieve and collected and composited from a minimum of three natural substrate samples, taken with Ponar type samplers with minimum sampling area of 225 cm^2.		

Notes: (1) “ln H” means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L. (2) This criterion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see 62-302.500(2)(d), F.A.C.

(12) BOD (Biochemical Oxygen Demand)		Shall not be increased to exceed values which would cause dissolved oxygen to be depressed below the limit established for each class and, in no case, shall it be great enough to produce nuisance conditions.					
(13) Boron	Milligrams/L					≤ 0.75	
(14) Bromates	Milligrams/L		≤ 100		≤ 100		
(15) Bromine (free molecular)	Milligrams/L		≤ 0.1		≤ 0.1		
(16) Cadmium	Micrograms/L See Notes (1) and (3).	Cd ≤ $e^{(0.7852[lnH]-3.49)}$	≤ 9.3	Cd ≤ $e^{(0.7852[lnH]-}$	≤ 9.3		
(17) Carbon tetrachloride	Micrograms/L	≤ 0.25 annual avg.; 3.0 max	≤ 4.42 annual avg.	≤ 4.42 annual avg.	≤ 4.42 annual avg.		
(18) Chlorides	Milligrams/L	≤ 250	Not increased more than 10% above normal background. Normal daily and seasonal fluctuations shall be maintained.		Not increased more than 10% above normal background. Normal daily and seasonal fluctuations shall be maintained.		In predominantly marine waters, not increased more than 10% above normal background. Normal daily and seasonal fluctuations shall be maintained.
(19) Chlorine (total residual)	Milligrams/L	≤ 0.01	≤ 0.01	≤ 0.01	≤ 0.01		
(20) (a) Chromium (trivalent)	Micrograms/L measured as total recoverable Chromium See Notes (1) and (3).	Cr (III) ≤ $e^{(0.819[lnH]+0.6848)}$		Cr (III) ≤ $e^{(0.819[lnH]+0.6848)}$		Cr (III) ≤ $e^{(0.819[lnH]+0.6848)}$	In predominantly fresh waters, ≤ $e^{(0.819[lnH]+0.6848)}$
(20) (b) Chromium (hexavalent)	Micrograms/L See Note (3).	≤ 11	≤ 50	≤ 11	≤ 50	≤ 11	In predominantly fresh waters, ≤ 11. In predominantly marine waters, ≤ 50

Notes: (1) "In H" means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L. (2) This criterion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see 62-302.500(2)(d), F.A.C.

(21) Chronic Toxicity (see definition in Section 62-302.200(3), F.A.C. and also see below, "Substances in concentrations which...")							
(22) Color, etc. (see also Minimum Criteria, Odor, Phenols, etc.)	Color, odor, and taste producing substances and other deleterious substances, including other chemical compounds attributable to domestic wastes, industrial wastes, and other wastes					Only such amounts as will not render the waters unsuitable for agricultural irrigation, livestock watering, industrial cooling, industrial process water supply purposes, or fish survival.	
(23) Conductance, Specific	Micromhos/cm	Shall not be increased more than 50% above background or to 1275, whichever is greater		Shall not be increased more than 50% above background or to 1275, whichever is greater		Shall not be increased more than 50% above background or to 1275, whichever is greater	Shall not exceed 4,000
(24) Copper	Micrograms/L See Notes (1) and (3).	Cu $\leq e^{(0.8545[lnH]-1.702)}$	$\leq$ 3.7	Cu $\leq e^{(0.8545[lnH]-1.702)}$	$\leq$ 3.7	$\leq$ 500	$\leq$ 500
(25) Cyanide	Micrograms/L	$\leq$ 5.2	$\leq$ 1.0	$\leq$ 5.2	$\leq$ 1.0	$\leq$ 5.0	$\leq$ 5.0
(26) Definitions (see Section 62-302.200, F.A.C.)							
(27) Detergents	Milligrams/L	$\leq$ 0.5	$\leq$ 0.5	$\leq$ 0.5	$\leq$ 0.5	$\leq$ 0.5	$\leq$ 0.5
(28) 1,1-Dichloroethylene (1,1-dichloroethene)	Micrograms/L	$\leq$ 0.057 annual avg.; $\leq$ 7.0 max	$\leq$ 3.2 annual avg.	$\leq$ 3.2 annual avg.	$\leq$ 3.2 annual avg.		
(29) Dichloromethane (methylene chloride)	Micrograms/L	$\leq$ 4.65 annual avg.	$\leq$ 1,580 annual avg.	$\leq$ 1,580 annual avg.	$\leq$ 1,580 annual avg.		
(30) 2,4-Dinitrotoluene	Micrograms/L	$\leq$ 0.11 annual avg.	$\leq$ 9.1 annual avg.	$\leq$ 9.1 annual avg.	$\leq$ 9.1 annual avg.		

Notes: (1) "In H" means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L. (2) This criterion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see 62-302.500(2)(d), F.A.C.

(31) Dissolved Oxygen	Milligrams/L	Shall not be less than 5.0. Normal daily and seasonal fluctuations above this level shall be maintained.	Shall not average less than 5.0 in a 24-hour period and shall never be less than 4.0. Normal daily and seasonal fluctuations above these levels shall be maintained.	Shall not be less than 5.0. Normal daily and seasonal fluctuations above these levels shall be maintained.	Shall not average less than 5.0 in a 24-hour period and shall never be less than 4.0. Normal daily and seasonal fluctuations above these levels shall be maintained.	Shall not average less than 4.0 in a 24-hour period and shall never be less than 3.0.	Shall not be less than 0.3, fifty percent of the time on an annual basis for flows greater than or equal to 250 cubic feet per second and shall never be less than 0.1. Normal daily and seasonal fluctuations above these levels shall be maintained.
(32) Dissolved Solids	Milligrams/L	≤ 500 as a monthly avg.; ≤ 1,000 max					
(33) Fluorides	Milligrams/L	≤ 1.5	≤ 1.5	≤ 10.0	≤ 5.0	≤ 10.0	≤ 10.0
(34) "Free Froms" (see Minimum Criteria in Section 62-302.500, F.A.C.)							
(35) "General Criteria" (see Section 62-302.510, F.A.C. and individual criteria)							
(36) (a) Halomethanes (Total trihalomethanes) (total of bromoform, chlorodibromo-methane, dichlorobromomethane, and chloroform). Individual halomethanes shall not exceed (b)1. to (b)5. below.	Micrograms/L	≤ 100					
(36) (b) 1. Halomethanes (individual): Bromoform	Micrograms/L	≤ 4.3 annual avg.	≤ 360 annual avg.	≤ 360 annual avg.	≤ 360 annual avg.		

Notes: (1) “ln H” means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L. (2) This criterion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see 62-302.500(2)(d), F.A.C.

(36) (b) 2. Halomethanes (individual): Chlorodibromo-methane	Micrograms/L	≤ 0.41 annual avg.	≤ 34 annual avg.	≤ 34 annual avg.	≤ 34 annual avg.		
(36) (b) 3. Halomethanes (individual): Chloroform	Micrograms/L	≤ 5.67 annual avg.	≤ 470.8 annual avg.	≤ 470.8 annual avg.	≤ 470.8 annual avg.		
(36) (b) 4. Halomethanes (individual): Chloromethane (methyl chloride)	Micrograms/L	≤ 5.67 annual avg.	≤ 470.8 annual avg.	≤ 470.8 annual avg.	≤ 470.8 annual avg.		
(36) (b) 5. Halomethanes (individual): Dichlorobromomethane	Micrograms/L	≤ 0.27 annual avg.	≤ 22 annual avg.	≤ 22 annual avg.	≤ 22 annual avg.		
(37) Hexachlorobuta-diene	Micrograms/L	≤ 0.45 annual avg.	≤ 49.7 annual avg.	≤ 49.7 annual avg.	≤ 49.7 annual avg.		
(38) Imbalance (see Nutrients)							
(39) Iron	Milligrams/L	≤ 0.3	≤ 0.3	≤ 1.0	≤ 0.3	≤ 1.0	
(40) Lead	Micrograms/L See Notes (1) and (3).	Pb ≤ $e^{(1.273[\ln H]- 4.705)}$	≤ 8.5	Pb ≤ $e^{(1.273 [\ln H] -4.705)}$	≤ 8.5	≤ 50	≤ 50
(41) Manganese	Milligrams/L		≤ 0.1				
(42) Mercury	Micrograms/L	≤ 0.012	≤ 0.025	≤ 0.012	≤ 0.025	≤ 0.2	≤ 0.2
(43) Minimum Criteria (see Section 62-302. 500, F.A.C.)							
(44) Mixing Zones (See Section 62-4.246, F.A.C.)							
(45) Nickel	Micrograms/L See Notes (1) and (3).	Ni ≤ $e^{(0.846[\ln H]+0.0584)}$	≤ 8.3	Ni ≤ $e^{(0.846[\ln H]+0.0584)}$	≤ 8.3	≤ 100	
(46) Nitrate	Milligrams/L as N	≤ 10 or that concentration that exceeds the nutrient criteria					

Notes: (1) “In H” means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L. (2) This criterion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see 62-302.500(2)(d), F.A.C.

(47) Nuisance Species		Substances in concentrations which result in the dominance of nuisance species: none shall be present.
(48) (a) Nutrients		The discharge of nutrients shall continue to be limited as needed to prevent violations of other standards contained in this chapter. Man-induced nutrient enrichment (total nitrogen or total phosphorus) shall be considered degradation in relation to the provisions of Sections 62-302.300, 62-302.700, and 62-4.242, F.A.C.

(48) (b) Nutrients		In no case shall nutrient concentrations of a body of water be altered so as to cause an imbalance in natural populations of aquatic flora or fauna.		

(49) Odor (also see Color, Minimum Criteria, Phenolic Compounds, etc.)	Threshold odor number		Shall not exceed 24 at 60 degrees C as a daily average.				Odor producing substances: only in such amounts as will not unreasonably interfere with use of the water for the designated purpose of this classification.
(50) (a) Oils and Greases	Milligrams/ L	Dissolved or emulsified oils and greases shall not exceed 5.0	Dissolved or emulsified oils and greases shall not exceed 5.0	Dissolved or emulsified oils and greases shall not exceed 5.0	Dissolved or emulsified oils and greases shall not exceed 5.0	Dissolved or emulsified oils and greases shall not exceed 5.0	Dissolved or emulsified oils and greases shall not exceed 10.0

(50) (b) Oils and Greases		No undissolved oil, or visible oil defined as iridescence, shall be present so as to cause taste or odor, or otherwise interfere with the beneficial use of waters.

(51) **Pesticides and Herbicides**							
(51) (a) 2,4,5-TP	Micrograms/L	≤ 10					
(51) (b) 2-4-D	Micrograms/L	≤ 100					
(51) (c) Aldrin	Micrograms/L	≤ .00013 annual avg.; 3.0 max	≤ .00014 annual avg.; 1.3 max	≤ .00014 annual avg.; 3.0 max	≤ .00014 annual avg.; 1.3 max		

Notes: (1) "ln H" means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L. (2) This criterion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see 62-302.500(2)(d), F.A.C.

(51) (d) Beta-hexachlorocyclo-hexane (b-BHC)	Micrograms/L	≤ 0.014 annual avg.	≤ 0.046 annual avg.	≤ 0.046 annual avg.	≤ 0.046 annual avg.		
(51) (e) Chlordane	Micrograms/L	≤ 0.00058 annual avg.; 0.0043 max	≤ 0.00059 annual avg.; 0.004 max	≤ 0.00059 annual avg.; 0.0043 max	≤ 0.00059 annual avg.; 0.004 max		
(51) (f) DDT	Micrograms/L	≤ 0.00059 annual avg.; 0.001 max	≤ 0.00059 annual avg.; 0.001 max	≤ 0.00059 annual avg.; 0.001 max	≤ 0.00059 annual avg.; 0.001 max		
(51) (g) Demeton	Micrograms/L	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1		
(51) (h) Dieldrin	Micrograms/L	≤ 0.00014 annual avg.; 0.0019 max	≤ 0.00014 annual avg.; 0.0019 max	≤ 0.00014 annual avg.; 0.0019 max	≤ 0.00014 annual avg.; 0.0019 max		
(51) (i) Endosulfan	Micrograms/L	≤ 0.056	≤ 0.0087	≤ 0.056	≤ 0.0087		
(51) (j) Endrin	Micrograms/L	≤ 0.0023	≤ 0.0023	≤ 0.0023	≤ 0.0023		
(51) (k) Guthion	Micrograms/L	≤ 0.01	≤ 0.01	≤ 0.01	≤ 0.01		
(51) (l) Heptachlor	Micrograms/L	≤ 0.00021 annual avg.; 0.0038 max	≤ 0.00021 annual avg.; 0.0036 max	≤ 0.00021 annual avg.; 0.0038 max	≤ 0.00021 annual avg.; 0.0036 max		
(51) (m) Lindane (g-benzene hexachlo-ride)	Micrograms/L	≤ 0.019 annual avg.; 0.08 max	≤ 0.063 annual avg.; 0.16 max	≤ 0.063 annual avg.; 0.08 max	≤ 0.063. annual avg.; 0.16 max		
(51) (n) Malathion	Micrograms/L	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1		
(51) (o) Methoxy-chlor	Micrograms/L	≤ 0.03	≤ 0.03	≤ 0.03	≤ 0.03		
(51) (p) Mirex	Micrograms/L	≤ 0.001	≤ 0.001	≤ 0.001	≤ 0.001		
(51) (q) Parathion	Micrograms/L	≤ 0.04	≤ 0.04	≤ 0.04	≤ 0.04		
(51) (r) Toxaphene	Micrograms/L	≤ 0.0002	≤ 0.0002	≤ 0.0002	≤ 0.0002		

(52) (a) pH (Class I and Class IV Waters)	Standard Units	Shall not vary more than one unit above or below natural background provided that the pH is not lowered to less than 6 units or raised above 8.5 units. If natural background is less than 6 units, the pH shall not vary below natural background or vary more than one unit above natural background. If natural background is higher than 8.5 units, the pH shall not vary above natural background or vary more than one unit below background.
(52) (b) pH (Class II Waters)	Standard Units	Shall not vary more than one unit above or below natural background of coastal waters as defined in Section 62-302.520(3)(b), F.A.C., or more than two-tenths unit above or below natural background of open waters as defined in Section 62-302.520(3)(f), F.A.C., provided that the pH is not lowered to less than 6.5 units or raised above 8.5 units. If natural background is less than 6.5 units, the pH shall not vary below natural background or vary more than one unit above natural background for coastal waters or more than two-tenths unit above natural background for open waters. If natural background is higher than 8.5 units, the pH shall not vary above natural background or vary more than one unit below natural background of coastal waters or more than two-tenths unit below natural background of open waters.

Notes: (1) “ln H” means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L. (2) This criterion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see 62-302.500(2)(d), F.A.C.

(52) (c) pH (Class III Waters)	Standard Units	Shall not vary more than one unit above or below natural background of predominantly fresh waters and coastal waters as defined in Section 62-302.520(3)(b), F.A.C. or more than two-tenths unit above or below natural background of open waters as defined in Section 62-302.520(3)(f), F.A.C., provided that the pH is not lowered to less than 6 units in predominantly fresh waters, or less than 6.5 units in predominantly marine waters, or raised above 8.5 units. If natural background is less than 6 units, in predominantly fresh waters or 6.5 units in predominantly marine waters, the pH shall not vary below natural background or vary more than one unit above natural background of predominantly fresh waters and coastal waters, or more than two-tenths unit above natural background of open waters. If natural background is higher than 8.5 units, the pH shall not vary above natural background or vary more than one unit below natural background of predominantly fresh waters and coastal waters, or more than two-tenths unit below natural background of open waters.
(52) (d) pH (Class V Waters)	Standard Units	Not lower than 5.0 nor greater than 9.5 except certain swamp waters which may be as low as 4.5.
(53)(a) Phenolic Compounds: Total		Phenolic compounds other than those produced by the natural decay of plant material, listed or unlisted, shall not taint the flesh of edible fish or shellfish or produce objectionable taste or odor in a drinking water supply.

(53) (b) Phenolic Compounds: Total	Micrograms/L	1. The total of all chlorinated phenols, and chlorinated cresols, except as set forth in (c) 1. to (c) 4. below, shall not exceed 1.0 unless higher values are shown not to be chronically toxic. Such higher values shall be approved in writing by the Secretary. 2. The compounds listed in (c) 1. to (c) 6. below shall not exceed the limits specified for each compound.	1. The total of the following Phenolic compounds shall not exceed 50: a) Chlorinated phenols; b) Chlorinated cresols; and c) 2,4-dinitrophenol.

(53) (c) 1. Phenolic Compound: 2-chlorophenol	Micrograms/L	$\leq$ 120	< 400 See Note (2).	< 400 See Note (2).	< 400 See Note (2).	< 400 See Note (2).	
(53) (c) 2. Phenolic Compound: 2,4-dichlorophenol	Micrograms/L	< 93 See Note (2).	< 790 See Note (2).	< 790 See Note (2).	< 790 See Note (2).	< 790 See Note (2).	
(53) (c) 3. Phenolic Compound: Pentachlorophenol	Micrograms/L	$\leq$ 30 max; $\leq$ 0.28 annual avg; $\leq e^{(1.005[pH]-5.29)}$	$\leq$ 7.9	$\leq$ 30 max; $\leq$ 8.2 annual avg; $\leq e^{(1.005[pH]-5.29)}$	$\leq$ 7.9	$\leq$ 30	
(53) (c) 4. Phenolic Compound: 2,4,6-trichlorophenol	Micrograms/L	$\leq$ 2.1 annual avg.	$\leq$ 6.5 annual avg.	$\leq$ 6.5 annual avg.	$\leq$ 6.5 annual avg.	$\leq$ 6.5 annual avg.	

Notes: (1) "ln H" means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L. (2) This criterion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see 62-302.500(2)(d), F.A.C.

(53) (c) 5. Phenolic Compound: 2,4-dinitrophenol	Milligrams/L	≤ 0.0697 See Note (2).	≤ 14.26 See Note (2).	≤ 14.26 See Note (2).	≤ 14.26 See Note (2).	≤ 14.26 See Note (2).	
(53) (c) 6. Phenolic Compound: Phenol	Milligrams/L	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3
(54) Phosphorus (Elemental)	Micrograms/L		≤ 0.1		≤ 0.1		
(55) Phthalate Esters	Micrograms/L	≤ 3.0		≤ 3.0			
(56) Polychlorinated Biphenyls (PCBs)	Micrograms/L	≤ 0.000044 annual avg.; 0.014 max	≤ 0.000045 annual avg.; 0.03 max	≤ 0.000045 annual avg.; 0.014 max	≤ 0.000045 annual avg.; 0.03 max		
(57) (a) Polycyclic Aromatic Hydrocarbons (PAHs). Total of: Acenaphthylene; Benzo(a)anthracene; Benzo(a)pyrene; Benzo(b)fluoranthene; Benzo(ghi)perylene; Benzo(k)fluoranthene; Chrysene; Dibenzo(a,h)anthracene; Indeno(1,2,3-cd)pyrene; and Phenanthrene	Micrograms/L	≤ 0.0028 annual avg.	≤ 0.031 annual avg.	≤ 0.031annual avg.	≤ 0.031 annual avg.		
(57) (b) 1 (Individual PAHs): Acenaphthene	Milligrams/L	< 1.2 See Note (2).	< 2.7 See Note (2).	< 2.7 See Note (2).	< 2.7 See Note (2).		
(57) (b) 2. (Individual PAHs): Anthracene	Milligrams/L	< 9.6 See Note (2).	< 110 See Note (2).	< 110 See Note (2).	< 110 See Note (2).		
(57) (b) 3. (Individual PAHs): Fluoranthene	Milligrams/L	< 0.3 See Note (2).	< 0.370 See Note (2).	< 0.370 See Note (2).	< 0.370 See Note (2).		
(57) (b) 4. (Individual PAHs): Fluorene	Milligrams/L	< 1.3 See Note (2).	< 14 See Note (2).	< 14 See Note (2).	< 14 See Note (2).		
(57) (b) 5. (Individual PAHs): Pyrene	Milligrams/L	< 0.96 See Note (2).	< 11 See Note (2).	< 11 See Note (2).	< 11 See Note (2).		

Notes: (1) “In H” means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L. (2) This criterion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see 62-302.500(2)(d), F.A.C.

(58) (a) Radioactive substances (Combined radium 226 and 228)	Picocuries/L	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5
(58) (b) Radioactive substances (Gross alpha particle activity including radium 226, but excluding radon and uranium)	Picocuries/L	≤ 15	≤ 15	≤ 15	≤ 15	≤ 15	≤ 15
(59) Selenium	Micrograms/L	≤ 5.0	≤ 71	≤ 5.0	≤ 71		
(60) Silver	Micrograms/L See Note (3).	≤ 0.07	See Minimum criteria in Section 62-302.500(3)	≤ 0.07	See Minimum criteria in Section 62-302.500(3)		
(61) Specific Conductance (see Conductance, Specific, above)							

(62) Substances in concentrations which injure, are chronically toxic to, or produce adverse physiological or behavioral response in humans, plants, or animals		None shall be present.

(63) 1,1,2,2-Tetrachloroethane	Micrograms/L	≤ 0.17 annual avg.	≤ 10.8 annual avg.	≤ 10.8 annual avg.	≤ 10.8 annual avg.		
(64) Tetrachloroethylene (1,1,2,2-tetrachloroethene)	Micrograms/L	≤ 0.8 annual avg., ≤ 3.0 max	≤ 8.85 annual avg.	≤ 8.85 annual avg.	≤ 8.85 annual avg.		
(65) Thallium	Micrograms/L	< 1.7	< 6.3	< 6.3	< 6.3		

Notes: (1) “ln H” means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L. (2) This criterion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see 62-302.500(2)(d), F.A.C.

(66) Thermal Criteria (See Section 62-302.520)							
(67) Total Dissolved Gases	Percent of the saturation value for gases at the existing atmospheric and hydrostatic pressures	≤ 110% of saturation value	≤ 110% of saturation value	≤ 110% of saturation value	≤ 110% of saturation value		
(68) Transparency	Depth of the compensation point for photosynthetic activity	Shall not be reduced by more than 10% as compared to the natural background value.	Shall not be reduced by more than 10% as compared to the natural background value.	Shall not be reduced by more than 10% as compared to the natural background value.	Shall not be reduced by more than 10% as compared to the natural background value.		
(69) Trichloroethylene (trichloroethene)	Micrograms/L	≤ 2.7 annual avg., ≤ 3.0 max	≤ 80.7 annual avg.	≤ 80.7 annual avg.	≤ 80.7 annual avg.		
(70) Turbidity	Nephelometric Turbidity Units (NTU)	≤ 29 above natural background conditions	≤ 29 above natural background conditions	≤ 29 above natural background conditions	≤ 29 above natural background conditions	≤ 29 above natural background conditions	≤ 29 above natural background conditions
(71) Zinc	Micrograms/L See Notes (1) and (3).	$Zn \leq e^{(0.8473[\ln H]+0.884}$	≤ 86	$Zn \leq e^{(0.8473[\ln H]+0.884}$	≤ 86	≤ 1,000	≤ 1,000

Notes: (1) “ln H” means the natural logarithm of total hardness expressed as milligrams/L of $CaCO_3$. For metals criteria involving equations with hardness, the hardness shall be set at 25 mg/L if actual hardness is <25 mg/L and set at 400 mg/L if actual hardness is >400 mg/L. (2) This criterion is protective of human health not of aquatic life. (3) For application of dissolved metals criteria see 62-302.500(2)(d), F.A.C.

Specific Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804 FS. Law Implemented 403.021, 403.061, 403.087, 403.088, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708 FS. History–New 1-28-90, Formerly 17-3.065, Amended 2-13-92, 6-17-92, Formerly 17-302.540, 17-302.550, 17-302.560, 17-302.570, 17-302.580, Amended 4-25-93, Formerly 17-302.530, Amended 1-23-95, 1-15-96, 5-15-02.

62-302.700 Special Protection, Outstanding Florida Waters, Outstanding National Resource Waters.

(1) It shall be the Department policy to afford the highest protection to Outstanding Florida Waters and Outstanding National Resource Waters. No degradation of water quality, other than that allowed in subsections 62-4.242(2) and (3), F.A.C., is to be permitted in Outstanding Florida Waters and Outstanding National Resource Waters, respectively, notwithstanding any other Department rules that allow water quality lowering.

(2) A complete listing of Outstanding Florida Waters and Outstanding National Resource Waters is provided in subsections (9) and (10). Outstanding Florida Waters generally include the following surface waters (unless named as Outstanding National Resource Waters):

(a) Waters in National Parks, Preserves, Memorials, Wildlife Refuges and Wilderness Areas;

(b) Waters in the State Park System and Wilderness Areas;

(c) Waters within areas acquired through donation, trade, or purchased under the Environmentally Endangered Lands Bond Program, Conservation and Recreation Lands Program, Land Acquisition Trust Fund Program, and Save Our Coast Program;

(d) Rivers designated under the Florida Scenic and Wild Rivers Program, federal Wild and Scenic Rivers Act of 1968 as amended, and Myakka River Wild and Scenic Designation and Preservation Act;

(e) Waters within National Seashores, National Marine Sanctuaries, National Estuarine Research Reserves, and certain National Monuments;

(f) Waters in Aquatic Preserves created under the provisions of Chapter 258, F.S.;

(g) Waters within the Big Cypress National Preserve;

(h) Special Waters as listed in paragraph 62-302.700(9)(i), F.A.C.; and

(i) Certain Waters within the Boundaries of the National Forests.

(3) Each water body demonstrated to be of exceptional recreational or ecological significance may be designated as a Special Water.

(4) The following procedure shall be used in designating an Outstanding National Resource Water as well as any Special Water:

(a) Rulemaking procedures pursuant to Chapter 120, F.S., and Chapter 62-102, F.A.C., shall be followed;
(b) At least one fact-finding workshop shall be held in the affected area;

(c) All local county or municipal governments and state legislators whose districts or jurisdictions include all or part of the water shall be notified at least 60 days prior to the workshop in writing by the Secretary;

(d) A prominent public notice shall be placed in a newspaper of general circulation in the area of the proposed water at least 60 days prior to the workshop; and

(e) An economic impact analysis, consistent with Chapter 120, F.S., shall be prepared which provides a general analysis of the impact on growth and development including such factors as impacts on planned or potential industrial, agricultural, or other development or expansion.

(5) The Commission may designate a water of the State as a Special Water after making a finding that the waters are of exceptional recreational or ecological significance and a finding that the environmental, social, and economic benefits of the designation outweigh the environmental, social, and economic costs.

(6) The Commission may designate a water as an Outstanding National Resource Water after making all of the following findings:

(a) That the waters are of such exceptional recreational or ecological significance that water quality should and can be maintained and protected under all circumstances other than temporary degradation and the lowering allowed by Section 316 of the Federal Clean Water Act; and

(b) That the level of protection afforded by the designation as Outstanding National Resource Waters is clearly necessary to preserve the exceptional ecological or recreational significance of the waters; and

(c) That the environmental, social, and economic benefits of the designation outweigh the environmental, social, and economic costs.

(7) The policy of this section shall be implemented through the permitting process pursuant to Rule 62-4.242, F.A.C.

(8) For each Outstanding Florida Water listed under subsection 62-302.700(9), F.A.C., the last day of the baseline year for defining the existing ambient water quality (paragraph 62-4.242(2)(c), F.A.C.) is March 1, 1979, unless otherwise indicated. Where appli-

cable, Outstanding Florida Water boundary expansions are indicated by date(s) following "as mod." under subsection 62-302.700(9), F.A.C. For each Outstanding Florida Water boundary which expanded subsequent to the original date of designation, the baseline year for the entire Outstanding Florida Water, including the expansion, remains March 1, 1979, unless otherwise indicated.

(9) Outstanding Florida Waters:

(a) Waters within National Parks and National Memorials.

National Park or National Memorial	County
1. Biscayne National Park (as mod. 5-14-86, 8-8-94)	Dade
2. Dry Tortugas National Park (10-4-90)	Monroe
3. Everglades National Park (as mod. 8-8-94)	Monroe/Dade/ Collier
4. Fort Caroline National Memorial (8-8-94)	Duval

(b) Waters within National Wildlife Refuges.

Wildlife Refuge	County
1. Archie Carr (8-8-94)	Indian River/Brevard
2. Caloosahatchee	Lee
3. Cedar Keys (as mod. 5-14-86, 4-19-88)	Levy
4. Chassahowitzka (as mod. 5-14-86, 4-19-88)	Citrus/Hernando
5. Chinsegut	Hernando
6. Crocodile Lake (12-1-82; as mod. 5-14-86, 4-19-88, 8-8-94)	Monroe
7. Crystal River (5-14-86; as mod. 10-4-90)	Citrus
8. Egmont Key	Hillsborough
9. Florida Panther (10-4-90; as mod. 8-8-94)	Collier
10. Great White Heron (as mod. 5-14-86,	Monroe

4-19-88)	
11. Hobe Sound (as mod. 5-14-86, 4-19-88, 8-8-94)	Martin
12. Island Bay	Charlotte
13. J. N. “Ding” Darling (as mod. 5-14-86, 4-19-88, 8-8-94)	Lee
14. Key West	Monroe
15. Lake Woodruff (as mod. 8-8-94)	Volusia/Lake
16. Lower Suwannee (12-1-82; as mod. 8-8-94)	Dixie/Levy
17. Loxahatchee	Palm Beach
18. Matlacha Pass (as mod. 8-8-94)	Lee
19. Merritt Island	Volusia/Brevard
20. National Key Deer (as mod. 5-14-86, 4-19-88, 10-4-90, 8-8-94)	Monroe
21. Okefenokee (Florida Portion)	Baker
22. Passage Key	Manatee
23. Pelican Island (as mod. 8-8-94)	Indian River
24. Pine Island (as mod. 8-8-94)	Lee
25. Pinellas	Pinellas
26. St. Johns (including Bee Line Unit) (as mod. 5-14-86, 4-19-88)	Brevard
27. St. Marks (as mod. 10-4-90, 8-8-94)	Jefferson/Wakulla/ Taylor
28. St. Vincent (including Pig Island Unit)	Franklin/Gulf

(c) Waters within State Parks, State Wildlife Parks, and State Recreation Areas.

State Park or State Recreation Area	County
1. Amelia Island State Recreation Area (5-14-86)	Nassau

2. Anastasia State Recreation Area (as mod. 4-19-88)	St. Johns
3. Avalon State Recreation Area (4-19-88; as mod. 8-8-94)	St. Lucie
4. Bahia Honda State Park (as mod. 5-14-86)	Monroe
5. Bear Creek State Recreation Area (12-1-82)	Gadsden
6. Big Lagoon State Recreation Area (12-1-82; as mod. 5-14-86, 8-8-94)	Escambia
7. Big Talbot Island State Park (5-14-86; as mod. 4-19-88, 8-8-94)	Duval
8. Bill Baggs Cape Florida State Recreation Area	Dade
9. Blackwater River State Park	Santa Rosa
10. Blue Springs State Park	Volusia
11. Bulow Creek State Park (5-14-86; as mod. 4-19-88)	Flagler/Volusia
12. Caladesi Island State Park	Pinellas
13. Cayo Costa State Park (12-1-82; as mod. 5-14-86, 4-19-88, 10-4-90, 8-8-94)	Lee
14. Collier-Seminole State Park	Collier
15. Dead Lakes State Recreation Area	Gulf
16. De Leon Springs State Recreation Area (5-14-86; as mod. 10-4-90)	Volusia
17. Delnor-Wiggins Pass State Recreation Area (12-1-82)	Collier

18. Don Pedro Island State Recreation Area (5-14-86; as mod. 4-19-88)	Charlotte
19. Dr. Julian G. Bruce St. George Island State Park (12-1-82)	Franklin
20. Edward Ball Wakulla Springs State Park (4-19-88)	Wakulla
21. Falling Waters State Recreation Area	Washington
22. Faver-Dykes State Park	St. Johns
23. Florida Caverns State Park (as mod. 8-8-94)	Jackson
24. Fort Clinch State Park (as mod. 4-19-88, 8-8-94)	Nassau
25. Fort Cooper State Park (12-1-82)	Citrus
26. Fort Pierce Inlet State Recreation Area (12-1-82; as mod. 5-14-86)	St. Lucie
27. Fred Gannon Rocky Bayou State Recreation Area	Okaloosa
28. Gamble Rogers Memorial State Recreation Area at Flagler Beach	Flagler
29. Gasparilla Island State Recreation Area (5-14-86; as mod. 4-19-88, 10-4-90)	Lee
30. Grayton Beach State Recreation Area (as mod. 4-19-88)	Walton
31. Guana River State Park (5-14-86; as mod. 4-19-88)	St. Johns
32. Henderson Beach State Recreation Area (5-14-86)	Okaloosa

33. Highlands Hammock State Park (as mod. 8-8-94)	Highlands/Hardee
34. Hillsborough River State Park	Hillsborough
35. Homosassa Springs State Wildlife Park (10-4-90)	Citrus
36. Honeymoon Island State Recreation Area (12-1-82; as mod. 5-14-86)	Pinellas
37. Hontoon Island State Park	Volusia/Lake
38. Hugh Taylor Birch State Recreation Area	Broward
39. Ichetucknee Springs State Park	Columbia/ Suwannee
40. John D. McArthur Beach State Park (12-1-82)	Palm Beach
41. John Pennekamp Coral Reef State Park (as mod. 5-14-86, 4-19-88)	Monroe
42. John U. Lloyd Beach State Recreation Area	Broward
43. Jonathan Dickinson State Park	Martin
44. Lake Arbuckle State Park (5-14-86)	Polk
45. Lake Griffin State Recreation Area	Lake
46. Lake Kissimmee State Park	Polk
47. Lake Louisa State Park (12-1-82)	Lake
48. Lake Manatee State Recreation Area (12-1-82)	Manatee
49. Lake Rousseau State Recreation Area (12-1-82)	Citrus/Levy/Marion
50. Lake Talquin State Recreation Area	Leon

(12-1-82; as mod. 5-14-86)	
51. Little Manatee River State Recreation Area (12-1-82)	Hillsborough
52. Little Talbot Island State Park	Duval
53. Long Key State Recreation Area	Monroe
54. Lovers Key State Recreation Area (5-14-86)	Lee
55. Manatee Springs State Park (as mod. 10-4-90)	Levy
56. Mike Roess Gold Head Branch State Park (as mod. 5-14-86, 4-19-88, 8-8-94)	Clay
57. Myakka River State Park	Manatee/Sarasota
58. North Peninsula State Recreation Area (5-14-86; as mod. 4-19-88, 10-4-90)	Volusia
59. Ochlockonee River State Park	Wakulla
60. O'Leno State Park (as mod. 5-14-86)	Alachua/Columbia
61. Oleta River State Recreation Area (12-1-82)	Dade
62. Oscar Scherer State Park (as mod. 8-8-94)	Sarasota
63. Peacock Springs State Recreation Area (4-19-88)	Suwannee
64. Perdido Key State Recreation Area (12-1-82)	Escambia
65. Ponce de Leon Springs State Recreation Area	Holmes/Walton
66. Port Charlotte Beach State Recreation Area (12-1-82)	Charlotte

67. St. Andrews State Recreation Area (as mod. 5-14-86, 4-19-88)	Bay
68. Sebastian Inlet State Recreation Area	Indian River/Brevard
69. Silver River State Park (4-19-88; as mod. 10-4-90, 8-8-94)	Marion
70. Suwannee River State Park (as mod. 10-4-90)	Hamilton/Madison/ Suwannee
71. Three Rivers State Recreation Area	Jackson
72. T. H. Stone Memorial St. Joseph Peninsula State Park	Gulf
73. Tomoka State Park	Volusia
74. Torreya State Park	Liberty
75. Wekiwa Springs State Park (as mod. 4-19-88)	Orange/Seminole

(d) Waters within State Ornamental Gardens, State Botanical Sites, State Historic Sites, and State Geological Sites.

State Ornamental Gardens, State Botanical Site, State Historic Site, or State Geological Site	County
1. Alfred B. Maclay State Gardens	Leon
2. Devils Millhopper State Geological Site (10-4-90)	Alachua
3. Eden State Gardens	Walton
4. Fort Zachary Taylor State Historic Site (10-4-90)	Monroe
5. Indian Key State Historic Site (10-4-90)	Monroe
6. Key Largo Hammock State Botanical Site (5-14-86)	Monroe
7. Koreshan State	Lee

Historic Site (10-4-90)	
8. Lignumvitae Key State Botanical Site (5-14-86)	Monroe
9. Marjorie Kinnan Rawlings State Historic Site (10-4-90)	Alachua
10. Natural Bridge Battlefield State Historic Site (10-4-90)	Leon
11. Paynes Creek State Historic Site (10-4-90)	Hardee
12. Ravine State Gardens	Putnam
13. San Marcos de Apalachee State Historic Site (10-4-90)	Wakulla
14. Washington Oaks State Gardens (as mod. 5-14-86)	Flagler
15. Windley Key Fossil Reef State Geological Site (10-4-90)	Monroe

(e) Waters within State Preserves, State Underwater Archaeological Preserves, and State Reserves.

State Preserve or State Reserve	County
1. Anclote Key State Preserve (12-1-82)	Pasco/Pinellas
2. Cape St. George State Reserve (12-1-82)	Franklin
3. Cedar Key Scrub State Reserve (12-1-82; as mod. 4-19-88)	Levy
4. Charlotte Harbor State Reserve (as mod. 4-19-88)	Charlotte
5. Crystal River State Reserve (5-14-86; as mod. 4-19-88)	Citrus
6. Fakahatchee Strand State Preserve (12-1-82; as mod. 5-14-86, 4-19-88, 10-4-90, 8-8-94)	Collier

7. Haw Creek State Preserve (12-1-82)	Flagler/Putnam/ Volusia
8. Lower Wekiva River State Reserve (12-1-82)	Lake/Seminole
9. Nassau Valley State Reserve (12-1-82)	Duval/Nassau
10. Paynes Prairie State Preserve (as mod. 10-4-90, 8-8-94)	Alachua
11. Prairie-Lakes State Preserve	Osceola
12. River Rise State Preserve (12-1-82; as mod. 8-8-94)	Alachua/Columbia
13. Rock Springs Run State Reserve (5-14-86; as mod. 4-19-88)	Orange
14. San Felasco Hammock State Preserve (12-1-82; as mod. 5-14-86, 4-19-88)	Alachua
15. San Pedro State Underwater Archaeological Preserve (10-4-90)	Monroe
16. Savannas State Reserve (12-1-82; as mod. 5-14-86, 10-4-90, 8-8-94)	Martin/St. Lucie
17. St. Lucie Inlet State Preserve (12-1-82)	Martin
18. Waccasassa Bay State Preserve (12-1-82; as mod. 4-19-88)	Levy
19. Weedon Island State Preserve (12-1-82)	Pinellas
20. William Beardell Tosohatchee State Reserve (12-1-82)	Orange

(f) Waters within Areas Acquired through Donation, Trade, or Purchased Under the Environmentally Endangered Lands Bond Program, Conservation and Recreation Lands Program, Land Acquisition Trust Fund Program, and Save Our Coast Program.

Program Area	County
1. Andrews Tract	Levy

(5-14-86; as mod. 4-19-88, 8-8-94)	
2. Apalachicola Bay (8-8-94)	Franklin
3. Barefoot Beach (12-1-82)	Collier
4. Beker Tracts (10-4-90)	Manatee
5. Big Bend Coastal Tract (4-19-88; as mod. 10-4-90)	Dixie/Taylor
6. Big Shoals (4-19-88)	Hamilton
7. B.M.K. Ranch (8-8-94)	Lake/Orange
8. Bower Tract (5-14-86; as mod. 4-19-88)	Hillsborough
9. Caravelle Ranch (8-8-94)	Putnam
10. Carlton Half-Moon Ranch (8-8-94)	Sumter
11. Catfish Creek (8-8-94)	Polk
12. Chassahowitzka Swamp (5-14-86; as mod. 4-19-88, 8-8-94)	Hernando/Citrus
13. Coupon Bight (10-4-90; as mod. 8-8-94)	Monroe
14. Crystal River (10-4-90)	Citrus
15. Curry Hammock (8-8-94)	Monroe
16. Deering Hammock/Estate (5-14-86; as mod. 4-19-88, 8-8-94)	Dade
17. East Everglades (5-14-86)	Dade
18. Econfina River (8-8-94)	Taylor
19. Emerson Point (8-8-94)	Manatee
20. Escambia Bay Bluffs (5-14-86)	Escambia
21. Estero Bay (8-8-94)	Lee
22. Florida First	Levy

Magnitude Springs (8-8-94)	
23. Ft. George Island (10-4-90)	Duval
24. Ft. Mose (8-8-94)	St. Johns
25. Ft. San Luis (5-14-86; as mod. 8-8-94)	Leon
26. Gateway (5-14-86)	Pinellas
27. Gills Tract (8-8-94)	Pasco
28. Green Turtle Beach (4-19-88)	St. Lucie
29. Guana River (5-14-86; as mod. 4-19-88)	St. Johns
30. Homosassa Reserve/Walker Tract (8-8-94)	Citrus
31. Indian River North Beach (5-14-86)	Indian River
32. ITT/Hammock (5-14-86)	Dade
33. Josslyn Island (10-4-90)	Lee
34. Levy County Forest/Sandhills (8-8-94)	Levy
35. Letchworth Mounds (8-8-94)	Jefferson
36. Lower Econlockhatchee (8-8-94)	Seminole
37. Martin County Tracts (5-14-86)	Martin
38. Mashes Sands (5-14-86)	Wakulla
39. Miami Rockridge Pinelands (8-8-94)	Dade
40. Milton to Whiting Field (8-8-94)	Santa Rosa
41. North Beach (5-14-86)	Broward
42. North Key Largo Hammock (5-14-86; as mod. 4-19-88, 10-4-90, 8-8-94)	Monroe
43. Placid Lakes (8-8-94)	Highlands

44. Point Washington (8-8-94)	Walton
45. Port Bougainville (10-4-90)	Monroe
46. Rainbow River/Springs (8-8-94)	Marion
47. Rookery Bay (10-4-90; as mod. 8-8-94)	Collier
48. Rotenberger (as mod. 4-19-88, 8-8-94)	Palm Beach
49. Saddle Blanket Lakes Scrub (8-8-94)	Polk
50. Save Our Everglades (10-4-90; as mod. 8-8-94)	Collier
51. Sea Branch (8-8-94)	Martin
52. Seminole Springs/Woods (8-8-94)	Lake
53. Snake Warrior Island (Oaks of Miramar) (8-8-94)	Broward
54. Spring Hammock (4-19-88; as mod. 10-4-90)	Seminole
55. Spruce Creek (4-19-88; as mod. 8-8-94)	Volusia
56. St. Martins River (8-8-94)	Citrus
57. Stark Tract (10-4-90)	Volusia
58. Stoney-Lane (10-4-90)	Citrus
59. Surfside Additions (5-14-86)	St. Lucie
60. Three Lakes/Prairie Lakes (as mod. 8-8-94)	Osceola
61. Topsail Hill (8-8-94)	Walton
62. Upper Black Creek (8-8-94)	Clay
63. Volusia Water Recharge Area	Volusia
64. Wacissa/Aucilla Rivers (10-4-90)	Jefferson/Taylor
65. Wekiva River Buffers (8-8-94)	Seminole

66. Westlake (5-14-86; as mod. 4-19-88)	Broward
67. Wetstone/Berkovitz (8-8-94)	Pasco
68. Withlacoochee Tracts (12-1-82)	Sumter

(g) Waters within National Seashores.

National Seashores	County
1. Canaveral	Brevard/Volusia
2. Gulf Islands	Escambia/Santa Rosa

(h) Waters within State Aquatic Preserves.

Aquatic Preserves	County
1. Alligator Harbor	Franklin
2. Apalachicola Bay	Franklin
3. Banana River (as mod. 8-8-94)	Brevard
4. Big Bend Seagrasses	Wakulla/Taylor/ Jefferson/Dixie/ Levy

except for the following areas:

a. Keaton Beach, Taylor County – Begin at 29º 49' 50'' N. Lat., 83º 35' 24'' W. Long.; then west to 29º 49' 45'', 83º 35' 50''; then south to 29º 49' 04'', 83º 35' 48''; then east to 29º 49' 04'', 83º 35' 24''; then north to the point of beginning.

b. Steinhatchee, Taylor County – Begin at 29º 40' 35'', 83º 22' 10''; then west to 29º 40' 35'', 83º 23' 10''; then north to 29º 41', 83º 23' 10''; then west to 29º 41', 83º 24' 10''; then south to the Taylor County-Dixie County boundary; then eastward along the boundary to 29º 39' 55'', 83º 22' 10''; then north to the point of beginning.

c. Suwannee, Dixie County – Begin at 29º 20' 30'', 83º 08' 10''; then west to 29º 20' 30'', 83º 08' 25''; then south to 29º 20' 05'', 83º 08' 25''; then southwesterly along SR 349 to 29º 19' 51'', 83º 08' 35''; then west to 29º 19' 51'', 83º 08' 45''; then southwesterly to 29º 19' 40'', 83º 09' 12''; then south to 29º 19' 30'', 83º 09' 12''; then northeasterly to 29º 19' 39'', 83º 08' 53''; then southeasterly to 29º 19' 25'', 83º 08' 41''; then southwesterly to 29º 19' 20'', 83º 08' 49''; then southeasterly to 29º 19' 14'', 83º 08' 41''; then northeasterly along the bank of the Suwannee River to and along the bank of Demory Creek to 29º 19' 45'', 83º 08' 10''; then north to the point of beginning.

d. Cedar Key unincorporated airport area, Levy County – Begin at 29º 08' 26", 83º 03' 17"; then south to 29º 07' 34", 83º 03' 17", then northeasterly to 29º 07' 48", 83º 02' 33"; beginning northerly and tracing the corporate limit of Cedar Key to the point of beginning.

e. Cedar Key unincorporated causeway area, Levy County – That portion of Section 20 lying within 1000 feet of the centerline of SR 24 and lying north of a line 500 feet northeast of and parallel to the northern corporate limit of Cedar Key.
f. Cedar Key channel, Levy County – Begin at 29º 08' 58", 83º 01' 17"; then west to 29º 08' 58", 83º 01' 24"; then south to 29º 08' 05", 83º 01' 26"; then northeasterly to 29º 08' 08", 83º 01' 17"; then northerly to the point of beginning.

g. Keaton Beach navigation channel, Taylor County – Begin at 29º 49' 02", 83º 35' 30"; then west to 29º 49' 02", 83º 37' 58"; then south to 29º 48' 45", 83º 37' 58"; then east to 29º 48' 45", 83º 35' 30"; then north to the point of beginning.

h. Keaton Beach local channels, Taylor County – Begin at 29º 49' 01", 83º 35' 38"; then southeast to 29º 48' 55", 83º 35' 15"; then northeast to 29º 48' 59", 83º 35' 13"; then northwest to 29º 49' 06", 83º 35' 36"; then southwest to the point of beginning.
(10-29-86)

5. Biscayne Bay (Cape Florida)	Dade/Monroe
6. Biscayne Bay (Card Sound) (12-1-82)	Dade/Monroe
7. Boca Ciega Bay	Pinellas
8. Cape Haze	Charlotte/Lee
9. Cape Romano-Ten Thousand Islands	Collier
10. Cockroach Bay	Hillsborough
11. Coupon Bight	Monroe
12. Estero Bay (as mod. 4-19-88)	Lee
13. Fort Clinch State Park	Nassau
14. Fort Pickens State Park	Santa Rosa/Escambia
15. Gasparilla Sound-Charlotte Harbor (as mod. 10-4-90)	Charlotte/Lee
16. Guana River Marsh (8-8-94)	St. Johns
17. Indian River Malabar to Vero Beach	Brevard/Indian River
18. Indian River Malabar to Vero Beach (additions), except those Indian River portions of	Brevard/Indian River

Sebastian Creek and Turkey Creek upstream of U.S. Highway 1 (1-26-88)	
19. Indian River Vero Beach to Ft. Pierce (as mod. 10-4-90)	Indian River/St. Lucie
20. Jensen Beach to Inlet (as mod. 10-4-90)	Martin/Palm Beach/Jupiter St. Lucie
21. Lake Jackson	Leon
22. Lemon Bay (4-19-88; as mod. 10-4-90)	Charlotte/Sarasota
23. Lignumvitae Key	Monroe
24. Loxahatchee River-Lake Worth Creek (as mod. 8-8-94)	Martin/Palm Beach
25. Matlacha Pass	Lee
26. Mosquito Lagoon	Volusia/Brevard
27. Nassau River-St. Johns River Marshes	Nassau/Duval
28. North Fork, St. Lucie	St. Lucie/Martin
29. Oklawaha River (10-4-90)	Marion
30. Pellicer Creek	St. Johns/Flagler
31. Pine Island Sound	Lee
32. Pinellas County	Pinellas
33. Rainbow Springs (4-19-88)	Marion
34. Rocky Bayou State Park	Okaloosa
35. Rookery Bay (12-1-82; as mod. 11-24-87, 7-11-91)	Collier
36. St. Andrews State Park	Bay
37. St. Joseph Bay	Gulf
38. St. Martins Marsh (as mod. 8-8-94)	Citrus
39. Terra Ceia (5-22-86)	Manatee
40. Tomoka Marsh	Volusia/Flagler
41. Wekiva River (12-1-82)	Lake/Orange/ Seminole
42. Wekiva River Addition, except that	Lake/Seminole/ Volusia

portion of the St. Johns
River between Interstate
Highway 4 and the
Wekiva River
confluence (12-28-88)
43. Yellow River Marsh Santa Rosa

(i) Special Waters.

1. Apalachicola River except for the following areas:

a. From a point 50 feet north of the northern boundary of the Jackson County Port Authority Slip, and including the slip itself, downstream to a point about four-tenths of a mile downstream, and specifically identified by navigation mile 103 on the 1982 U.S. Geological Survey Quadrangle Map of Sneads, Florida; and

b. From 850 feet downstream of the U.S. Army Corps of Engineers Blountstown Navigation Gage in Calhoun County, north to a point approximately 2,700 feet upstream of the Gage, and specifically identified by the line passing through 30º 25' 45" N. Lat. and 85º 1' 35" W. Long.; and 30º 25' 38" N. Lat. and 85º 1' 20" W. Long. (12-11-84).
2. Aucilla River.

3. Blackwater River.

4. Butler Chain of Lakes – consisting of Lake Butler, Lake Down, Wauseon Bay, Lake Louise, Lake Palmer (also known as Lake Isleworth), Lake Chase, Lake Tibet, Lake Sheen, Pocket Lake, Fish Lake, and the waterways which connect these lakes (3-1-84), and Lake Blanche and its connecting waterway (2-18-87).

5. Chassahowitzka River System including: Potter, Salt, Baird, Johnson, Crawford, Ryle, and Stevenson Creeks, and other tributaries to the Chassahowitzka River; but excluding artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (1-5-93).

6. Chipola River.

7. Choctawhatchee River.

8. Clermont Chain of Lakes – consisting of Lake Louisa (also known as Lake Louise), Lake Susan, Lake Crescent, Lake Minnehaha, Lake Winona, Lake Palatlakaha, Lake Hiawatha, Lake Minneola, Lake Wilson, Lake Cook, Cherry Lake, Lake Hunt, Lake Stewart, Lake Lucy, Lake Emma, and the waterways that interconnect Clermont Chain of Lakes (5-28-86).

9. Crooked Lake in Polk County including the area known as Little Crooked Lake and the connecting waterway between these waterbodies; less however, artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (4-9-87).

10. Crystal River, including Kings Bay (2-1-83).

11. Econlockhatchee River System – consisting of the Econlockhatchee River and the following tributaries:

a. Little Econlockhatchee River upstream to Michaels Dam in Jay Blanchard Park; and

b. Mills Creek upstream to Mills Lake; and

c. Southerly branch of Mills Creek upstream to Fort Christmas Road in Section 2, Township 22 South, Range 32 East; and

d. Silcox Branch (branch of Mills Creek) upstream to Lake Pickett; and

e. Long Branch upstream to the eastern section line of Section 34, Township 22 South, Range 32 East; and

f. Hart Branch upstream to the Old Railroad Grade in Section 18, Township 23 South, Range 32 East; and

g. Cowpen Branch upstream to the southernmost bifurcation of the creek in Section 20, Township 23 South, Range 32 East; and

h. Green Branch upstream to the western section line of Section 29, Township 23 South, Range 32 East; and

i. Turkey Creek upstream to Weewahootee Road in Section 5, Township 24 South, Range 32 East, and to the west section lines of Section 5, Township 24 South, Range 32 East, and Section 32, Township 23 South, Range 32 East; and

j. Little Creek upstream to the eastern section line of Section 22, Township 24 South, Range 32 East; and

k. Fourmile Creek upstream to the southern line of the NE 1{2} of Section 28, Township 24 South, Range 32 East; and

l. Econlockhatchee River Swamp upstream to State Road 532;

m. But excluding all other tributaries and artificial water bodies, defined as any water body created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (6-18-92).

12. Estero Bay Tributaries including: Hendry Creek to State Road 865, Big Bayou, Mullock Creek to U.S. 41 (State Road 45); Mud Creek; Estero River (north and south branches) to I-75 Halfway Creek to State Road 41; Spring Creek to Business Route 41 (State Road 887, old State Road 41), and the unnamed south branch of Spring Creek in Sections 20 and 29; Imperial River to the eastern line of Section 31, Range 26 East, Township 47 South, Oak Creek, and Leitner Creek; except for Tenmile Canal and any artificial water bodies, defined as any water body created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (10-4-90).

13. Florida Keys, including channels as defined in subsection 62-312.020(4), F.A.C., and described as follows: Commence at the northeasterly most point of Palo Alto Key and run due north to a point at the center of the channel of Broad Creek as the point of beginning, thence due east to the eastern boundary of the jurisdictional waters of the State of Florida, thence meander southerly along said eastern boundary to a point due south of the westernmost point of the island of Key West; thence westerly, northerly and easterly along the arc of a curve three leagues distant from the westernmost point of the island of Key West to a point due north of the island of Key West; thence northeasterly three leagues distant from the most northerly land of the Florida Keys to the intersection with the boundary of the Everglades National Park; thence southeasterly, northeasterly and northwesterly along the boundary of the Everglades National Park to the intersection with the Dade County-Monroe County line; thence northeasterly and easterly along the Dade County-Monroe County line to the point of beginning; less however, three areas:

a. Key West Sewage Outfall, being a circle 150 feet in radius from the point of discharge located at approximately 24º 32' 13" N. Latitude and 81º 48' 55" W. Longitude; and

b. Stock Island Power Plant Mixing Zone; being a circle 150 feet in radius from the end of the power plant discharge canal; and

c. Artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (5-8-85).

14. Hillsborough River from Fletcher Avenue (State Road 582A) in Hillsborough County upstream to the Withlacoochee River Overflow in Pasco County, and the following tributaries:

a. Crystal Springs; and

b. Blackwater Creek westward of the Hillsborough – Polk County line; and

c. Cypress Creek, Thirteenmile Run eastward of Livingston Avenue, and Big Cypress Swamp upstream to and including the Cypress Creek Wellfield, as delineated in the

maps entitled “Cypress Creek OFW Boundary Maps,” incorporated herein by reference; and

d. Trout Creek upstream to Bruce B. Downs Boulevard (State Road 581);

e. But excluding all other tributaries as well as the proposed transportation corridor, which crosses Cypress Creek in Section 21, Township 27 South, Range 19 East, as identified in the Adopted 2010 Long Range Transportation Plan of the Metropolitan Planning Organization, dated May 26, 1993.

f. A copy of the maps referenced in subparagraph c. above may be obtained from the Department of Environmental Protection, Bureau of Surface Water Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 (4-12-95).

15. Homosassa River System including: Halls River, Turtle, Otter, Battle, and Price Creeks, and other tributaries to the Homosassa River; but excluding artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (1-5-93).

16. Kingsley Lake and Black Creek (North Fork) downstream to the northern line of Section 23, Township 5 South, Range 23 East, including all tributaries along this segment of Black Creek (11-8-90).

17. Lake Disston – Specifically including Lake Disston plus contiguous wetlands within the following areas: Township 14 South, Range 29 East, Sections 21, 20, 19, 18, 17, 16, 9, 8 and 7 in Flagler County; and Township 14 South, Range 28 East, Sections 13 and 24 in Volusia County except:

a. Artificial water bodies defined as any water body created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C.; and

b. Any natural water bodies connected by artificial water bodies to the above-described system.

18. Lake Powell, Phillips Inlet, and all tributaries to Lake Powell as bounded by the following described line: Begin at the Northwest corner of Section 26, Township 2 South, Range 18 West; thence East to the Northwest corner of Section 29, Township 2 South, Range 17 West; thence South to the Northwest corner of the SW 1/4 of Section 29, Township 2 South, Range 17 West; thence East to the West line of Section 27, Township 2 South, Range 17 West, thence South to the mean high water line of the Gulf of Mexico; thence meander Northwest along the mean high water line to the West line of Section 35, Township 2 South, Range 18 West; thence North to the point of beginning (8-18-91).

19. Lemon Bay estuarine system – from Boca Grande Causeway northward to approximately two thousand feet northwest of the mouth of Alligator Creek, specifically identified

as the East line of Section 31, Township 39 South, Range 19 East, including Placida Harbor, Gasparilla Pass, Kettle Harbor, Bocilla Lagoon, Bocilla Pass, Knight Pass, Stump Pass, Lemon Bay, Buck Creek upstream to County Road 775, Oyster Creek upstream to County Road 775, Ainger (Rock) Creek upstream to County Road 775, and Godfrey (Godfried, Gottfried) Creek upstream to County Road 775; but excluding:

a. Alligator Creek, Forked Creek, Lemon Creek, and all other tributaries; and
b. Artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in Section 62-312.020(3), F.A.C. (4-29-86).

20. Little Manatee River – from its mouth to the western crossing of the river by S.R. 674, including Hayes, Mill and Bolster Bayous, but excluding South Fork, Ruskin Inlet and all other tributaries (10-1-82).

21. Lochloosa Lake (including Little Lochloosa Lake, Lochloosa Lake Right Arm, and Lochloosa Creek upstream to County Road 20A) (12-15-87).

22. Myakka River between State Road 771 (El Jobean Bridge) and the Charlotte-Sarasota County line, except for artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (4-19-88).

23. Ochlockonee River.

24. Oklawaha River between the eastern line of Section 36, Township 15 South, Range 23 East, and Eureka Lock and Dam, including Turkey Creek, Strouds Creek, Dead River (the water body so named near Gores Landing), Cedar Creek, and Fish Creek, but excluding Marshall Swamp, the Dead River (the water body so named exiting Marshall Swamp), and all other tributaries (12-20-89).

25. Orange Lake up to the U.S. Highway 301 bridge, the River Styx up to Camps Canal, and Cross Creek (4-9-87).

26. Perdido River.

27. Rainbow River, including Indian Creek, but excluding all other tributaries (1-17-85).

28. Santa Fe River System – consisting of the Santa Fe River, Lake Santa Fe, Little Lake Santa Fe, Santa Fe Swamp, Olustee Creek, and the Ichetucknee River below S.R. 27, but excluding all other tributaries (8-16-84).

29. Sarasota Bay estuarine system – generally extending from Venice north to the Hillsborough-Manatee County line and specifically described as follows: Commence at the northern tip of Anna Maria Island and follow a line running to the southern tip of Egmont Key until intersecting the boundary between Hillsborough and Manatee Counties; thence

run easterly and northeasterly along the county boundary until intersecting the Intracoastal Waterway; thence proceed southerly until intersecting a line between the southern tip of Mullet Key and the western tip of Snead Island; thence proceed southeasterly along said line to the western tip of Snead Island; thence to De Soto Point; and thence westerly and southerly including all of the Sarasota Bay estuarine system southward to the northernmost U.S. Highway Business Route 41 bridge over the Intracoastal Waterway in Venice, including Anna Maria Sound, Passage Key Inlet, Perico Bayou, Palma Sola Bay, Longboat Pass, Sarasota Bay, New Pass, Big Sarasota Pass, Roberts Bay, Little Sarasota Bay, Dryman Bay, Blackburn Bay, Lyons Bay, Venice Inlet, Dona Bay upstream to the U.S. Highway 41 bridge, and Roberts Bay upstream to the U.S. Highway 41 bridge; less however, the following areas:

a. All tributaries, including Palma Sola Creek, Bowlees Creek, Whitaker Bayou, Hudson Bayou, Phillippi Creek, Catfish Creek, North Creek, South Creek, Shakett Creek, Curry Creek; and

b. A circle 1500 feet in radius from the mouth of Whitaker Bayou; and

c. A circle 1500 feet in radius from the mouth of Phillippi Creek; and

d. Artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (4-29-86).

e. The designation shall not affect the consideration by the Department of an application for Site Specific Alternative Criteria for the discharge of the City of Bradenton’s Municipal Sewage Treatment Plant being built under Department of Environmental Protection Construction Permit No. DC41-81224. The application will be processed under the regulations of the Department existing on February 18, 1986.

30. St. Marks River – except that part between Rattlesnake Branch and the confluence of the St. Marks and Wakulla Rivers.

31. Shoal River.

32. Silver River (Marion County) (4-9-87).

33. Spruce Creek upstream to State Road 40A, and the following tributaries:

a. Unnamed tributary upstream to the Southern section line of Section 4, Township 17 South, Range 33 East; and
b. Unnamed tributary upstream to the Northern section line of Section 20, Township 16 South, Range 33 East; and

c. Unnamed tributary upstream to the Northern section line of Section 23, Township 16 South, Range 32 East (right fork), and to the Western line of the NE 1/4 of Section 27, Township 16 South, Range 32 East; and

d. Unnamed tributary upstream to the Western section line Section 35, Township 16 South, Range 32 East; and

e. Strickland Bay; and Turnbull Bay and Turnbull Creek upstream to the Northwestern section line of Section 43, Township 17 South, Range 33 East; and

f. Murray Creek upstream to the Town of Ponce Inlet municipal limits; and

g. Waters east from U.S. Highway 1 following the northerly and southerly municipal limits of the Town of Ponce Inlet to its intersection with the western boundary of the Intracoastal Waterway and including Rose Bay upstream to Nova Road (State Road 5A);

h. But excluding all other tributaries (7-11-91).

34. Suwannee River.

35. Tomoka River upstream to Interstate Highway 4; and the following tributaries:
a. Priest Branch upstream to the Western and Southern section lines of Section 6, Township 15 South, Range 32 East; and

b. Little Tomoka River and its tributaries as bounded by the following described line: Begin at the Southwestern point of confluence between the Tomoka River and the Little Tomoka River; thence meander upstream along the Little Tomoka River to the Western section line of Section 25, Township 14 South, Range 31 East; thence South to the Southwest corner of Section 25, Township 14 South, Range 31 East; thence West to the Southwest corner of Section 28, Township 14 South, Range 31 East; thence North to the Northwest corner of Section 28, Township 14 South, Range 31 East; thence East to the West section line of Section 25, Township 14 South, Range 31 East; thence South to the Northern shore of the Little Tomoka River; thence meander easterly to the confluence with the Tomoka River; thence South to the point of beginning; and

c. Groover Branch upstream to the Northern section line of Section 24, Township 14 South, Range 31 East; and

d. Misner's Branch upstream to the Northern section line of Section 29, Township 14 South, Range 32 East; and

e. Thompson Creek and Strickland Creek upstream to the Northern section line of Section 40, Township 14 South, Range 32 East;

f. But excluding all other tributaries (7-11-91).

36. Wacissa River.

37. Wakulla River.

38. Weekiwachee Riverine and Spring System – consisting of the Weekiwachee Springs and River, Mud Springs and River, Jenkins Creek, Salt Spring and Creek, the Weekiwachee Swamp, and all tributaries and contiguous wetlands within the following sections: Township 23 South, Range 17 East, Sections 2-9; Township 22 South, Range 17 East, Sections 20, 21, and 27-35, together with that portion of Section 19 that is southerly of CR 550 (Cortez Blvd.); Township 22 South, Range 16 East, Sections 25 and 36; including any and all waters, and wetlands contiguous to the tributaries located southerly of the north line of Section 25, Township 22 South, Range 16 East and westerly projection thereof and easterly of the west line of Section 36, Township 22 South, Range 16 East and northerly projection thereof, and easterly of a line through latitude 28º 32' 52" North, longitude 82º 39' 23" West, and through latitude 28º 31' 47" North, longitude 82º 39' 52" West (North American Datum of 1983). This OFW excludes artificial waters defined as any water body created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (12-11-03).

39. Wekiva River System – consisting of the Wekiva River, Rock Springs Run and its tributary Sulphur Spring, the Little Wekiva River south to its confluence with the southernmost run of Sanlando Springs, Black Water Creek and Swamp (up to Lake Dorr), Lake Norris, Seminole Springs and Creek, Seminole Swamp, Sulphur Spring and Run, and Messant Spring and Creek, but excluding all other tributaries (12-28-88).

40. Wiggins Pass Estuarine Area and the Cocohatchee River System – the estuarine and marine waters from the Lee/Collier County line southward through and including Water Turkey Bay to 50 feet north of S.R. 846 (Bluebill Ave.) 1995 right-of-way; the Cocohatchee River downstream from 50 feet west of U.S. 41 1995 right-of-way; and Wiggins Pass; but excluding maintenance dredging as authorized by Section 403.813(2)(f), F.S., in the following areas:

a. Wiggins Pass from the Gulf of Mexico eastward for 200 linear feet (as measured from the southwestern point of Little Hickory Island);

b. The channel (South Channel, Vanderbilt Channel), that connects Wiggins Pass with Vanderbilt Lagoon through Water Turkey Bay; and

c. East Channel (for purposes of this designation described as the East Channel from its confluence with South Channel to Vanderbilt Drive, including all waters surrounding the spoil islands known as Conklin Point and Island Marina).

41. Withlacoochee Riverine and Lake System, including:

a. The Withlacoochee River downstream of State Road 33 in Lake County to eastern section line of Section 33, Township 16 South, Range 18 East; and

b. The lower Withlacoochee River, from the Gulf of Mexico to the Cross Florida Barge Canal By-Pass Spillway, but not including that portion of the river between Lake Rousseau and the Cross Florida Barge Canal; and

c. The Little Withlacoochee River; and

d. Jumper Creek downstream of State Road 35, including Jumper Creek Swamp; and

e. Gum Springs, Gum Slough (Dead River), and Gum Swamp; and

f. Lake Panasoffkee, Outlet River, Little Jones Creek, Big Jones Creek, and Rutland Creek; and

g. Shady (Brook, Panasoffkee) Creek downstream of State Road 468, including Warm Spring Hammock; and

h. Lake Tsala Apopka; and

i. But excluding all other tributaries and artificial waterbodies, defined as any waterbody created by dredging, or excavation, or by the filling in of its boundaries, including canals as defined in subsection 62-312.020(3), F.A.C. (4-10-89); and

(j) Waters within Rivers Designated Under the Florida Scenic and Wild Rivers Program, Federal Wild and Scenic Rivers Act of 1968 as amended, and Myakka River Wild and Scenic Designation and Preservation Act

River Segment	County
1. Loxahatchee National Wild and Scenic River Segment (5-14-86)	Martin/Palm Beach
2. Myakka Florida Wild and Scenic River Segment (5-14-86)	Sarasota
3. Wekiva Florida Scenic and Wild River Segment (12-1-82)	Lake/Seminole

(k) Waters within National Preserves

National Preserve	County
1. Big Cypress National Preserve (as mod. 5-14-86, 4-19-88, 8-8-94)	Collier/Dade/ Monroe
2. Timucuan Ecological	Duval

and Historic Preserve
(8-8-94)

(l) Waters within National Marine Sanctuaries

Marine Sanctuary	County
1. Key Largo	Monroe
2. Looe Key (12-1-82)	Monroe

(m) Waters within National Estuarine Research Reserves
National Estuarine

Research Reserve	County
1. Apalachicola (12-1-82; as mod. 5-14-86, 4-19-88)	Franklin/Gulf
2. Rookery Bay (as mod. 5-14-86, 4-19-88)	Collier

(n) Certain Waters within the Boundaries of the National Forests

National Forest	County
1. Apalachicola	Wakulla/Leon/ Franklin
a. Sopchoppy River (9-1-82)	
b. Big Dismal Sink (9-1-82)	
2. Ocala	Putnam/Marion/ Lake
a. Alexander Springs (9-1-82)	
b. Alexander Springs Creek (9-1-82)	
c. Juniper Springs (9-1-82)	
d. Juniper Creek (9-1-82)	
e. Salt Springs (9-1-82)	
f. Salt Springs Run (9-1-82)	
g. Lake Dorr (9-1-82)	
h. Lake Kerr (9-1-82)	
i. Little Lake Kerr (9-1-82)	
3. Osceola	Baker/Columbia
a. Deep Creek (9-1-82)	
b. Robinson Creek (9-1-82)	
c. Middle Prong – St. Marys River (9-1-82)	
d. Ocean Pond (9-1-82)	
e. Falling Creek (9-1-82)	

(10) Outstanding National Resource Waters:

(a) The Commission designates the following waters as Outstanding National Resource Waters:

1. Biscayne National Park, as described in the document entitled “Outstanding National Resource Waters Boundary Description and Map for Biscayne National Park”, dated June 15, 1989, herein adopted by reference.

2. Everglades National Park, as described in the document entitled “Outstanding National Resource Waters Boundary Description and Map for Everglades National Park”, dated June 15, 1989, herein adopted by reference.

(b) It is the intent of the Commission that water bodies designated as Outstanding National Resource Waters shall be protected and maintained to the extent required by the federal Environmental Protection Agency. Therefore, the designations set forth in paragraph 62-302.700(10)(a), F.A.C., shall not be effective until the Florida Legislature enacts legislation specifically authorizing protection and maintenance of Outstanding National Resource Waters to the extent required by the federal Environmental Protection Agency pursuant to 40 C.F.R. 131.12.

(c) It is also the intent of the Commission to utilize the Surface Water Improvement and Management Act planning process, as outlined in Section 373.451, F.S., and Chapter 62-43, F.A.C., to establish the numerical standards for water quality parameters appropriate for Everglades and Biscayne National Parks’ status as outstanding National Resource Waters.

(d) The baseline for defining the existing ambient water quality (paragraph 62-4.242(2)(c), F.A.C.) in Outstanding National Resource Waters is a five year period from March 1, 1976 to March 1, 1981, unless otherwise indicated.

Specific Authority 403.061, 403.087, 403.088, 403.804, 403.805 FS. Law Implemented 403.021, 403.061, 403.062, 403.087, 403.088, 403.101, 403.141, 403.182, 403.502, 403.702, 403.708, 403.918 FS. History–New 3-1-79, Amended 8-10-80, 8-24-82, 9-30-82, 11-30-82, 2-1-83, 6-1-83, 3-1-84, 8-16-84, 12-11-84, 1-17-85, 5-8-85, 4-29-86, 5-14-86, 5-22-86, 5-28-86, 10-29-86, 2-18-87, 4-9-87, 11-24-87, 12-15-87, 1-26-88, 4-19-88, 12-28-88, 4-10-89, 9-13-89, 10-4-89, 12-20-89, 1-28-90, Formerly 17-3.041, Amended 10-4-90, 11-8-90, 7-11-91, 8-18-91, 12-11-91, 6-18-92, 1-5-93, 8-8-94, Formerly 17-302.700, Amended 1-23-95, 4-3-95, 4-12-95, 7-16-96, 4-4-01, 12-11-03.

62-302.800 Site Specific Alternative Criteria.

(1) A water body, or portion thereof, may not meet a particular ambient water quality criterion specified for its classification, due to natural background conditions or man-induced conditions which cannot be controlled or abated. In such circumstances, and upon petition by an affected person or upon the initiation by the Department, the Secretary may establish a site specific alternative water quality criterion when an affirmative demonstration is made that an alternative criterion is more appropriate for a specified

portion of waters of the state. Public notice and an opportunity for public hearing shall be provided prior to issuing any order establishing alternative criteria.

(a) The affirmative demonstration required by this section shall mean a documented showing that the proposed alternative criteria would exist due to natural background conditions or man-induced conditions which cannot be controlled or abated. Such demonstration shall be based upon relevant factors which include:
1. A description of the physical nature of the specified water body and the water pollution sources affecting the criterion to be altered.

2. A description of the historical and existing water quality of the parameter of concern including, spatial, seasonal, and diurnal variations, and other parameters or conditions which may affect it. Conditions in similar water bodies may be used for comparison.

3. A description of the historical and existing biology, including variations, which may be affected by the parameter of concern. Conditions in similar water bodies may be used for comparison.

4. A discussion of any impacts of the proposed alternative criteria on the designated use of the waters and adjoining waters.

(b) The Secretary shall specify, by order, the site specific criteria for the parameters which the Secretary determines to have been demonstrated by the preponderance of competent substantial evidence to be more appropriate.

(2) In accordance with the procedures set forth below, affected persons may petition the Department to adopt an alternative water quality criterion for a specific water body, or portion thereof, on the basis of site-specific reasons other than those set forth above in subsection 62-302.800(1), F.A.C. The Department shall process any such petition as follows:

(a) No later than 60 days after receipt of a petition, the Department shall review the petition and notify the petitioner of whether the petition is sufficiently complete to enable the Department to evaluate the proposed site-specific alternative criterion under subparagraph (c) below. If the petition is not sufficiently complete, the Department shall request the submittal of additional information. The Department shall review any additional information within 60 days of receipt from the applicant and may then request only that information reasonably needed to clarify or answer new questions directly related to the additional information, unless the Department shows good cause for not having requested the information previously.

(b) Petitions deemed complete by the Department shall be processed under subparagraph (c). For any petition not deemed complete, if the petitioner believes that additional information requested by the Department under subparagraph (a) is not necessary to the Department’s evaluation, the Department, at the petitioner’s request, shall proceed to process the petition under subparagraph (c) below.

(c) The Department shall initiate rulemaking for the Commission to consider approval of the proposed alternative criterion as a rule if the petitioner meets all the requirements of this subparagraph and its subparts. The petitioner must demonstrate that the proposed criterion would fully maintain and protect human health, existing uses, and the level of water quality necessary to protect human health and existing and designated beneficial uses. If the petition fails to meet any of these requirements (including the required demonstration), the Department shall issue an order denying the petition. In deciding whether to initiate rulemaking or deny the petition, the Department shall evaluate the petition and other relevant information according to the following criteria and procedures:

1. The petition shall include all the information required under subparagraphs (1)(a)1.-4. above.

2. In making the demonstration required by this subparagraph (c), the petition shall include an assessment of aquatic toxicity, except on a showing that no such assessment is relevant to the particular criterion. The assessment of aquatic toxicity shall show that physical and chemical conditions at the site alter the toxicity or bioavailability of the compound in question and shall meet the requirements and follow the Indicator Species procedure set forth in *Water Quality Standards Handbook* (December 1983), a publication of the United States Environmental Protection Agency, incorporated here by reference.

3. The demonstration shall also include a risk assessment that determines the human exposure and health risk associated with the proposed alternative criterion, except on a showing that no such assessment is relevant to the particular criterion. The risk assessment shall include all factors and follow all procedures required by generally accepted scientific principles for such an assessment, such as analysis of existing water and sediment quality, potential transformation pathways, the chemical form of the compound in question, indigenous species, bioaccumulation and bioconcentration rates, and existing and potential rates of human consumption of fish, shellfish, and water. If the results of the assessments of health risks and aquatic toxicity differ, the more stringent result shall govern.

4. The demonstration shall include information indicating that one or more assumptions used in the risk assessment on which the existing criterion is based are inappropriate at the site in question and that the proposed assumptions are more appropriate or that physical or chemical characteristics of the site alter the toxicity or bioavailability of the compound. Such a variance of assumptions, however, shall not be a ground for a proposed alternative criterion unless the assumptions characterize a factor specific to the site, such as bioaccumulation rates, rather than a generic factor, such as the cancer potency and reference dose of the compound. Man-induced pollution that can be controlled or abated shall not be deemed a ground for a proposed alternative criterion.

5. The petition shall include all information required for the Department to complete its economic impact statement for the proposed criterion.

6. For any alternative criterion more stringent than the existing criterion, the petition shall include an analysis of the attainability of the alternative criterion.

7. No later than 180 days after receipt of a complete petition or after a petitioner requests processing of a petition not found to be complete, the Department shall notify the petitioner of its decision on the petition. The Department shall publish in the Florida Administrative Weekly either a notice of rulemaking for the proposed alternative criterion or a notice of the denial of the petition, as appropriate, within 30 days after notifying the petitioner of the decision. A denial of the petition shall become final within 14 days unless timely challenged under Section 120.57, F.S.

(d) The provisions of this subsection do not apply to criteria contained in Rule 62-302.500, F.A.C., or criteria that apply to:

1. Bacteriological Quality.

2. Biological Integrity.

3. B.O.D.

4. Chlorides.

5. Color.

6. Detergents.

7. Dissolved Oxygen.

8. Dissolved Solids.

9. Nutrients.

10. Odor.

11. Oils and Greases.

12. Radioactive Substances.

13. Specific Conductance.

14. Substances in concentrations that injure, are chronically toxic to, or produce adverse physiological or behavioral response in humans, animals, or plants.

15. Substances in concentrations that result in the dominance of nuisance species.

16. Total Dissolved Gases.

17. Transparency.

18. Turbidity.

19. Any criterion or maximum concentration based on or set forth in paragraph 62-4.244(3)(b), F.A.C.

(e) Despite any failure of the Department to meet a deadline set forth in this subsection (4), the grant of an alternative criterion shall not become effective unless approved as a rule by the Commission.

(f) Nothing in this rule shall alter the rights afforded to affected persons by Chapter 120, F.S.

(3) The Department shall modify permits of existing sources affected in a manner consistent with the Secretary's Order.

(4) Additional relief from criteria established by this Chapter may be provided through exemption pursuant to Rule 62-4.243, Florida Administrative Code, or variances as provided for by Rule 62-103.100, F.A.C.

Specific Authority 403.061, 403.062, 403.087, 403.504, 403.704, 403.804, 403.805 FS. Law Implemented 403.021, 403.061, 403.087, 403.088, 403.141, 403.161, 403.201, 403.502 FS. History–Formerly 17-3.05(4), Amended 3-1-79, 10-2-80, 2-1-83, Formerly 17-3.031, Amended 6-17-92, Formerly 17-302.800, Amended 5-15-02.

Chapter 62-340, F.A.C.
Delineation of the Landward Extent of Wetlands and Surface Waters

Florida Department of Environmental Protection
Rules

DELINEATION OF THE LANDWARD EXTENT OF WETLANDS AND SURFACE WATERS Chapter 62-340, F.A.C.

New July 1, 1994

CHAPTER 62-340 DELINEATION OF THE LANDWARD EXTENT OF WETLANDS AND SURFACE WATERS

62-340.100 Intent.
62-340.200 Definitions.
62-340.300 Delineation of Wetlands.
62-340.400 Selection of Appropriate Vegetative Stratum.
62-340.450 Vegetative Index.
62-340.500 Hydrologic Indicators.
62-340.550 Wetland Hydrology.
62-340.600 Surface Waters.
62-340.700 Exemptions for Treatment or Disposal Systems.
62-340.750 Exemption for Surface Waters or Wetlands Created by Mosquito Control Activities.

62-340.100 Intent.

(1) This rule's intent is to provide a unified statewide methodology for the delineation of the extent of wetlands and surface waters to satisfy the mandate of Section 373.421, F.S. This delineation methodology is intended to approximate the combined landward extent of wetlands as determined by a water management district and the Department immediately before the effective date of this rule. Before implementing the specific provisions of this methodology, the regulating agency shall attempt to identify wetlands according to the definition for wetlands in subsection 373.019(17), F.S. and subsection 62-340.200(19), F.A.C. below. The landward extent of wetlands shall be determined by the dominance of plant species, soils and other hydrologic evidence indicative of regular and periodic inundation or saturation. In all cases, attempts shall be made to locate the landward extent of wetlands visually by on site inspection, or aerial photointerpretation in combination with ground truthing, without quantitative sampling. If this cannot be accomplished, the quantitative methods in paragraph 62-301.400(1)(c), F.A.C., shall be used unless the applicant or petitioner and regulating agency agree, in writing, on an alternative method for quantitatively analyzing the vegetation on site. The methodology shall not be used to delineate areas which are not wetlands as defined in subsection 62-340.200(19), F.A.C., nor to delineate as wetlands or surface waters areas exempted from delineation by statute or agency rule.

(2) The Department shall be responsible for ensuring statewide coordination and consistency in the delineation of surface waters and wetlands pursuant to this rule, by providing training and guidance to the Department, Districts, and local governments in implementing the methodology.

Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211 FS. History–New 7-1-94, Formerly 17-340.100.

62-340.200 Definitions.

When used in this chapter, the following terms shall mean:

(1) "Aquatic plant" means a plant, including the roots, which typically floats on water or requires water for its entire structural support, or which will desiccate outside of water.

(2) "Canopy" means the plant stratum composed of all woody plants and palms with a trunk four inches or greater in diameter at breast height, except vines.

(3) "Diameter at Breast Height (DBH)" means the diameter of a plant's trunk or main stem at a height of 4.5 feet above the ground.

(4) "Facultative plants" means those plant species listed in subsection 62-340.450(3) of this chapter. For the purposes of this rule, facultative plants are not indicators of either wetland or upland conditions.

(5) "Facultative Wet plants" means those plant species listed in subsection 62-340.450(2) of this chapter.

(6) "Ground Cover" means the plant stratum composed of all plants not found in the canopy or subcanopy, except vines and aquatic plants.

(7) "Ground truthing" means verification on the ground of conditions on a site.

(8) "Hydric Soils" means soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile.

(9) "Hydric Soil Indicators" means those indicators of hydric soil conditions as identified in *Soil and Water Relationships of Florida's Ecological Communities* (Florida Soil Conservation ed. Staff 1992).

(10) "Inundation" means a condition in which water from any source regularly and periodically covers a land surface.

(11) "Obligate plants" means those plant species listed in subsection 62-340.450(1) of this chapter.

(12) "Regulating agency" means the Department of Environmental Protection, the water management districts, state or regional agencies, local governments, and any other governmental entities.

(13) "Riverwash" means areas of unstabilized sandy, silty, clayey, or gravelly sediments. These areas are flooded, washed, and reworked by rivers or streams so frequently that they may support little or no vegetation.

(14) "Saturation" means a water table six inches or less from the soil surface for soils with a permeability equal to or greater than six inches per hour in all layers within the upper 12 inches, or a water table 12 inches or less from the soil surface for soils with a permeability less than six inches per hour in any layer within the upper 12 inches.

(15) "Seasonal High Water" means the elevation to which the ground and surface water can be expected to rise due to a normal wet season.

(16) "Subcanopy" means the plant stratum composed of all woody plants and palms, exclusive of the canopy, with a trunk or main stem with a DBH between one and four inches, except vines.

(17) "Upland plants" means those plant species, not listed as Obligate, Facultative Wet, or Facultative by this rule, excluding vines, aquatic plants, and any plant species not

introduced into the State of Florida as of the effective date of this rule.
(18) "U.S.D.A.-S.C.S." means the United States Department of Agriculture, Soil Conservation Service.
(19) "Wetlands," as defined in subsection 373.019(17), F.S., means those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto.
Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211 FS. History–New 7-1-94, Formerly 17-340.200.

62-340.300 Delineation of Wetlands.
The landward extent (i.e., the boundary) of wetlands as defined in subsection 62-340.200(19), F.A.C., shall be determined by applying reasonable scientific judgment to evaluate the dominance of plant species, soils, and other hydrologic evidence of regular and periodic inundation and saturation as set forth below. In applying reasonable scientific judgment, all reliable information shall be evaluated in determining whether the area is a wetland as defined in subsection 62-340.200(19), F.A.C.
(1) Before using the wetland delineation methodology described below, the regulating agency shall attempt to identify and delineate the landward extent of wetlands by direct application of the definition of wetlands in subsection 62-340.200(19), F.A.C., with particular attention to the vegetative communities which the definition lists as wetlands and non-wetlands. If the boundary cannot be located easily by use of the definition in subsection 62-340.200(19), F.A.C., the provisions of this rule shall be used to locate the landward extent of a wetland. In applying the provisions of this rule, the regulating agency shall attempt to locate the landward extent of wetlands visually by on site inspection, or aerial photointerpretation in combination with ground truthing.
(2) The landward extent of a wetland as defined in subsection 62-340.200(19), F.A.C., shall include any of the following areas:
(a) Those areas where the aereal extent of obligate plants in the appropriate vegetative stratum is greater than the areal extent of all upland plants in that stratum, as identified using the method in Section 62-340.400, F.A.C., and either:
1. the substrate is composed of hydric soils or riverwash, as identified using standard

U.S.D.A.-S.C.S. practices for Florida, including the approved hydric soil indicators, except where the hydric soil is disturbed by a nonhydrological mechanical mixing of the upper soil profile and the regulating agency establishes through data or evidence that hydric soil indicators would be present but for the disturbance;
2. the substrate is nonsoil, rock outcrop-soil complex, or the substrate is located within an artificially created wetland area; or 3. one or more of the hydrologic indicators listed in Section 62-340.500, F.A.C., are present and reasonable scientific judgment indicates that inundation or saturation is present sufficient to meet the wetland definition of subsection 62-340.200(19), F.A.C.
(b) Those areas where the areal extent of obligate or facultative wet plants, or combinations thereof, in the appropriate stratum is equal to or greater than 80% of all the plants in that stratum, excluding facultative plants, and either:
1. the substrate is composed of hydric soils or riverwash, as identified using standard U.S.D.A.-S.C.S. practices for Florida, including the approved hydric soil indicators, except where the hydric soil is disturbed by a nonhydrologic mechanical mixing of the upper soil profile and the regulating agency establishes through data or evidence that hydric soil indicators would be present but for the disturbance;
2. the substrate is nonsoil, rock outcrop-soil complex, or the substrate is located within an artificially created wetland area; or 3. one or more of the hydrologic indicators listed in Section 62-340.500, F.A.C., are present and reasonable scientific judgment indicates that inundation or saturation is present sufficient to meet the wetland definition of subsection 62-340.200(19), F.A.C.
(c) Those areas, other than pine flatwoods and improved pastures, with undrained hydric soils which meet, in situ, at least one of the criteria listed below. A hydric soil is considered undrained unless reasonable scientific judgment indicates permanent artificial alterations to the on site hydrology have resulted in conditions which would not support the formation of hydric soils.
1. Soils classified according to United States Department of Agriculture's *Keys to Soil Taxonomy* (4th ed. 1990) as Umbraqualfs, Sulfaquents, Hydraquents, Humaquepts, Histosols (except Folists), Argiaquolls, or Umbraquults.
2. Saline sands (salt flats-tidal flats).
3. Soil within a hydric mapping unit designated by the U.S.D.A.-S.C.S. as frequently flooded or depressional, when the hydric nature of the soil has been field verified using the U.S.D.A.-S.C.S. approved hydric soil indicators for Florida. If a permit applicant, or a person petitioning for a formal determination pursuant to subsection 373.421(2), F.S., disputes the boundary of a frequently flooded or depressional mapping unit, the applicant or petitioner may request that the regulating agency, in cooperation with the U.S.D.A.-S.C.S., confirm the boundary. For the purposes of subsection 120.60(2), F.S., a request for a boundary confirmation pursuant to this subparagraph shall have the same effect as a timely request for additional information by the regulating agency. The regulating agency's receipt of the final response provided by the U.S.D.A.-S.C.S. to the request for boundary confirmation shall have the same effect as a receipt of timely requested addi-

tional information.
4. For the purposes of this paragraph only, "pine flatwoods" means a plant community type in Florida occurring on flat terrain with soils which may experience a seasonal high water table near the surface. The canopy species consist of a monotypic or mixed forest of long leaf pine or slash pine. The subcanopy is typically sparse or absent. The ground cover is dominated by saw palmetto with areas of wire grass, gallberry, and other shrubs, grasses, and forbs, which are not obligate or facultative wet species. Pine flatwoods do not include those wetland communities as listed in the wetland definition contained in subsection 62-340.200(19), which may occur in the broader landscape setting of pine flatwoods and which may contain slash pine. Also for the purposes of this paragraph only, "improved pasture" means areas where the dominant native plant community has been replaced with planted or natural recruitment of herbaceous species which are not obligate or facultative wet species and which have been actively maintained for livestock through mechanical means or grazing.
(d) Those areas where one or more of the hydrologic indicators listed in Section 62-340.500, F.A.C., are present, and which have hydric soils, as identified using the U.S.D.A.-S.C.S. approved hydric soil indicators for Florida, and reasonable scientific judgment indicates that inundation or saturation is present sufficient to meet the wetland definition of subsection 62-340.200(19), F.A.C. These areas shall not extent beyond the seasonal high water elevation.
(3)(a) If the vegetation or soils of an upland or wetland area have been altered by natural or man-induced factors such that the boundary between wetlands and uplands cannot be delineated reliably by use of the methodology in subsection 62-340.300(2), F.A.C., as determined by the regulating agency, and the area has hydric soils or riverwash, as identified using standard U.S.D.A.-S.C.S. practices for Florida, including the approved hydric soil indicators, except where the hydric soil is disturbed by a non hydrologic mechanical mixing of the upper soil profile and the regulating agency establishes through data or evidence that hydric soil indicators would be present but for the disturbance, then the most reliable available information shall be used with reasonable scientific judgment to determine where the methodology in subsection 62-340.300(2), F.A.C., would have delineated the boundary between wetlands and uplands. Reliable available information may include, but is not limited to, aerial photographs, remaining vegetation, authoritative site-specific documents, or topographical consistencies.
(b) This subsection shall not apply to any area where regional or site-specific permitted activity, or activities which did not require a permit, under Sections 253.123 and 253.124, F.S. (1957), as subsequently amended, the provisions of Chapter 403, F.S. (1983), relating to dredging and filling activities, Chapter 84-79, Laws of Florida, and Part IV of Chapter 373, F.S., have altered the hydrology of the area to the extent that reasonable scientific judgment, or application of the provisions of Section 62-340.550, F.A.C., indicate that under normal circumstances the area no longer inundates or saturates at a frequency and duration sufficient to meet the wetland definition in subsection 62-340.200(19), F.A.C.

(c) This subsection shall not be construed to limit the type of evidence which may be used to delineate the landward extent of a wetland under this chapter when an activity violating the regulatory requirements of Sections 253.123 and 253.124, F.S. (1957), as subsequently amended, the provisions of Chapter 403, F.S. (1983), relating to dredging and filling activities, Chapter 84-79, Laws of Florida, and Part IV of Chapter 373, F.S., has disturbed the vegetation or soils of an area. (4) The regulating agency shall maintain sufficient soil scientists on staff to provide evaluation or consultation regarding soil determinations in applying the methodologies set forth in subsections 62-340.300(2) or (3), F.A.C. Services provided by the U.S.D.A.-S.C.S., or other competent soil scientists, under contract or agreement with the regulating agency, may be used in lieu of, or to augment, agency staff.
Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211 FS. History–New 7-1-94, Formerly 17-340.300.

62-340.400 Selection of Appropriate Vegetative Stratum.
Dominance of plant species, as described in paragraphs 62-340.300(2)(a) and 62-340.300(2)(b), shall be determined in a plant stratum (canopy, subcanopy, or ground cover). The top stratum shall be used to determine dominance unless the top stratum, exclusive of facultative plants, constitutes less than 10 percent areal extent, or unless reasonable scientific judgment establishes that the indicator status of the top stratum is not indicative of the hydrologic conditions on site. In such cases, the stratum most indicative of on site hydrologic conditions, considering the seasonal variability in the amount and distribution of rainfall, shall be used. The evidence concerning the presence or absence of regular and periodic inundation or saturation shall be based on in situ data. All facts and factors relating to the presence or absence of regular and periodic inundation or saturation shall be weighed in deciding whether the evidence supports shifting to a lower stratum. The presence of obligate, facultative wet, or upland plants in a lower stratum does not by itself constitute sufficient evidence to shift strata, but can be considered along with other physical data in establishing the weight of evidence necessary to shift to a lower stratum. The burden of proof shall be with the party asserting that a stratum other than the top stratum should be used to determine dominance. Facultative plants shall not be considered for purposes of determining appropriate strata or dominance.
Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211 FS. History–New 7-1-94, Formerly 17-340.400.

62-340.450 Vegetative Index.

(1) Obligate Species

Acer saccharinum	maple, silver
Acoelorraphe wrightii	palm, paurotis

Acrostichum spp.	leather fern
Aeschynomene pratensis	joint-vetch, meadow
Agalinis linifolia	false-foxglove, flax-leaf
Agalinis maritima	false-foxglove, saltmarsh
Alisma subcordatum	water-plantain, subcordate
Alnus serrulata	alder, hazel
Alternanthera philoxeroides	alligator-weed
Alternanthera sessilis	alligator weed, sessile
Amaranthus australis	amaranth, southern
Amaranthus cannabinus	amaranth, tidemarsh
Amaranthus floridanus	amaranth, Florida
Ammannia spp.	toothcup
Annona glabra	pond apple
Aristida affinis	three-awn grass, long-leaf
Armoracia aquatica	lakecress
Arnoglossum sulcatum	indian-plantain, Georgia
Asclepias incarnata	milkweed, swamp
Asclepias lanceolata	milkweed, fen-flower
Asclepias perennis	milkweed, aquatic
Asclepias rubra	milkweed, red
Aster carolinianus	aster, climbing
Aster elliottii	aster, Elliott's
Aster subulatus	aster, saltmarsh
Aster tenuifolius	aster, saltmarsh
Avicennia germinans	mangrove, black
Baccharis angustifolia	false-willow
Bacopa spp.	water-hyssop
Batis maritima	saltwort
Betula nigra	birch, river
Bidens spp. except *Bidens pilosa*	beggar-ticks, white (FAC)
Bidens bipinnata	Spanish needles (U)
Boehmeria cylindrica	false-nettle, small-spike

Borrichia spp.	sea oxeye
Burmannia spp.	burmannia
Callitriche spp.	water-starwort
Campanula floridana	bellflower
Canna spp. except	canna
Canna x generalis	canna, common (FAC)
Cardamine bulbosa	bitter-cress
Cardamine pensylvanica	spring-cress
Carex atlantica	sedge, prickly bog
Carex comosa	sedge, bearded
Carex crinita	sedge, fringed
Carex crus-corvi	sedge, raven-foot
Carex decomposita	sedge, cypress-knee
Carex elliottii	sedge, Elliott's
Carex folliculata	sedge, long
Carex gigantea	sedge, large
Carex howei	sedge, Howe's
Carex hyalinolepis	sedge, shoreline
Carex leptalea	sedge, bristly-stalk
Carex louisianica	sedge, Louisiana
Carex lupulina	sedge, hop
Carex lurida	sedge, shallow
Carex stipata stalk-grain	sedge,
Carex walteriana	sedge, Walter's
Carya aquatica	hickory, water
Cephalanthus occidentalis	buttonbush
Chamaecyparis thyoides	cedar, Atlantic white

Cicuta spp.	water-hemlock
Cirsium muticum	thistle, swamp
Cladium spp.	sawgrass
Cleistes divaricata	rosebud
Colocasia esculenta	elephant's ear
Coreopsis nudata	tickseed, Georgia
Cornus amomum	dogwood, silky
Crataegus aestivalis	mayhaw
Crinum americanum	swamp-lily, southern
Cyperus alternifolius	flatsedge, alternate-leaf
Cyperus articulatus	flatsedge, jointed
Cyperus difformis	flatsedge, variable
Cyperus distinctus	flatsedge, marshland
Cyperus drummondii	flatsedge
Cyperus entrerianus	flatsedge
Cyperus erythrorhizos	flatsedge, red-root
Cyperus haspan	flatsedge, sheathed
Cyperus lanceolatus	flatsedge, epiphytic
Cyperus papyrus	flatsedge, papyrus
Decodon verticillatus	swamp-loosestr ife
Dichromena latifolia	white-top sedge, giant
Distichlis spicata	saltgrass, seashore
Drosera filiformis	sundew, thread-leaf

Drosera intermedia	sundew, spoon-leaf
Drosera tracyi	sundew, Gulf coast
Dulichium arundinaceum	sedge, three-way
Echinodorus spp.	burhead
Eleocharis spp.	spikerush
Erianthus giganteus	plumegrass, sugarcane
Erianthus strictus	plumegrass, narrow
Eriocaulon spp.	pipewort
Eryngium aquaticum	corn snakeroot
Eupatorium leptophyllum	marsh thoroughwort
Fimbristylis spp. except	fringe-rush
Fimbristylis annua	fringe-rush, annual (FACW)
F. puberula	fringe-rush, Vahl's (FACW)
F. spathacea	hurricane-grass (FAC)
Fraxinus spp. except	ash
Fraxinum americana	ash, white (U)
Fuirena spp.	umbrella-sedge
Gleditsia aquatica	water-locust
Glyceria striata	fowl mannagrass
Heteranthera reniformis	mud-plantain, kidney-leaf
Hibiscus coccineus	rosemallow, scarlet
Hibiscus grandiflorus	rosemallow, swamp
Hibiscus laevis	rosemallow, halberd-leaf

Hibiscus moscheutos	rosemallow, swamp
Hydrochloa caroliniensis	watergrass
Hydrocleis nymphoides	water-poppy
Hydrocotyle ranunculoides	penny-wort, floating
Hydrolea spp.	false-fiddle-leaf
Hygrophila spp.	hygrophila
Hymenachne amplexicaulis	trompetilla
Hymenocallis spp.	spider-lily
Hypericum chapmanii	St. John's-wort, Chapman's
Hypericum edisonianum	St. John's-wort, Edison's
Hypericum fasciculatum	St. John's-wort, marsh
Hypericum lissophloeus	St. John's-wort, smooth-bark
Hypericum nitidum	St. John's-wort, Carolina
Ilex amelanchier	holly, sarvis
Ilex cassine	holly, dahoon
Ilex myrtifolia	holly, myrtle
Ilex verticillata	winterberry
Illicium floridanum	anise, Florida
Impatiens capensis	touch-me-not, spotted
Iris spp.	iris
except *I. verna*	dwarf iris (U)
Isoetes spp.	quillwort
Itea virginica	virginia willow
Iva frutescens	marsh elder
Juncus spp.	rush
except *J. tenuis*	rush (FAC)
J. marginatus	rush (FACW)
Justicia spp.	water-willow
except J.	shrimp plant (U)

brandegeana	
Kosteletzkya virginica	mallow, seashore
Lachnocaulon digynum	bogbutton, pineland
Lachnocaulon engleri Engler's	bogbutton,
Lachnocaulon minus	bogbutton, Small's
Laguncularia racemosa	mangrove, white
Leersia spp.	cutgrass
Leitneria floridana	corkwood
Lilaeopsis spp.	lilaeopsis
Lilium iridollae	lily, panhandle
Limnobium spongia	frogbit
Limnophila spp.	marshweed
Limonium carolinianum	sea-lavender
Lindera melissaefolia	spicebush, southern
Linum westii	flax, West's
Liparis elata (L. nervosa)	= liparis, tall
Litsea aestivalis	pondspice
Lobelia cardinalis	cardinal flower
Lobelia floridana	lobelia, Florida
Ludwigia spp.	ludwigia; water-primrose
except *Ludwigia hirtella*	seedbox, hairy (FACW)
Ludwigia maritima	seedbox, seaside (FACW)
L. suffruticosa	seedbox, headed (FACW)
Ludwigia virgata	seedbox, savanna (FACW)

Lycium carolinianum	Christmas berry
Lycopus spp.	bugleweed
Lysimachia spp.	loosestrife
Lythrum spp.	marsh loosestrife
Macranthera flammea	flameflower
Magnolia virginiana var. australis	magnolia, sweetbay
Malaxis spicata	adder's-mouth, Florida
Maxillaria crassifolia	orchid, hidden
Melanthium virginicum	bunchflower, Virginia
Micranthemum spp.	baby tears
Micromeria brownei	savory, Brown's
Mimulus alatus	monkey-flower
Monanthochloe littoralis	keygrass
Muhlenbergia capillaris	muhly grass
Nasturtium spp.	water-cress
Nelumbo spp.	water-lotus
Nuphar luteum	cow-lily, yellow
Nymphaea spp.	water-lily
Nymphoides spp.	floating hearts
Nyssa aquatica	tupelo, water
Nyssa ogeche	tupelo, ogeechee
Nyssa sylvatica var. biflora	tupelo, swamp
Orontium aquaticum	golden club
Osmunda regalis	fern, royal
Oxypolis spp.	water drop-wort
Panicum ensifolium	panic grass
Panicum	witchgrass,

erectifolium	erect-leaf
Panicum gymnocarpon	panicum, savannah
Panicum hemitomon	maidencane
Panicum longifolium	panicum, tall thin
Panicum scabriusculum	panicum, woolly
Panicum tenerum	panicum, bluejoint
Parnassia spp.	grass-of-parnassus
Paspalidium geminatum	water panicum
Paspalum dissectum	paspalum, mudbank
Paspalum distichum	paspalum, joint
Paspalum monostachyum	paspalum, gulf
Paspalum praecox	paspalum, early
Paspalum repens	paspalum, water
Peltandra spp.	arum; spoon flower
Penthorum sedoides	ditch stonecrop
Pentodon pentandrus	pentodon, Hall's
Persea palustris	bay, swamp
Phragmites australis	reed, common
Physostegia godfreyi	dragon-head, Godfrey's
Physostegia leptophylla	dragon-head, slender-leaf
Pinckneya bracteata	fever-tree
Pinguicula spp.	butterwort
Planera aquatica	planer tree

Platanthera spp.	orchid, fringed
Pleea tenuifolia	rush-featherling
Pogonia ophioglossoides	pogonia, rose
Polygala cymosa	milkwort, tall
Polygonum spp. except	smartweed
P. argyrocoleon	smartweed, silversheath (U)
P. virginianum	jumpseed (FACW)
Pontederia cordata	pickerelweed
Populus heterophylla	cottonwood, swamp
Proserpinaca spp.	mermaid-weed
Psilocarya spp.	baldrush
Quercus lyrata	oak, overcup
Rhexia parviflora	meadow-beauty white
Rhexia salicifolia	meadow-beauty panhandle
Rhizophora mangle	mangrove, red
Rhynchospora cephalantha	beakrush, clustered
Rhynchospora chapmanii	beakrush, Chapman's
Rhynchospora corniculata	beakrush, short-bristle
Rhynchospora decurrens	beakrush, swamp-forest
Rhynchospora divergens	beakrush, spreading
Rhynchospora harperi	beakrush, Harper's
Rhynchospora inundata	beakrush, horned
Rhynchospora macra	beakrush, large

Rhynchospora microcarpa	beakrush, southern
Rhynchospora miliacea	beakrush, millet
Rhynchospora mixta	beakrush, mingled
Rhynchospora oligantha	beakrush, few-flower
Rhynchospora stenophylla	beakrush, Chapman's
Rhynchospora tracyi	beakrush, Tracy's
Rorippa spp.	yellow-cress
Rosa palustris	rose, swamp
Rotala ramosior	toothcup
Rudbeckia mohrii	coneflower, Mohr's
Sabatia bartramii	rose-gentian, Bartram's
Sabatia calycina	rose-gentian, coast
Sabatia dodecandra	rose-gentian, large
Sacciolepis striata	cupscale, American
Sagittaria spp.	arrowhead
Salicornia spp.	glasswort
Salix spp.	willow
Samolus spp.	pimpernel, water
Sarracenia spp. except	pitcher-plant
Sarracenia minor	pitcher-plant, hooded (FACW)
Saururus cernuus	lizard's tail
Scirpus spp.	bulrush
Scutellaria lateriflora	skullcap, blue
Scutellaria racemosa	skullcap
Senecio aureus	ragwort, golden
Senecio	butterweed

glabellus	
Setaria magna	foxtail
Sium suave	water-parsnip
Solidago elliottii	golden-rod, Elliott's
Solidago patula	golden-rod, rough-leaf
Sparganium americanum	burreed
Spartina alterniflora	cordgrass, saltmarsh
Spartina cynosuroides	cordgrass, big
Spartina spartinae	cordgrass, gulf
Spergularia marina	sandspurry, saltmarsh
Sphagnum spp.	sphagnum moss
Sphenopholis pensylvanica	wedgescale, swamp
Sporobolus virginicus	dropseed, seashore
Stachys lythroides	hedgenettle
Stillingia aquatica	corkwood
Styrax americana	snowbell; storax
Suaeda spp.	sea-blite
Taxodium ascendens	cypress, pond
Taxodium distichum	cypress, bald
Thalia geniculata	thalia; fire flag
Tofieldia racemosa	false-asphodel, coastal
Triadenum spp.	St. John's-wort, marsh
Triglochin striatam	arrow-grass
Typha spp.	cattail

Utricularia spp.	bladderwort
Veronica anagallis-aquatica	speedwell, water
Vicia ocalensis	vetch, Ocala
Viola lanceolata	violet, lance-leaf
Websteria confervoides	water-meal
Woodwardia aereolata	chainfern
Xyris spp.	yellow-eyed grass
except	
Xyris caroliniana	yellow-eyed grass, Carolina (FACW)
Xyris jupicai	yellow-eyed grass, tropical (FACW)
Zizania aquatica	wildrice
Zizaniopsis miliacea	wildrice, southern

(2) Facultative Wet Species

Abildgaardia ovata	rush, flat-spike
Acer negundo	box-elder
Acer rubrum	maple, red
Aeschynomene indica	joint-vetch, India
Agalinis aphylla	false-foxglove, scale-leaf
Agalinis pinetorum (=A. pulchella)	false-foxglove
Agalinis purpurea	false-foxglove, large purple
Agarista populifolia	hobble-bush
Agrostis stolonifera	redtop

Amorpha fruticosa	indigo-bush
Amphicarpum muhlenbergianum	blue maidencane
Amsonia rigida	slimpod, stiff
Amsonia tabernaemontana	slimpod, eastern
Andropogon glomeratus	bluestem, bushy (Campbell)
Andropogon liebmanii var. pungensis (Campbell) (A. mohrii)	bluestem, Mohr's
Anthaenantia rufa	silky-scale, purple
Apteria aphylla	nodding nixie
Arenaria godfreyi	stitchwort, Godfrey's
Arisaema spp.	jack-in-the-pulpit; green-dragon
Aristida purpurascens (s.l.)	three-awn grass, wand-like
Arnoglossum diversifolium	indian-plantain, variable-leaf
Arnoglossum ovatum	indian-plantain, egg-leaf
Aronia arbutifolia	red chokeberry
Arundinaria gigantea	giant cane
Asclepias connivens	milkweed, large-flower
Asclepias longifolia	milkweed, long-leaf
Asclepias pedicellata	milkweed, savannah
Asclepias	milkweed,

viridula	southern
Aster chapmanii	aster, savannah
Aster eryngiifolius	aster, coyote-thistle
Aster lateriflorus	aster, calico
Aster spinulosus	aster, bog
Aster vimineus	aster, small white
Athyrium filix-femina	fern, subarctic lady
Atriplex patula	saltbush, halberd-leaf
Balduina atropurpurea d,	honeycomb-hea purple
Balduina uniflora d,	honeycomb-hea one-flower
Bartonia spp.	screwstem
Bigelowia nudata	golden-rod, rayless
Blechnum serrulatum	swamp fern
Boltonia spp.	boltonia
Brachiaria purpurascens	paragrass
Cacalia suaveolens	indian-plantain, sweet-scent
Calamovilfa curtissii	Curtiss' reed grass
Calopogon spp.	grass-pinks
Calycocarpum lyonii	cupseed
Caperonia spp.	caperonia
Capparis flexuosa	caper-tree
Carex spp. except	sedges
Carex atlantica	sedge, prickly bog (OBL)
Carex comosa	sedge, bearded (OBL)
Carex crinita	sedge, fringed (OBL)

Carex crus-corvi	sedge, raven-foot (OBL)
Carex decomposita	sedge, cypress-knee (OBL)
Carex elliottii	sedge, Elliott's (OBL)
Carex folliculata	sedge, long (OBL)
Carex gigantea	sedge, large (OBL)
Carex howei	sedge, Howe's (OBL)
Carex hyalinolepis	sedge, shoreline (OBL)
Carex leptalea	sedge, bristly-stalk (OBL)
Carex louisianica	sedge, Louisiana (OBL)
Carex lupulina	sedge, hop (OBL)
Carex lurida	sedge, shallow (OBL)
Carex stipata	sedge, stalk-grain (OBL)
Carex walteriana	sedge, Walter's (OBL)
Carphephorus carnosus	chaffhead, pineland
Carphephorus pseudoliatris	chaffhead, bristle-leaf
Carpinus caroliniana	hornbeam, American
Celtis laevigata	sugar-berry; hackberry
Centella asiatica	coinwort
Chaptalia tomentosa	sunbonnet; pineland daisy

Chasmanthium spp. except *C. latifolum* *C. sessiliflorum*	spanglegrass longleaf Chasmanthium
Chrysobalanus icaco	cocoplum
Cirsium lecontei	thistle, Leconte's
Cirsium nuttallii	thistle, Nuttall's
Clethra alnifolia	sweet pepper bush
Cliftonia monophylla	buckwheat-tree
Commelina spp. except *Commelina erecta*	dayflower dayflower, sandhill (U)
Conocarpus erectus	buttonwood
Coreopsis falcata	tickseed, sickle
Coreopsis floridana	tickseed, Florida
Coreopsis gladiata	tickseed, southeastern
Coreopsis integrifolia	tickseed, ciliate-leaf
Coreopsis leavenworthii	tickseed, Leavenworth's
Coreopsis linifolia	tickseed, Texas
Cornus foemina	swamp dogwood
Crataegus marshallii	haw, parsley
Crataegus viridis	haw, green
Croton elliottii	croton, Elliott's
Ctenitis submarginalis	fern, brown-hair comb
Ctenium spp.	toothache grass
Cuphea aspera	common

	waxweed
Cyperus spp. except	flatsedge
C. alternifolius	flatsedge, alternate-leaf (OBL)
Cyperus articulatus	flatsedge, jointed (OBL)
Cyperus difformis	flatsedge, variable (OBL)
Cyperus distinctus	flatsedge, marshland (OBL)
Cyperus drummondii	flatsedge (OBL)
Cyperus entrerianus	flatsedge (OBL)
C. erythrorhizos	flatsedge, red-root (OBL)
Cyperus haspan	flatsedge, sheathed (OBL)
Cyperus lanceolatus	flatsedge, epiphytic (OBL)
Cyperus papyrus	flatsedge, papyrus (OBL)
Cyperus cuspidatus	flatsedge, coastal-plain (FAC)
Cyperus esculentus	flatsedge (FAC)
Cyperus giganteus	flatsedge (FAC)
Cyperus globulosus	flatsedge, baldwin (FAC)
Cyperus huarmensis (FAC)	flatsedge, black knotty-*root*
Cyperus metzii	flatsedge (FAC)
Cyperus retrorsus	flatsedge (FAC)
Cyperus rotundus	flatsedge, purple (FAC)

Cyperus filiculmis	flatsedge, sandhill (U)
Cyperus ovularis	flatsedge (U)
Cyperus reflexus	flatsedge (U)
Cyperus refractus	flatsedge (U)
C. retrofractus	flatsedge (U)
Cyperus tetragonus	flatsedge (U)
Dichromena colorata	white-top sedge, starbrush
Dichromena floridensis	white-top sedge, Everglades
Dicliptera brachiata	mudwort, wild
Digitaria pauciflora	everglades grass
Diodia virginiana	button-weed
Dionaea muscipula	Venus' flytrap
Drosera brevifolia	sundew, dwarf
Drosera capillaris	sundew, pink
Dryopteris ludoviciana	shield-fern, southern
Dyschoriste humistrata	dyschoriste, swamp
Echinochloa spp.	jungle-rice; cockspur grass
Eclipta alba	yerba de Tajo
Elyonurus tripsacoides	balsam-scale, Pan-American
Equisetum hyemale	horsetail
Erianthus brevibarbus	plume grass, short-beard
Erigeron vernus	fleabane, early

	whitetop
Eriochloa spp.	cupgrass
Eryngium integrifolium	coyote-thistle, blue-flower
Eryngium prostratum	coyote-thistle, creeping
Eryngium yuccifolium	rattlesnake master
Erythrodes querceticola	erythrodes, low
Eulophia alta	coco, wild
Eupatoriadelphus fistulosus	joe-pye-weed
Eupatorium leucolepis	thoroughwort, white-bract
Eupatorium mikanioides	thoroughwort, semaphore
Eupatorium perfoliatum	boneset
Euphorbia humistrata (=Chamaesyce humistrata)	broomspurge, spreading
Euphorbia inundata	spurge, Florida
Euphorbia polyphylla	spurge, many-leaved
Eustachys glauca (=Chloris glauca)	fingergrass, saltmarsh
Eustoma exaltatum	prairie-gentian
Evolvulus convolvuloides	evolvulus
Evolvulus sericeus	silky bindweed
Fimbristylis annua	fimbry, annual
Fimbristylis puberula	fimbry, Vahl's hairy
Flaveria	yellowtop

floridana	
Flaveria linearis	yellowtop
Forestiera acuminata	privet, swamp
Fothergilla gardenii	witch-alder, dwarf
Galium tinctorium	bedstraw, stiff marsh
Gaylussacia mosieri	woolly-berry
Gentiana spp.	gentian
Gleditsia triacanthos	honey-locust
Gordonia lasianthus	bay, loblolly
Gratiola spp. except	hedgehyssop
Gratiola hispida (FAC)	hedgehyssop
Habenaria spp.	rein orchid
Halesia diptera	silver-bell
Harperocallis flava	Harper's beauty
Hartwrightia floridana	hartwrightia, Florida
Hedychium coronarium	ginger
Helenium spp. except	sneezeweed
Helenium amarum	sneezeweed, pasture (FAC)
Helianthus agrestis	sunflower, southeastern
Helianthus angustifolius	sunflower, swamp
Helianthus carnosus	sunflower, lakeside
Helianthus heterophyllus	sunflower, wetland
Helianthus simulans	sunflower, muck
Heliotropium	heliotrope,

procumbens	four-spike
Hemicarpha spp.	dwarf-bullrush
Hibiscus aculeatus	rosemallow
Hydrocotyle spp.	pennywort
except	
H. ranunculoides	pennywort, floating (OBL)
Hypericum spp.	St. John's-wort
except	
Hypericum chapmanii	St. John's-wort, Chapman's (OBL)
H. edisonianum	St. John's-wort, Edison's (OBL)
H. fasciculatum	St. John's-wort, marsh (OBL)
H. lissophloeus	St. John's-wort, smooth-*bark*
(OBL)	
Hypericum nitidum	St. John's-wort, Carolina (OBL)
H. hypericoides	St. Andrew's cross (FAC)
H. tetrapetalum	St. John's-wort, four-petal (FAC)
H. cumulicola	St. John's-wort, scrub (U)
H. drummondii	St. John's-wort, Drummond's (U)
H. gentianoides	pineweed (U)
H. microsepalum	St. John's-wort, small-sepal (U)
H. prolificum	St. John's-wort,
shrubby (U)	
Hypericum punctatum	St. John's-wort, dotted (U)
Hypericum reductum	St. John's-wort, Atlantic (U)
Hypolepis f	ern, bead

repens	
Hypoxis spp.	stargrasses, yellow
Hyptis alata	musky mint
Ilex coriacea	holly, bay-gall
Ilex decidua	holly, deciduous
Illicium parviflorum	star anise
Iva little *microcephala*	marsh elder
Juncus marginatus	shore rush
Kalmia latifolia	laurel, mountain
Lachnocaulon anceps	bogbutton, white-head
Lachnocaulon beyrichianum	bogbutton, southern
Laportea canadensis	wood-nettle, Canada
Leptochloa spp. except *Leptochloa virgata*	sprangle-top, tropic (FAC)
Leucothoe spp.	dog-hobble
Liatris garberi	gayfeather, garber's
Lindera benzoin	spicebush, northern
Lindernia spp. except *Lindernia crustacea* , *Malayan (FAC)*	false-pimpernel
Linum carteri	flax, Carter's
Linum striatum	flax, ridged yellow
Lipocarpha spp.	lipocarpha
Liquidambar styraciflua	sweetgum
Liriodendron tulipifera	tulip tree
Listera spp.	twayblade

Lobelia spp.	lobelia
except	
Lobelia cardinalis	flower, cardinal (OBL)
Lobelia floridana	lobelia, Florida (OBL)
Lophiola americana	golden-crest
Ludwigia hirtella	seedbox, hairy
Ludwigia maritima	seedbox, seaside
Ludwigia suffruticosa	seedbox, headed
Ludwigia virgata	seedbox, savanna
Lycopodium spp.	clubmoss
Lyonia lucida	fetter-bush
Lyonia mariana	fetter-bush
Macbridea spp.	birds-in-a-nest
Manisuris spp.	jointgrass
except	
M. cylindrica	jointgrass, pitted (FAC)
Marshallia graminifolia	barbara's-buttons, grass-leaf
Marshallia tenuifolia	barbara's-buttons, slim-leaf
Mecardonia spp.	mecardonia
Melanthera nivea	squarestem
Mitreola spp.	hornpod
Muhlenbergia schreberi	nimblewill
Myrica heterophylla	bayberry, evergreen
Myrica inodora	bayberry, odorless
Nemastylis floridana	pleatleaf, fall-flowering
Nemophila	baby-blue-eyes,

aphylla	small-flower
Oldenlandia	bluets, water
spp.	
Onoclea	fern, sensitive
sensibilis	
Osmunda	fern, cinnamon
cinnamomea	
Panicum	cut-throat grass
abscissum (Hall)	
Panicum	panicum, fall
dichotomiflorum	
Panicum	panicum
dichotomum	
Panicum	panicum
pinetorum	
Panicum repens	grass, torpedo
Panicum	panicum, red-top
rigidulum	
Panicum	panicum
scoparium	
Panicum spretum	panicum
Panicum	panicum, warty
verrucosum	
Panicum	switchgrass
virgatum	
Paspalum	paspalum, brook
acuminatum	
Paspalum	paspalum, bull
boscianum	
Paspalum	paspalum,
floridanum	Florida
Paspalum laeve	paspalum, field
Paspalum	paspalum,
pubiflorum	hairy-seed
Pavonia spicata	mangrove
	mallow
Philoxerus	silverhead
vermicularis	
Phyllanthus	leaf-flower,
caroliniensis	Carolina
Phyllanthus	leaf-flower,
liebmannianus	Florida

Physostegia purpurea	dragon-head, purple
Physostegia virginiana	dragon-head, false
Pieris phillyreifolia	fetter-bush, climbing
Pilea spp.	clearweed
Pinus glabra	pine, spruce
Pinus serotina	pine, pond
Platanus occidentalis	sycamore
Pluchea spp.	camphor-weed
Polygala spp. except	milkwort
Polygala cymosa	milkwort, tall yellow (OBL)
P. leptostachys	milkwort, sandhill (U)
Polygala lewtonii (U)	milkwort, scrub
Polygala polygama	milkwort, racemed (U)
P. verticillata	milkwort, whorled (U)
Polygonum virginianum	jumpseed
Ponthieva racemosa	shadow-witch
Populus deltoides	cotton-wood, eastern
Pteris tripartita	brake, giant
Ptilimnium capillaceum	mock bishop-weed
Pycnanthemum nudum	mountain-mint, coastal-plain
Quercus laurifolia	oak, laurel
Quercus michauxii	oak, swamp chestnut
Quercus nigra	oak, water
Quercus pagoda	oak, cherry-bark
Quercus phellos	oak, willow

Ranunculus spp.	butter-cup
Reimarochloa oligostachya	grass, Florida reimar
Rhapidophyllum hystrix	palm, needle
Rhexia spp. except	meadow-beauty
Rhexia parviflora	meadow-beauty white (OBL)
Rhexia salicifolia	meadow-beauty panhandle (OBL)
Rhododendron viscosum	azalea, swamp
Rhynchospora spp. except	beakrush
R. cephalantha	beakrush, clustered (OBL)
R. chapmanii	beakrush, Chapman's (OBL)
R. corniculata	beakrush, short-bristle (OBL)
R. decurrens	beakrush, swamp-forest (OBL)
R. divergens	beakrush, spreading (OBL)
R. harperi	beakrush, Harper's (OBL)
R. inundata	beakrush, horned (OBL)
Rhynchospora macra	beakrush, large (OBL)
R. microcarpa southern	beakrush, (OBL)
R. miliacea	beakrush, millet (OBL)
Rhynchospora mixta	beakrush, mingled (OBL)

R. oligantha	beakrush, few-flower (OBL)
R. stenophylla	beakrush, Chapman's (OBL)
Rhynchospora tracyi	beakrush, Tracy's (OBL)
Rhynchospora grayi	beakrush, Gray's (U)
R. intermedia	beakrush, pinebarren (U)
R. megalocarpa	beakrush, giant-fruited (U)
Roystonea spp.	palm, royal
Rudbeckia fulgida	coneflower, orange
Rudbeckia graminifolia	coneflower, grass-leaf
Rudbeckia laciniata	coneflower, cut-leaf
Rudbeckia nitida	coneflower, shiny
Ruellia noctiflora	wild-petunia, night-flowering
Rumex spp.	dock
Sabal minor	palmetto, dwarf
Sabatia spp. except	rose-gentian
Sabatia bartramii	rose-gentian, Bartram's (OBL)
Sabatia calycina	rose-gentian, coast (OBL)
Sabatia dodecandra	rose-gentian, large (OBL)
Sachsia polycephala	sachsia
Sarracenia minor	pitcher-plant, hooded
Schoenolirion croceum	sunny bells
Schoenolirion	sunny bells

elliottii	
Schoenus nigricans	black-sedge
Scleria spp.	nutrush
Sclerolepis uniflora	hardscale, one flower
Selaginella apoda	spike-moss, meadow
Sesuvium spp. s	ea-purslane
Sisyrinchium atlanticum	blue-eye-grass, eastern
Sisyrinchium capillare	blue-eye-grass
Sisyrinchium mucronatum	blue-eye-grass, Michaux's
Solanum bahamense	canker-berry
Solanum erianthum	night-shade, shrub
Solidago fistulosa	golden-rod, marsh
Solidago leavenworthii	golden-rod, leavenworth's
Solidago sempervirens	golden-rod, seaside
Solidago stricta	golden-rod, willow-leaf
Sophora tomentosa	coast sophora
Spartina bakeri	cordgrass, sand
Spartina patens	cordgrass, saltmeadow
Spermacoce glabra	button-plant, smooth
Sphenoclea zeylandica	chicken-spike
Sphenostigma coelestinum	ixia, Bartram's
Spigelia loganioides	pink-root
Spilanthes americana	spotflower, creeping

Spiranthes spp.	ladies'-tresses
Sporobolus floridanus	dropseed, Florida
Staphylea trifolia	bladdernut, American
Stenandrium floridanum	stenandrium
Stenanthium gramineum	feather-bells, eastern
Stipa avenacioides	grass, Florida needle
Stokesia laevis	stokesia
Syngonanthus flavidulus	bantam-buttons
Teucrium canadense	germander, American
Thalictrum spp.	meadow-rue
Thelypteris spp.	shield fern
Tilia americana	American basswood
Toxicodendron vernix	poison sumac
Trachelosperm um difforme ne	climbing-dogba
Trepocarpus aethusae	trepocarpus, aethusa-like
Trianthema portulacastrum	horse-purslane
Tridens ambiguus	tridens, savannah
Tridens strictus	tridens, long-spike
Triphora spp.	pogonias, nodding
Ulmus spp. except *Ulmus rubra*	elm elm, slippery (U)
Urechites lutea	allamanda, wild
Uvularia floridana	bellwort, Florida
Vaccinium	blueberry,

corymbosum	highbush
Verbena scabra	vervain, sandpaper
Verbesina chapmanii	crownbeard, Chapman's
Verbesina heterophylla	crownbeard, diverse-leaf
Vernonia spp. except	ironweed
V. angustifolia	ironweed, narrow-leaf (U)
Veronicastrum virginicum	culver's root
Viburnum dentatum	arrow-wood
Viburnum nudum	viburnum, possum-haw
Viburnum obovatum	viburnum, walter
Vicia acutifolia	vetch, four-leaf
Vicia floridana	vetch, Florida
Viola affinis	violet, Leconte's
Viola esculenta	violet, edible
Viola primulifolia	violet, primrose-leaf
Woodwardia virginica	chainfern
Xanthorhiza simplicissima	yellow-root, shrubby
Xanthosoma sagittifolium	elephant ear
Xyris caroliniana	yellow-eyed-grass, Carolina
Xyris jupicai	yellow-eyed-grass, Richard's
Yeatesia viridiflora	yeatesia, green-flower
Zephyranthes atamasco	lily, atamasco
Zigadenus densus	crow poison
Zigadenus	deathcamas,

glaberrimus	Atlantic

Within Monroe County and the Key Largo portion of Dade County only, the following species shall be listed as Facultative Wet:

Alternanthera maritima	beach alternanthera
Morinda royoc	Keys rhubarb
Strumpfia maritima	strumpia

(3) Facultative Species

Acacia auriculiformis	ear-leaved acacia
Aletris spp.	colic-root
Alopecurus carolinianus	foxtail, tufted
Anagallis pumila	pimpernel, Florida
Andropogon arctatus	bluestem, savannah (Campbell)
Andropogon brachystachys	bluestem, short-spike (Campbell)
Andropogon gerardii	bluestem, big (Campbell)
Andropogon perangustatus	bluestem, slim (Campbell)
Andropogon virginicus	broom-sedge (Campbell)
Ardisia spp.	marlberry
Aristida rhizomophora	grass, rhizomatous three-awn
Aristida spiciformis	bottlebrush, three-awn
Aristida stricta	grass, pineland three-awn

Arundo donax	reed, giant
Aster dumosus	aster, bushy
Aster umbellatus	aster, flat-top white
Axonopus spp.	carpet grass
Baccharis dioica	false-willow, broom-bush
Baccharis glomeruliflora	groundsel tree
Baccharis halimifolia	false-willow, eastern
Bidens pilosa	beggar-ticks, hairy
Bucida buceras	gregory wood
Bumelia celastrina	bumelia, coastal
Bumelia lycioides	bumelia, buckthorn
Bumelia reclinata	bumelia
Campanula americana	bellflower, American
Canna x generalis	garden canna
Carphephorus odoratissimus	vanilla plant
Carphephorus paniculatus	deer-tongue
Casuarina spp.	casuarina
Cayaponia guingueloba	cyaponia, five-lobe
Cestrum diurnum	day jessamine
Chasmanthium latifolium	spangle grass
Chasmanthium sessiliflorum	longleaf Chasmanthium
Chiococca spp.	snowberry
Colubrina asiatica	snakewood, Asian
Conoclinium coelestinum	mistflower
Coreopsis	tickseed, tall

tripteris	
Cupaniopsis anacardioides	carrotwood
Cuphea carthagenensis Columbia	waxweed,
Cyperus cuspidatus	flatsedge, coastal-plain
Cyperus giganteus	flatsedge
Cyperus globulosus	flatsedge, baldwin
Cyperus huarmensis	flatsedge, black knotty-root
Cyperus metzii	flatsedge
Cyperus retrorsus	flatsedge
Cyperus rotundus	flatsedge, purple
Cypselea humifusa	panal
Cyrilla racemiflora	cyrilla, swamp
Dichondra caroliniensis	pony-foot
Digitaria serotina	crabgrass, dwarf
Diospyros virginiana	persimmon, common
Drymaria cordata	West Indian chickweed
Elytraria caroliniensis	scaly-stem, Carolina
Eragrostis spp.	lovegrass
Erechites hieraciifolia	fireweed
Erigeron guercifolius	fleabane
Erithralis fruticosa	black torchwood
Eryngium bladwini	coyote-thistle, Baldwin's
Eupatorium spp.	thoroughworts

except	
E. leptophyllum	thoroughwort, secund (OBL)
E. leucolepis	thoroughwort, white-bract (FACW)
E. mikanioides	thoroughwort, semaphore (FACW)
E. perfoliatum	boneset, common (FACW)
Eustachys petracea	finger grass
Euthamia spp.	bushy goldenrod
Ficus aurea	fig, Florida strangler
Fimbristylis spathacea	hurricane-grass
Flaveria bidentis	yellowtop
Flaveria yellowtop	
trinervia	
Forestiera segregata	privet, Florida
Gaylussacia dumosa	dwarf huckleberry
Gaylussacia frondosa	dangleberry
Gratiola hispida	hyssop, hispid
Helenium amarum	sneezeweed, pasture
Helianthus floridanus	sunflower, Florida
Heliotropium curassavicum	heliotrope, seaside
Heliotropium polyphyllum	heliotrope
Hibiscus tiliaceus	rosemallow, sea
Hypericum hypericoides	St. Andrew's cross
Ilex opaca var.	American holly

opaca	
Ilex vomitoria	yaupon holly
Jacquinia keyensis	Joewood
Juncus tenuis	rush, path
Kosteletzkya pentasperma	mallow, coastal
Lachnanthes caroliniana	redroot
Leptochloa virgata	sprangle-top, tropic
Liatris gracilis	blazing star
Liatris spicata	gayfeather, spiked
Lilium catesbaei	lily, southern red
Lindernia crustacea	false-pimpernel Malayan
Linum floridanum	flax, Florida yellow
Linum medium	flax, stiff yellow
Lyonia ligustrina	maleberry
Manisuris cylindrica	joint grass, pitted
Maytenus phyllanthoides	Florida mayten
Melaleuca guinguenervia	punk tree
Melochia corchorifolia	chocolate-weed
Metopium toxiferum	poison wood
Mimosa pigra	mimosa, black
Morus rubra	mulberry, red
Muhlenbergia expansa	cutover muhly
Murdannia spp.	dewflower
Myosurus minimus	mouse-tail, tiny
Myrica cerifera	bayberry, southern
Myrsine guianensis	myrsine, guiana

Nephrolepis spp.	sword ferns
Neyraudia reynaudiana	reed, silk
Oplismenus setarius	grass, woods
Oryza sativa	rice, cultivated
Panicum anceps	panicum, beaked
Panicum commutatum (Hall)	panicum
Panicum hians	panicum, gaping
Panicum strigosum	panicum
Panicum tenue	panicum
Parietaria spp.	pellitory
Paspalum conjugatum	paspalum, sour
Paspalum dilatatum	dallisgrass
Paspalum fimbriatum	paspalum, Panama
Paspalum plicatulum	paspalum, brown-seed
Paspalum setaceum	paspalum, thin
Paspalum urvillei	grass, vasey
Pennisetum purpureum	elephant ear grass
Phalaris spp.	grass, canary
Phyla spp.	frog-fruit
Phyllanthus urinaria	leaf-flower, water
Piriqueta caroliniana	piriqueta
Polypogon spp.	grass, rabbit-foot
Polypremium procumbens	rustweed
Psidium cattleianun	guava, strawberry

Psychotria spp.	wild coffee
Rhodomyrtus tomentosus	downy rose myrtle
Rubus spp.	blackberries
Ruellia brittoniana	wild-petunia, Britton's
Ruellia caroliniensis	wild petunia
Sabal palmetto	palm, cabbage
Sacciolepis indica	grass, glenwood
Sambucus canadensis	elderberry
Sapium sebiferum	tallow-tree, Chinese
Schinus terebinthifolius	pepper-tree, Brazilian
Schizachyrium spp.	bluestem
Scoparia dulcis	sweet broom
Scutellaria floridana	skullcap
Scutellaria integrifolia	rough skullcap
Sebastiana fruticosa	sebastian-bush, gulf
Sesbania spp.	rattle-bush
Setaria geniculata	grass, bristle
Seymeria cassiodes	black senna
Solidago rugosa	golden-rod, wrinkled
Stillingia sylvatica var. tenuis	queen's-delight, marsh
Suriana maritima	bay-cedar
Syzygium spp.	Java plum
Thespesia populnea	seaside mahoe
Tradescantia	trailing

fluminensis	spiderwort
Trema spp.	trema
Tripsacum dactyloides	grass, eastern gama
Vaccinium elliottii	blueberry, Elliott
Verbesina virginica	crownbeard, white
Wedelia trilobata	reeping ox-eye

Within Monroe County and the Key Largo portion of Dade County only, the following species shall be listed as Facultative:

Alternanthera paronychioides	smooth chaff-flower
Byrsonima lucida	locust-berry
Ernodea littoralis	golden creeper
Guapira discolor	blolly
Manilkara bahamensis	wild dilly
Pisonia rotundata	pisonia
Pithecellobium keyensis	blackbead
Pithecellobium unguis-cati	catsclaw
Randia aculeata	box briar
Reynosia septentrionalis	darling plum
Thrinax radiata	Florida thatch palm

(4) Nomenclature. Use of plants in this rule is based solely on the scientific names. Common names are included in the above lists for information purposes only. The following references shall be used by the regulating agency to resolve any uncertainty about the nomenclature or taxonomy of any plant listed by a given scientific name in this section: R. Godfrey, Trees, Shrubs and Woody Vines of Northern Florida and Adjacent Georgia & Alabama (Univ. Ga. Press, Athens 1988) and D. Lellinger, Ferns & Fern-Allies of the

United States & Canada (Smithsonian Institution Press, Washington D.C. 1985) for all species covered by these
references. For all other listed scientific names the following references will be followed unless the species list in this section designates a different authority next to an individual species name: R. Godfrey & J. Wooten, Aquatic and Wetland Plants of Southeastern United States: Monocotyledons (Univ. Ga. Press, Athens 1979); R. Godfrey & J. Wooten, Aquatic and Wetland Plants of Southeastern United States: Dicotyledons (Univ. Ga. Press, Athens 1979); D. & H. Correll, Flora of the Bahama Archipelago (A.R. Gantner, Germany 1982). When the species list in this section designates a different authority next to an individual species name, the regulating agency shall resolve any ambiguity in nomenclature by using the name identified in D. Hall, The Grasses of Florida (Doctoral Dissertation, Univ. of Fla., Gainesville 1978); or C. Campbell, Systematics of the Andropogon Virginicus Complex (GRAMINEAE), 64 Journal of the Arnold Arboretum 171-254 (1983).
Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211 FS. History–New 7-1-94, Formerly 17-340.450.

62-340.500 Hydrologic Indicators.
The indicators below may be used as evidence of inundation or saturation when used as provided in Section 62-340.300, F.A.C. Several of the indicators reflect a specific water elevation. These specific water elevation indicators are intended to be evaluated with meteorological information, surrounding topography and reliable hydrologic data or analyses when provided, to ensure that such indicators reflect inundation or saturation of a frequency and duration sufficient to meet the wetland definition in subsection 62-340.200(19), F.A.C., and not rare or aberrant events. These specific water elevation indicators are not intended to be extended from the site of the indicator into surrounding areas when reasonable scientific judgment indicates that the surrounding areas are not wetlands as defined in subsection 62-340.200(19), F.A.C.
(1) Algal mats. The presence or remains of nonvascular plant material which develops during periods of inundation and persists after the surface water has receded.
(2) Aquatic mosses or liverworts on trees or substrates. The presence of those species of mosses or liverworts tolerant of or dependent on surface water inundation.
(3) Aquatic plants. Defined in subsection 62-340.200(1), F.A.C.
(4) Aufwuchs. The presence or remains of the assemblage of sessile, attached or free-living, nonvascular plants and invertebrate animals (including protozoans) which develop a community on inundated surfaces.
(5) Drift lines and rafted debris. Vegetation, litter, and other natural or manmade material deposited in discrete lines or locations on the ground or against fixed objects, or entangled above the ground within or on fixed objects in a form and manner which indicates that the material was waterborne. This indicator should be used with caution to ensure that the drift lines or rafted debris represent usual and recurring events typical of inundation or saturation at a frequency and duration sufficient to meet the wetland definition of

subsection 62-340.200(19), F.A.C.
(6) Elevated lichen lines. A distinct line, typically on trees, formed by the water-induced limitation on the growth of lichens.
(7) Evidence of aquatic fauna. The presence or indications of the presence of animals which spend all or portions of their life cycle in water. Only those life stages which depend on being in or on water for daily survival are included in this indicator.
(8) Hydrologic data. Reports, measurements, or direct observation of inundation or saturation which support the presence of water to an extent consistent with the provisions of the definition of wetlands and the criteria within this rule, including evidence of a seasonal high water table at or above the surface according to methodologies set forth in *Soil and Water Relationships of Florida's Ecological Communities* (Florida Soil Conservation Staff 1992).
(9) Morphological plant adaptations. Specialized structures or tissues produced by certain plants in response to inundation or saturation which normally are not observed when the plant has not been subject to conditions of inundation or saturation.
(10) Secondary flow channels. Discrete and obvious natural pathways of water flow landward of the primary bank of a stream watercourse and typically parallel to the main channel.
(11) Sediment deposition. Mineral or organic matter deposited in or shifted to positions indicating water transport.
(12) Vegetated tussocks or hummocks. Areas where vegetation is elevated above the natural grade on a mound built up of plant debris, roots, and soils so that the growing vegetation is not subject to the prolonged effects of soil anoxia.
(13) Water marks. A distinct line created on fixed objects, including vegetation, by a sustained water elevation.
Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211 FS. History–New 7-1-94, Formerly 17-340.500.

62-340.550 Wetland Hydrology.
A wetland delineation using the methodology described above, can be refuted by either reliable hydrologic records or site specific hydrologic data which indicate that neither inundation for at least seven consecutive days, nor saturation for at least twenty consecutive days, occurs during conditions which represent long-term hydrologic conditions. Hydrologic records or site specific hydrologic data must be of such a duration, frequency, and accuracy to demonstrate that the records or data are representative of the long-term hydrologic conditions, including the variability in quantity and seasonality of rainfall. When sufficient amounts of either reliable hydrologic records or site specific hydrologic data are not available to prove that the wetland area of concern does not inundate or saturate as described above, a site-specific field-verified analytic or numerical model may be used to demonstrate that the wetland area no longer inundates or saturates regularly or periodically under typical long-term hydrologic conditions. Before initiating the use of a model to evaluate if a wetland delineation should be refuted based on hydrologic condi-

tions, the applicant or petitioner shall first meet with the appropriate regulating agency and reach an agreement on the terms of study, including data collection, the specific model, model development and calibration, and model verification. If the data, analyses, or models are deemed inadequate based on the hydrologic conditions being addressed, the regulating agency shall provide a case-by-case review of the applicability of any data, analyses, or models and shall provide specific reasons, based on generally accepted scientific and engineering practices, why they are inadequate.
Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211 FS. History–New 7-1-94, Formerly 17-340.550.

62-340.600 Surface Waters.
(1) For the purposes of Section 373.421, F.S., surface waters are waters on the surface of the earth, contained in bounds created naturally or artificially, including, the Atlantic Ocean, the Gulf of Mexico, bays, bayous, sounds, estuaries, lagoons, lakes, ponds, impoundments, rivers, streams, springs, creeks, branches, sloughs, tributaries, and other watercourses. However, state water quality standards apply only to those waters defined in subsection 403.031(13), F.S.
(2) The landward extent of a surface water in the State for the purposes of implementing Section 373.414, F.S., shall be the more landward of the following:
(a) wetlands as located by Section 62-340.300, F.A.C., of this chapter;
(b) the mean high water line elevation for tidal water bodies;
(c) the ordinary high water line for non-tidal natural water bodies;
(d) the top of the bank for artificial lakes, borrow pits, canals, ditches and other artificial water bodies with side slopes of 1 foot vertical to 4 feet horizontal or steeper, excluding spoil banks when the canals and ditches have resulted from excavation into the ground; or
(e) the seasonal high water line for artificial lakes, borrow pits, canals, ditches, and other artificial water bodies with side
slopes flatter than 1 foot vertical to 4 feet horizontal along with any artificial water body created by diking or impoundment above the ground.
(3) Determinations made pursuant to paragraphs (2)(b) and (2)(c) shall be for regulatory purposes and are not intended to be a delineation of the boundaries of lands for the purposes of title.
Specific Authority 373.421 FS. Law Implemented 373.421, 373.4211, 403.031(13) FS. History–New 7-1-94, Formerly 17-340.600.

62-340.700 Exemptions for Treatment or Disposal Systems.
(1) Alteration and maintenance of the following shall be exempt from the rules adopted by the department and the water management districts to implement subsections 373.414(1) through 373.414(6), 373.414(8) and 373.414(10), F.S.; and subsection 373.414(7), F.S., regarding any authority to apply state water quality standards within any works, impoundments, reservoirs, and other watercourses described in this subsec-

tion and any authority granted pursuant to Section 373.414, F.S. (1991):
(a) Works, impoundments, reservoirs, and other watercourses constructed and operated solely for wastewater treatment or disposal in accordance with a valid permit reviewed or issued under Sections 62-28.700, 62-302.520, F.A.C., Chapters 62-17, 62-600, 62-610, 62-640, 62-650, 62-660, 62-670, 62-671, 62-673, or 62-701, F.A.C., or Section 403.0885, F.S., or rules implementing Section 403.0885, F.S., except for treatment wetlands or receiving wetlands permitted to receive wastewater pursuant to Chapter 62-611, F.A.C., or Section 403.0885, F.S., or its implementing rules;
(b) Works, impoundments, reservoirs, and other watercourses constructed solely for wastewater treatment or disposal before a construction permit was required under Chapter 403, F.S., and operated solely for wastewater treatment or disposal in accordance with a valid permit reviewed or issued under Sections 62-28.700, 62-302.520, F.A.C., Chapters 62-17, 62-600, 62-610, 62-640, 62-650, 62-660, 62-670, 62-671, 62-673, or 62-701, F.A.C., or Section 403.0885, F.S., or rules implementing Section 403.0885, F.S., except for treatment wetlands or receiving wetlands permitted to receive wastewater pursuant to Chapter 62-611, F.A.C., or Section 403.0885, F.S., or its implementing rules;
(c) Works, impoundments, reservoirs, and other watercourses of less than 0.5 acres in combined area on a project-wide basis, constructed and operated solely for stormwater treatment in accordance with a noticed exemption under Chapter 62-25, F.A.C., or a valid permit issued under Chapters 62-25 (excluding Rule 62-25.042), 62-330, 40B-4, 40C-4, 40C-42 (excluding Rule 40C-42.0265), 40C-44, 40D-4, 40D-40, 40D-45, or 40E-4, F.A.C., except those permitted as wetland stormwater treatment systems; or
(d) Works, impoundments, reservoirs, and other watercourses of less than 0.5 acres in combined area on a project-wide basis, constructed and operated solely for stormwater treatment before a permit was required under Chapters 62-25, 40B-4, 40C-4, 40C-42, 40C-44, 40D-4, 40D-40, 40D-45, or 40E-4, F.A.C.
(2) Alteration and maintenance of the following shall be exempt from the rules adopted by the department and the water management districts to implement subsections 373.414(1), 373.414(2)(a), 373.414(8), and 373.414(10), F.S.; and subsections 373.414(3) through 373.414(6), F.S.; and subsection 373.414(7), F.S., regarding any authority to apply state water quality standards within any works, impoundments, reservoirs, and other watercourses described in this subsection and any authority granted pursuant to Section 373.414, F.S. (1991), except for authority to protect threatened and endangered species in isolated wetlands:
(a) Works, impoundments, reservoirs, and other watercourses of 0.5 acre or greater in combined area on a project-wide basis, constructed and operated solely for stormwater treatment in accordance with a noticed exemption under Chapter 62-25, F.A.C., or a valid permit issued under Chapters 62-25 (excluding Rule 62-25.042), 62-330, 40B-4, 40C-4, 40C-42 (excluding Rule 40C-42.0265), 40C-44, 40D-4, 40D-40, 40D-45, 40E-4, except those permitted as wetland stormwater treatment systems; or
(b) Works, impoundments, reservoirs, and other watercourses of 0.5 acres or greater in combined area on a project-wide basis, constructed and operated solely for stormwater

treatment before a permit was required under Chapters 62-25, 40B-4, 40C-4, 40C-42, 40C-44, 40D-4, 40D-40, 40D-45, or 40E-4, F.A.C.
(3) The exemptions in subsections 62-340.700(1) and (2) shall not apply to works, impoundments, reservoirs or other watercourses that
(a) are currently wetlands which existed before construction of the stormwater treatment system and were incorporated in it;
(b) are proposed to be altered through expansion into wetlands or other surface waters; or
(c) are wetlands created, enhanced, or restored as mitigation for wetland or surface water impacts under a permit issued by the Department or a water management district.
(4) Alterations and maintenance of works, impoundments, reservoirs, and other watercourses exempt under this subsection shall not be considered in determining whether any wetland permitting threshold is met or exceeded under part IV of Chapter 373, F.S.
(5) Works, impoundments, reservoirs, and other watercourses exempt under this subsection, other than isolated wetlands in systems described in subsection 62-340.700(2) above, shall not be delineated under Section 373.421, F.S.
(6) This exemption shall not affect the application of state water quality standards, including those applicable to Outstanding Florida Waters, at the point of discharge to waters as defined in subsection 403.031(13), F.S.
(7) As used in this subsection, "solely for" means the reason for which a work, impoundment, reservoir, or other watercourse is constructed and operated; and such construction and operation would not have occurred but for the purposes identified in subsections 62-340.700(1) or subsection 62-340.700(2), F.A.C. Furthermore, the phrase does not refer to a work, impoundment, reservoir, or other watercourse constructed or operated for multiple purposes. Incidental uses, such as occasional recreational uses, will not render the exemption inapplicable, so long as the incidental uses are not part of the original planned purpose of the work, impoundment, reservoir, or other watercourse. However, for those works, impoundments, reservoirs, or other watercourses described in paragraphs 62-340.700(1)(c) and 62-340.700(2)(a), F.A.C., use of the system for flood attenuation, whether originally planned or unplanned, shall be considered an incidental use, so long as the works, impoundments, reservoirs, and other watercourses are no more than 2 acres larger than the minimum area required to comply with the stormwater treatment requirements of the district or department. For the purposes of this subsection, reuse from a work, impoundment, reservoir, or other watercourse is part of treatment or disposal.
Specific Authority 373.414(9) FS. Law Implemented 373.414(9) FS. History–New 7-1-94, Formerly 17-340.700.

62-340.750 Exemption for Surface Waters or Wetlands Created by Mosquito Control Activities.
Construction, alteration, operation, maintenance, removal, and abandonment of stormwater management systems, dams, impoundments, reservoirs, appurtenant works, or

works, in, on or over lands that have become surface waters or wetlands solely because of mosquito control activities undertaken as part of a governmental mosquito control program, and which lands were neither surface waters nor wetlands before such activities, shall be exempt from the rules adopted by the department and water management districts to implement subsections 373.414(1) through 373.414(6), 373.414(8), and 373.414(10), F.S.; and subsection 373.414(7), F.S., regarding any authority granted pursuant to Section 373.414, F.S. (1991). Activities exempted under this section shall not be considered in determining whether any wetland permitting threshold is met or exceeded under part IV of Chapter 373, F.S. This exemption shall not affect the regulation of impacts on other surface waters or wetlands, or the application of state water quality standards to waters as defined in subsection 403.031(13), F.S., including standards applicable to Outstanding Florida Waters.

Specific Authority 373.414(9) FS. Law Implemented 373.414(9) FS. History–New 7-1-94, Formerly 17-340.750.

Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District

BASIS OF REVIEW FOR ENVIRONMENTAL RESOURCE PERMIT APPLICATIONS WITHIN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT

SUMMARY OF AMENDMENTS
TO
BASIS OF REVIEW FOR ENVIRONMENTAL RESOURCE
PERMIT APPLICATIONS WITHIN
THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT
ORIGINALLY ADOPTED THROUGH RULE 16K-4.035 ON MAY 12, 1977

AMENDED:

December 15, 1977, generally to address conceptual approval applications and the information requirements applicable thereto.
Effective: January 16, 1978

July 10, 1980, to refine, clarify and expand the criteria contained in Basis.
Effective: August 11, 1980

July 10, 1981, a recodification of District rules to Title 40E, and to repeal Title 16K.
Effective: September 9, 1981

January 1982, to include water quality criteria.
Effective: February 1, 1982

October 1982, to redefine title and to clarify agency practice, especially for stormwater quality, pursuant to Chapter 373, F.S.; and to an agreement between the Department of Environmental Regulation and the South Florida Water Management District, dated February 3, 1982.
Effective: December 1, 1982

January 1986, to revise significant portions of Basis (e.g. retention and detention criteria, solid waste disposal sites and all water quality criteria).
Effective: May 1, 1986

May 1986, to revise conceptual approval provisions included in Basis to reflect changes to Chapter 40E-4 on this subject.
Effective: July 1, 1986

February 12, 1987, to adopt Appendix 6 on above-ground impoundments.
Effective: March 24, 1987

January 8, 1987, to adopt Appendix 7 on isolated wetlands.
Effective: April 15, 1987

March 10, 1994, to reorganize the Basis as part of a larger effort to reorganize rules and criteria, to adopt the gradient approach as a means of determining adequate lake-wetland separation, to remove any seeming discretionary language, to clarify and to update numerous Basis sections which experience had shown to be unclear or outmoded.
Effective: April 20, 1994

August 10, 1995, to redefine title and to reorganize the Basis as part of a statewide effort to achieve a coordinated and consistent permitting approach among the water management

districts and the Florida Department of Environmental Protection; to reflect the elimination of both dredge and fill permits and surface water management permits, and the replacement of them with Environmental Resource Permits (ERP); to expand the Environmental Criteria section to incorporate the statewide ERP criteria; and to include provisions governing the establishment and use of mitigation banks.
Effective: October 3, 1995

November 14, 1996, to incorporate mitigation ratios based on percent coverage of melaleuca in wetlands, and to provide an incentive program for landowners to remove melaleuca.
Effective: January 1, 1997

April 13, 2000, to incorporate minor amendments to various sections, as part of the "ERP Glitch Rule."
Effective: May 28, 2000

July 13, 2000, to incorporate revised side slope criteria into wet retention/detention area dimensional criteria.
Effective: August 16, 2000

December 14, 2000, to incorporate into mitigation bank financial responsibility mechanisms, language regarding co-beneficiaries.
Effective: January 17, 2001

April 11, 2002, to clarify what types of ponds and ditches alterations would not be required to comply with certain BOR provisions; and to expand BOR text about off-setting cumulative impacts, to bring that text into agreement with recently-passed amendments to Paragraph 373.414(8)(b), F.S.
Effective: June 26, 2002

February 13, 2003, to amend "Appendix 6 Above Ground Impoundments," to specify that inspection reports must be retained by the permittee and made available to District staff upon request, and to expand the language of the typical special condition for all above ground impoundments.
Effective: April 6, 2003

February 13, 2003, to delete or revise language objected to by the Joint Administrative Procedures Committee (JAPC).
Effective: April 14, 2003

July 10, 2003, to amend sections 10.1 and 10.2 to modify construction completion certification requirements, to include the requirements to use forms 0881A and 0881B, and to explain the situations in which each form is to be used.
Effective: September 16, 2003

(Pages iii through x are reserved.)

TABLE OF CONTENTS

Page

1.0 Introduction 1
1.1 Objectives....1
1.2 Application Review Process 1
1.2.1 Application Form....2
1.3 Criteria Objectives 2
1.4 Simultaneous Reviews 2

2.0 Definitions 3

3.0 General Review Requirements 7
3.1 Development of Regional Impact 7
3.2 Water and Wastewater Service 7
3.3 Phased Projects 7
3.4 Pre-Application Meetings 8

4.0 Environmental Criteria....9
4.1 Wetlands and Other Surface Waters....9
4.1.1 Environmental Conditions for Issuance 9
4.2 Environmental Review Criteria 10
4.2.1 Elimination or Reduction of Impacts 10
4.2.2 Fish, Wildlife, Listed Species and their Habitats 11
4.2.3 Public Interest Test....14
4.2.4 Water Quality 18
4.2.5 Class II Waters; Waters Approved for Shellfish Harvesting....21
4.2.6 Vertical Seawalls....22
4.2.7 Secondary Impacts 23
4.2.8 Cumulative Impacts 25
4.3 Mitigation....30
4.3.1 Types of Mitigation....30
4.3.2 Mitigation Ratio Guidelines 31
4.3.3 Mitigation Proposals....36
4.3.4 Monitoring Requirements for Mitigation Areas....37
4.3.5 Protection of Mitigation Areas....37
4.3.6 Mitigation Success 37
4.3.7 Financial Responsibility for Mitigation....38
4.3.8 Real Property Conveyances 42
4.3.9 Mitigation Reduction Through a Melaleuca Eradication Program 42
4.4 Mitigation Banking....49
4.4.1 Intent....49
4.4.2 Use of a Mitigation Bank....49

TABLE OF CONTENTS

Page

4.4.3 Criteria for Establishing a Mitigation Bank 50
4.4.4 Permit Applications for an Individual or Conceptual Approval Environmental Resource Permits for a Mitigation Bank..... 50
4.4.5 Establishment of Mitigation Credits..... 53
4.4.6 Contribution of Lands..... 54
4.4.7 Contribution of Funds..... 55
4.4.8 Mitigation Service Area 55
4.4.9 Land Use Restrictions on Mitigation Banks..... 56
4.4.10 Financial Responsibility..... 57
4.4.11 Individual or Conceptual Approval Environmental Resource Permit for a Mitigation Bank..... 61
4.4.12 Surrender, Transfer, or Modification of an Individual or Conceptual Approval Environmental Resource Permits for a Mitigation Bank 62
4.4.13 Department of Environmental Protection Mitigation Banks 63
4.5 Formal Determination of Landward Extent of Wetlands and Other Surface Waters..... 66
4.5.1 Procedure..... 66
4.5.2 Types of Formal Determinations 66
4.5.3 Locating the Surface Waters and Wetlands Boundary Line68
4.5.4 Duration..... 68
4.5.5 Formal Determinations for Properties with an Existing Formal Determination..... 68
4.5.6 Nonbinding Determinations..... 68

5.0 Water Quality Criteria 69
5.1 State Standards 69
5.2 Retention/Detention Criteria 69
5.2.1 Volumetric Requirements 69
5.2.2 Land Use and Coverage Criteria..... 69
5.3 Incorporation of Natural Areas and Existing Water Bodies..... 71
5.3.1 Natural Water Bodies and Existing Water Bodies 71
5.4 Underground Exfiltration Systems 71
5.5 Sewage Treatment Percolation Ponds 72
5.6 Criteria for Creation of Water Bodies..... 72
5.7 Impervious Areas..... 72
5.8 Stagnant Water Conditions..... 72
5.9 Water Quality Monitoring 72
5.10 Solid Waste Facilities 74

TABLE OF CONTENTS

Page

6.0 Water Quantity Criteria 77
- 6.1 General 77
- 6.2 Discharge Rate 77
- 6.3 Design Storm 77
- 6.4 Flood Protection of Building Floors 77
- 6.5 Flood Protection of Roads and Parking Lots 77
- 6.6 Flood Plain Encroachment 78
- 6.7 Historic Basin Storage 78
- 6.8 Offsite Lands 78
- 6.9 Minimum Drainage 78
- 6.10 Overdrainage and Water Conservation 79
- 6.11 Detention and Control Elevations 80
- 6.12 Lake-Wetland Separation 80
- 6.13 Water Supply Sources 81

7.0 Water Management System Design and Construction Criteria 82
- 7.1 Discharge Structures 82
- 7.2 Control Devices/Bleed-down Mechanisms for Detention Systems 83
- 7.3 Dry Retention/Detention Areas (Not Applicable to Natural or Mitigation Wetland Areas) 83
- 7.4 Wet Retention/Detention Area Dimensional Criteria (As Measured at or from the Control Elevation) 83
- 7.5 Maintenance Access and Easements 84
- 7.6 Exfiltration Systems 85

8.0 Required Design Information and Assumptions 86
- 8.1 Antecedent Conditions 86
- 8.2 Rainfall 86
- 8.3 Evapotranspiration 87
- 8.4 Storage 87
  - 8.4.1 Open Surface 87
  - 8.4.2 Ground 87
- 8.5 Infiltration and Percolation 88
  - 8.5.1 Ground Surface 88
  - 8.5.2 Subsurface 88
- 8.6 Runoff 88
- 8.7 Receiving Water Stage 88
  - 8.7.1 Regulated Systems 88
  - 8.7.2 Non-regulated Systems 89
  - 8.7.3 Any System 89
- 8.8 Discharge 89
  - 8.8.1 Allowable Discharges 89
  - 8.8.2 Non-urban Gravity Systems 89

TABLE OF CONTENTS

Page

9.0 Operating Entity Requirements 90
9.1 General Requirements 90
9.2 Association Requirements 90

10.0 Surface Water Management System Certification and Operation 94
10.1 Construction Completion Certification 94
10.2 Construction Completion Certification for Phased Projects 95
10.3 Operation Phase Becoming Effective 95

Appendices
(Appendices 1, 4, 5, 7 and 8 have been repealed.)

2 Allowable Discharge Formulas for South Florida Water Management District Canals
3 Urban Retention/Detention
6 Above Ground Impoundments

BASIS OF REVIEW FOR ENVIRONMENTAL RESOURCE PERMIT APPLICATIONS WITHIN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT

September 2003

1.0 Introduction

2.0 Definitions

3.0 General Review Requirements

4.0 Environmental Criteria

5.0 Water Quality Criteria

6.0 Water Quantity Criteria

7.0 Water Management System Design and Construction Criteria

8.0 Required Design Information and Assumptions

9.0 Operating Entity Requirements

10.0 Surface Water Management System Certification and Operation

1.0 INTRODUCTION

1.1 Objectives -

Under Part IV of Chapter 373, F.S., and Chapters 40E-4, 40E-40, and 40E-400, F.A.C., the District is responsible for the permitting of construction, alteration, operation, maintenance, removal and abandonment of surface water management systems within its jurisdictional boundaries. The objective of this document is to identify the permit review criteria and information used by District staff when reviewing permit applications.

The objective of the permit application review process is to insure that the permit authorizes activities which are not harmful to the water resources of the District and are not inconsistent with water resource objectives of the District. This document has been adopted by reference in Rule 40E-4.091(1)(a), F.A.C.

1.2 Application Review Process -

The District issues three types of environmental resource permits: conceptual approvals and individual permits pursuant to Chapter 40E-4, F.A.C., and general permits (standard,

no notice or noticed) pursuant to Chapters 40E-40 and 40E-400, F.A.C. Conceptual and individual mitigation bank permits are also types of environmental resource permit. Although the processes for these three permits differ administratively, District staff review submitted information in the same manner, using the same basic technical procedures.

1.2.1 Application Form -

An applicant for an environmental resource individual or general permit for the construction, alteration, operation, maintenance, removal and abandonment of a surface water management system, including dredging and filling, shall supply all information identified in Rules 40E-4.101, 40E-40.112, or 40E-400.211, F.A.C., as applicable to the specific project. The District welcomes the submittal of any additional information which the applicant feels will assist the District with its review. Since review time is dependent on information sufficiency, it is to the applicant's benefit to timely submit information to allow application review to proceed without delay. District staff are available on request for non-binding, pre-application meetings to offer assistance in application preparation.

1.3 Criteria Objectives -

The criteria contained herein were established with the primary goal of meeting District water resource objectives as set forth in Chapter 373, F.S. Performance criteria are used where possible. Other methods of meeting overall objectives and which meet the conditions for issuance set forth in Rules 40E-4.301 and 40E-4.302, F.A.C., will be considered by staff or presented to the District Governing Board for consideration. Compliance with the criteria herein constitutes a presumption that the project proposal is in conformance with the conditions for issuance set forth in Rules 40E-4.301 and 40E-4.302, F.A.C.

1.4 Simultaneous Reviews -

It is recommended that the applicant seek simultaneous reviews from all federal, state, regional or local governmental agencies with jurisdiction over the proposed project. It is also in the best interest of the applicant to contact all interested and affected persons prior to submitting a formal environmental resource permit application. Advance communication facilitates the permitting process. The applicant is encouraged to submit summaries of meetings and copies of responses from interested persons with the application.

2.0 DEFINITIONS

2.1 "Banker" - An entity that creates, operates, manages, or maintains a Mitigation Bank pursuant to a Mitigation Bank Permit.

2.2 "Control device" - Element of a discharge structure which allows the gradual release of water under controlled conditions. Sometimes referred to as the bleed-down mechanism, or "bleeder".

2.3 "Control elevation" - The lowest elevation at which water can be released through the control device.

2.4 "Creation" - The establishment of new wetlands or surface waters by conversion of other land forms.

2.5 "Department" - The Department of Environmental Protection.

2.6 "Detention" - The delay of stormwater runoff prior to discharge into receiving waters.

2.7 "Detention volume" - The volume of open surface storage behind the discharge structure between the overflow elevation and control elevation.

2.8 "Ecological Value" - The value of functions performed by wetlands and other environmentally sensitive areas. These functions include providing habitat for wildlife, corridors for wildlife movement, food chain support, groundwater rechrge, water storage and flow attenuation, and water quality enhancement.

2.9 "Elevation" - Height in feet above mean sea level according to National Geodetic Vertical Datum (NGVD).

2.10 "Endangered species" - Those animal species which are listed in Section 39-27.003, F.A.C., and those plant species which are listed as endangered in 50 Code of Federal Regulations 17.12.

2.11 "Enhancement" - Improving the ecological value of wetlands, other surface waters, or uplands that have been degraded in comparison to their historic condition.

2.12 "Estuary" - A semienclosed, naturally existing coastal body of water which has a free connection with the open sea and within which seawater is measurably diluted with fresh water derived from riverine systems.

2.13 "Existing nesting or denning" - As used in Section 4.2.7, means an upland site is currently being used for nesting or denning, or is expected, based on reasonable scientific judgement, to be used for such purposes based upon past nesting or denning at the site.

2.14 "Historic discharge" - The peak rate at which runoff leaves a parcel of land by gravity in an undisturbed/natural state, or the legally allowable discharge in effect at the time of permit application.

2.15 "Impervious" - Land surfaces which do not allow, or minimally allow, the penetration of water. Examples include building roofs, normal concrete and asphalt pavements, and some fine grained soils such as clays.

2.16 "Isolated Wetland" - Any wetland without a direct hydrologic connection to a lake, stream, estuary, or marine water.

2.17 "Lagoon" - A naturally existing coastal zone depression which is below mean high water and which has permanent or ephemeral communications with the sea, but which is protected from the sea by some type of naturally existing barrier.

2.18 "Listed Species" - Those animals species which are endangered, threatened or of special concern and are listed in Section 39-27.003, 39-27.004 and 39-27.005, F.A.C., and those plant species listed in 50 Code of Federal Regulation 17.12, when such plants are found to be located in a wetland or other surface water.

2.19 "Mitigation" - An action or series of actions to offset the adverse impacts that would otherwise cause a regulated activity to fail to meet the criteria set forth in sections 4.2 and 4.2.8.2. Mitigation usually consists of restoration, enhancement, creation, preservation, or a combination thereof.

2.20 "Mitigation Bank" - A project undertaken to provide for the withdrawal of mitigation credits to offset adverse impacts.

2.21 "Mitigation Bank Permit" - A permit issued to a banker to construct, operate, manage and maintain a Mitigation Bank.

2.22 "Mitigation Credit" - A unit of measure which represents the increase in ecological value resulting from restoration, enhancement, preservation, or creation activities.

2.23 "Mitigation Service Area" - The geographic area within which Mitigation Credits from a Mitigation Bank may be used to offset adverse impacts of activities regulated under Part IV of Chapter 373, F.S.

2.24 "Other Surface Waters" - Means surface waters as described and delineated pursuant to Section 62-340.600, F.A.C., as ratified by Section 373.4211, F.S., other than wetlands.

2.25 "Overflow elevation" - Design elevation of a discharge structure at which, or below which, water is contained behind the structure, except for that which leaks out, or bleeds out, through a control device down to the control elevation.

2.26 "Preservation" - The protection of wetlands, other surface waters or uplands from adverse impacts by placing a conservation easement or other comparable land use restriction over the property or by donation of fee simple interest in the property.

2.27 "Regional Watershed" - As used in subsection 4.4, a regional watershed means a watershed as delineated in Figure 4.4-1.

2.28 "Regulated activity" - The construction, alteration, operation, maintenance, abandonment or removal of a surface water management system, including dredging and filling, regulated pursuant to Part IV, Chapter 373, F.S.

2.29 "Restoration" - Converting back to a historic condition those wetlands, surface waters, or uplands which currently exist as a land form which differs from the historic condition.

2.30 "Retention" - The prevention of stormwater runoff from direct discharge into receiving waters; included as examples are systems which discharge through percolation, exfiltration, filtered bleed-down and evapotranspiration processes.

2.31 "Retention/detention area (dry)" - Water storage area with bottom elevation at least one foot above the control elevation of the area. Sumps, mosquito control swales and other minor features may be at a lower elevation.

2.32 "Retention/detention area (wet)" - A water storage area with bottom elevation lower than one foot above the control elevation of the area.

2.33 "Seawall" - A manmade wall or encroachment, except riprap, which is made to break the force of waves and to protect the shore from erosion.

2.34 "Species of Special Concern" - Those animal species listed in Section 39-27.005, F.A.C.

2.35 "Staff Report" - A written report prepared by District Staff advising the Governing Board of its conclusions and recommendations based on review of an application. The description of the project in the staff report shall take precedence over application data contained in District permit files, since numerous project changes are often made by applicants during application processing, the results of which may only be reflected in the staff report. Staff reports may be prepared for General Permits. In addition, staff reports serve as notice of proposed agency action.

2.36 "Surface Water Management System" or "System" - A stormwater management system, dam, impoundment, reservoir, appurtenant work or works, or any combination thereof. The terms "surface water management system" of "system" include areas of dredging or filling as defined by Section 373.403(13) and (14), F.S., respectively.

2.37 "Threatened species" - Those animal species listed in Section 39-27.004, F.A.C., and those plant species which are listed as threatened in 50 Code of Federal Regulations 17.12.

2.38 "Water management areas" - Areas to be utilized for the conveyance, treatment or storage of storm water.

2.39 "Wetlands" - Those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated

soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptation, have the ability to grow, reproduce, or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto. The landward extent of wetlands shall be delineated pursuant to Sections 62-340.100 through 62-340.550, F.A.C., as ratified by Section 373.4211, F.S.

3.0 GENERAL REVIEW REQUIREMENTS

3.1 Development of Regional Impact -

Projects which are or presumptively may be a Development of Regional Impact (DRI) pursuant to Section 380.0651, F.S., may not in all cases meet local government DRI requirements. Therefore, it is strongly recommended that the applicant procure a final approved Development Order (DO) issued by the affected local government prior to initiating permitting proceedings with the District. Exceptions to this recommendation occur in the following situations:

(a) When the applicant has a signed Preliminary Development Agreement with the Florida Department of Community Affairs which allows a specified portion of the proposed development to proceed prior to the issuance of a DO, pursuant to Section 380.06(8), F.S., or

(b) When the applicant has received a Binding Letter of Interpretation Determination from the Florida Department of Community Affairs which finds that the project is not required to comply with the DRI review requirements of Section 380.06, F.S., or

(c) When the applicant has applied for conceptual agency review pursuant to Section 380.06(9), F.S., concurrently with the filing of a DRI Application for Development Approval (ADA) and any applicable Local Government Comprehensive Plan amendments pursuant to Section 380.06(9), F.S.

3.2 Water and Wastewater Service –

(a) Potable water, irrigation and wastewater facilities must be identified. An applicant for an environmental resource permit must provide information on how these services are to be provided. If wastewater disposal is accomplished on-site, additional information shall be requested regarding separation of waste and surface water management systems.

(b) For environmental resource permits, if on-site consumptive water use withdrawals are also proposed for which a District water use permit is required, the environmental resource and water use permits must be processed simultaneously. These requirements are dependent upon site specific water resource limitations. It is recommended that the applicant contact District staff prior to filing an application to determine whether the proposed project necessitates simultaneous environmental resource and water use permitting.

3.3 Phased Projects –

Projects which are to be developed in phases will require the submission of a master plan of the applicant's contiguous land holdings. The primary interest of the District is to insure continuity between phases, satisfactory completeness of individual phases should

the project be incomplete as planned, and preservation of adjacent property owners' rights. This includes adjacent property owners created by the sale of incomplete phases. See Rule 40E-4.305 for further information regarding conceptual approval permits.

3.4 Pre-Application Meetings –

Pre-application meetings are encouraged, as are submissions of explanatory information such as site plans, topographic information, vegetation maps and soils information, which may be useful to the Staff in their preliminary review. Staff representations made at pre-application meetings are not binding on the District.

4.0 ENVIRONMENTAL CRITERIA

It is the intent of the Governing Board that the criteria in subsections 4.2 through 4.3.8 be implemented in a manner which achieves a programmatic goal, and a project permitting goal, of no net loss in wetland and other surface water functions. This goal shall not include projects that are exempt by statute or rule, or which are authorized by a noticed general permit. Unless exempt by statute or rule, permits are required for the construction, alteration, operation, maintenance, abandonment and removal of systems so that the District can conserve the beneficial functions of these wetlands or other surface waters.

4.1 Wetlands and other Surface Waters -

Wetlands are important components of the water resource because they often serve as spawning, nursery and feeding habitats for many species of fish and wildlife, and because they often provide important flood storage, nutrient cycling, detrital production, recreational and water quality functions. Other surface waters such as lakes, ponds, reservoirs, other impoundments, streams, rivers and estuaries also often provide such functions, and in addition may provide flood conveyance, navigation and water supply functions to the public. Not all wetlands or other surface waters provide all of these functions, nor do they provide them to the same extent. A wide array of biological, physical and chemical factors affect the functioning of any wetland or other surface water community. Maintenance of water quality standards in applicable wetlands and other surface waters is critical to their ability to provide many of these functions.

Unless exempted by statute or rule, permits are required for the construction, alteration, operation, maintenance, abandonment and removal of systems so that the District can conserve the beneficial functions of these communities. The term "systems" includes dredged or filled areas. When used in section 4.0 of the Basis of Review, "wetlands and other surface waters" means those areas as delineated pursuant to the methodology in Chapter 62-340, F.A.C. as ratified in section 373.4211, F.S.

4.1.1 Environmental Conditions for Issuance -

The District addresses the conservation of these beneficial functions in the permitting process by requiring applicants to provide reasonable assurances that the following conditions for issuance of permits, set forth in Sections 40E-4.301 (Conditions for Issuance) and 40E-4.302 (Additional Conditions for Issuance), F.A.C., are met. Applicants must provide reasonable assurance that:

(a) a regulated activity will not adversely impact the value of functions provided to fish and wildlife and listed species by wetlands and other surface waters (paragraph 40E-4.301(1)(d), F.A.C.)(see subsection 4.2.2);

(b) a regulated activity located in, on, or over wetlands or other surface waters, will not be contrary to the public interest, or if such an activity significantly degrades or is located within an Outstanding Florida Water, that the regu-

lated activity will be clearly in the public interest (paragraph 40E-4.302(1)(a), F.A.C.) (see subsections 4.2.3 through 4.2.3.7);

(c) a regulated activity will not adversely affect the quality of receiving waters such that the water quality standards set forth in chapters 62-3, 62-4, 62-302, 62-520, 62-522, and 62-550, F.A.C., including any anti-degradation provisions of sections 62-4.242(1)(a) and (b), 62-4.242(2) and (3), and 62-302.300 and any special standards for Outstanding Florida Waters and Outstanding National Resource Waters set forth in sections 62-4.242(2) and (3), F.A.C., will be violated (paragraph 40E-4.301(1)(e), F.A.C.).

(d) a regulated activity located in, adjacent to or in close proximity to Class II waters or located in waters classified by the Department as approved, restricted, or conditionally restricted for shellfish harvesting as set forth in Chapter 16R-7, F.A.C., will comply with the additional criteria in subsection 4.2.5 of the Basis of Review (paragraph 40E-4.302(1)(c), F.A.C.;

(e) the construction of vertical seawalls in estuaries and lagoons will comply with the additional criteria in subsection 4.2.6 of the Basis of Review; (paragraph 40E-4.302(1)(d), F.A.C.)

(f) a regulated activity will not cause adverse secondary impacts to the water resources (paragraph 40E-4.301(1)(f), F.A.C.) (see subsection 4.2.7);

(g) a regulated activity will not cause unacceptable cumulative impacts upon wetlands and other surface waters (paragraph 40E-4.302(1)(b), F.A.C.) (see subsections 4.2.8 through 4.2.8.2);

4.2 Environmental Review Criteria –

Compliance with the conditions for issuance in subsection 4.1.1 will be determined through compliance with the criteria explained in subsections 4.2 - 4.3.8 of this Basis of Review.

4.2.1 Elimination or Reduction of Impacts -

The degree of impact to wetland and other surface water functions caused by a proposed system, whether the impact to these functions can be mitigated and the practicability of design modifications for the site, as well as alignment alternatives for a proposed linear system, which could eliminate or reduce impacts to these functions, are all factors in determining whether an application will be approved by the District. Design modifications to reduce or eliminate adverse impacts must be explored, as described in subsection 4.2.1.1. Any adverse impacts remaining after practicable design modifications have been implemented may be offset by mitigation as described in subsections 4.3 - 4.3.9. An applicant may propose mitigation, or the District may suggest mitigation, to offset the adverse impacts caused by regulated activities as identified in sections 4.2 - 4.2.8.2. To receive District approval, a system cannot cause a net adverse impact on wetland func-

tions and other surface water functions which is not offset by mitigation.

4.2.1.1 Except as provided in subsection 4.2.1.2, if the proposed system will result in adverse impacts to wetland functions and other surface water functions such that it does not meet the requirements of sections 4.2.2 through 4.2.3.7, then the District in determining whether to grant or deny a permit shall consider whether the applicant has implemented practicable design modifications to reduce or eliminate such adverse impacts.

The term "modification" shall not be construed as including the alternative of not implementing the system in some form, nor shall it be construed as requiring a project that is significantly different in type or function. A proposed modification which is not technically capable of being done, is not economically viable, or which adversely affects public safety through the endangerment of lives or property is not considered "practicable". A proposed modification need not remove all economic value of the property in order to be considered not "practicable". Conversely, a modification need not provide the highest and best use of the property to be "practicable". In determining whether a proposed modification is practicable, consideration shall also be given to the cost of the modification compared to the environmental benefit it achieves.

4.2.1.2 The District will not require the applicant to implement practicable design modifications to reduce or eliminate impacts when:

(a) the ecological value of the function provided by the area of wetland or other surface water to be adversely affected is low based on site specific analysis using the factors in subsection 4.2.2.3, and the proposed mitigation will provide greater long term ecological value than the area of wetland or other surface water to be adversely affected, or

(b) the applicant proposes mitigation that implements all or part of a plan that provides regional ecological value and that provides greater long term ecological value than the area of wetland or other surface water to be adversely affected.

4.2.1.3 Should such mutual consideration of modification and mitigation not result in a permittable system, the District must deny the application. Nothing herein shall imply that the District may not deny an application for a permit as submitted or modified, if it fails to meet the conditions for issuance, or that mitigation must be accepted by the District.

4.2.2 Fish, Wildlife, Listed Species and their Habitats

Pursuant to paragraph 4.1.1(a), an applicant must provide reasonable assurances that a regulated activity will not impact the values of wetland and other surface water functions so as to cause adverse impacts to:

(a) the abundance and diversity of fish, wildlife and listed species; and

(b) the habitat of fish, wildlife and listed species.

In evaluating whether an applicant provided reasonable assurances under subsection 4.2.2, deminimis effects shall not be considered adverse impacts for the purposes of this subsection.

As part of the assessment of the impacts of regulated activities upon fish and wildlife and their habitats, the District will provide a copy of all notices of applications for standard general, individual, and conceptual approval permits which propose regulated activities in, on or over wetlands or other surface waters to the Florida Game and Fresh Water Fish Commission for review and comment. In addition, the District staff may solicit comments from the Florida Game and Fresh Water Fish Commission regarding other applications to assist in the assessment of potential impacts to wildlife and their habitats, particularly with regard to listed wildlife species. Where proposed activities have a potential to impact listed marine species, the District will provide a copy of the above-referenced types of applications to the Department of Environmental Protection, Office of Protected Species.

The need for a wildlife survey will depend upon the likelihood that the site is used by listed species, considering site characteristics and the range and habitat needs of such species, and whether the proposed system will impact that use such that the criteria in subsection 4.2.2 -4.2.2.3 and subsection 4.2.7 will not be met. As part of assessing the likelihood of use of a site by listed species, the District will consult scientific literature. Survey methodologies employed to inventory the site must provide reasonable assurances regarding the presence or absence of the subject listed species.

4.2.2.1 Compliance with subsections 4.2.2 - 4.2.3.7, 4.2.5 - 4.3.8 will not be required for regulated activities in isolated wetlands less than one half acre in size, unless:

(a) the wetland is used by threatened or endangered species.

(b) the wetland is located in an area of critical state concern designated pursuant to Chapter 380, F.S., or

(c) the wetland is connected by standing or flowing surface water at seasonal high water level to one or more wetlands, and the combined wetland acreage so connected is greater than one half acre.

(d) the District establishes that the wetland to be impacted is, or several such wetlands to be impacted are, cumulatively, of more than minimal value to fish and wildlife based on the factors in subsection 4.2.2.3.

4.2.2.2 Alterations in wholly owned ponds that were completely constructed in uplands and which are less than one acre in area and alterations in drainage ditches that were constructed in uplands will not be required to comply with the provisions of subsections 4.2.2 -4.2.2.3, 4.2.3 - 4.2.3.7, 4.2.5 - 4.3.8 unless those ponds or ditches provide significant habitat for threatened or endangered species. This means that, except in cases where those ponds or ditches provide significant habitat for threatened or endangered species, the only environmental criteria that will apply to those ponds or ditches are

those included in subsections 4.2.4 - 4.2.4.5 and 4.2.2.4. This provision shall only apply to those ponds and ditches which were constructed before a permit was required under Part IV, Chapter 373, F.S. or were constructed pursuant to a permit under Part IV, Chapter 373, F.S. This provision does not apply to ditches constructed to divert natural stream flow.

4.2.2.3 The assessment of impacts expected as a result of proposed activities on the values of functions that any wetland or other surface water provides to fish, wildlife, and listed species will be based on a review of pertinent scientific literature, ecologic and hydrologic information, and field inspection. When assessing the value of such functions, the factors which the District will consider are:

(a) condition - this factor addresses whether the wetland or other surface water is in a high quality state or has been the subject of past alterations in hydrology, water quality, or vegetative composition. However, areas impacted by activities in violation of a District or Department rule, order, or permit adopted or issued pursuant to Chapter 373, F.S. or Part VIII, Chapter 403, F.S. (1984, as amended), will be evaluated as if the activity had not occurred.

(b) hydrologic connection - this factor addresses the nature and degree of off-site connection which may provide benefits to off-site water resources through detrital export, base flow maintenance, water quality enhancement or the provision of nursery habitat.

(c) uniqueness - this factor addresses the relative rarity of the wetland or other surface water and its floral and faunal components in relation to the surrounding regional landscape.

(d) location - this factor addresses the location of the wetland or other surface water in relation to its surroundings. In making this assessment, the District will consult reference materials such as the Florida Natural Areas Inventory, Local Government Comprehensive Plans, and maps created by governmental agencies identifying lands with high ecological value.

(e) fish and wildlife utilization - this factor addresses use of the wetland or other surface water for resting, feeding, breeding, nesting or denning by fish and wildlife, particularly those which are listed species.

4.2.2.4 Water Quantity Impacts to Wetlands and Other Surface Waters Pursuant to paragraph 4.1.1(a), an applicant must provide reasonable assurance that the regulated activity will not change the hydroperiod of a wetland or other surface water, so as to adversely affect wetland functions or other surface water functions as follows:

(a) Whenever portions of a system, such as constructed basins, structures, stormwater ponds, canals, and ditches, are reasonably expected to have the effect of reducing the depth, duration or frequency of inundation or sat-

uration in a wetland or other surface water, the applicant must perform an analysis of the drawdown in water levels or diversion of water flows resulting from such activities and provide reasonable assurance that these drawdowns or diversions will not adversely impact the functions that wetlands and other surface waters provide to fish and wildlife and listed species.

(b) Increasing the depth, duration, or frequency of inundation through changing the rate or method of discharge of water to wetlands or other surface waters or by impounding water in wetlands or other surface waters must also be addressed to prevent adverse effects to functions that wetlands and other surface waters provide to fish and wildlife and listed species. Different types of wetlands respond differently to increased depth, duration, or frequency of inundation. Therefore, the applicant must provide reasonable assurance that activities that have the potential to increase discharge or water levels will not adversely affect the functioning of the specific wetland or other surface water subject to the increased discharge or water level.

(c) Whenever portions of a system could have the effect of altering waterlevels in wetlands or other surface waters, applicants shall be required to: monitor the wetland or other surface waters to demonstrate that such alteration has not resulted in adverse impacts; or calibrate the system to prevent adverse impacts. Monitoring parameters, methods, schedules, and reporting requirements shall be specified in permit conditions.

4.2.3 Public Interest Test

In determining whether a regulated activity located in, on, or over surface waters or wetlands is not contrary to the public interest, or if such an activity significantly degrades or is within an Outstanding Florida Water, that the regulated activity is clearly in the public interest, the District shall consider and balance, and an applicant must address, the following criteria:

(a) Whether the regulated activity will adversely affect the public health, safety, or welfare or the property of others (40E-4.302(1)(a)1., F.A.C.);

(b) Whether the regulated activity will adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats (40E-4.302(1)(a)2., F.A.C.);

(c) Whether the regulated activity will adversely affect navigation or the flow of water or cause harmful erosion or shoaling (40E-4.302(1)(a)3., F.A.C.);

(d) Whether the regulated activity will adversely affect the fishing or recreational values or marine productivity in the vicinity of the activity (40E-4.302(1)(a)4., F.A.C.);

(e) Whether the regulated activity will be of a temporary or permanent nature (40E-4.302(a)5., F.A.C.);

(f) Whether the regulated activity will adversely affect or will enhance significant historical and archaeological resources under the provisions of section 267.061, F.S. (40E-4.302(1)(a)6., F.A.C.); and

(g) The current condition and relative value of functions being performed by areas affected by the proposed regulated activity (40E-4.302(1)(a)7., F.A.C.).

4.2.3.1 Public health, safety, or welfare or the property of others In reviewing and balancing the criterion regarding public health, safety, welfare and the property of others in paragraph 4.2.3(a), the District will evaluate whether the regulated activity located in, on, or over wetlands or other surface waters will cause:

(a) an environmental hazard to public health or safety or improvement to public health or safety with respect to environmental issues. Each applicant must identify potential environmental public health or safety issues resulting from their project. Examples of these type of issues include: mosquito control; proper disposal of solid, hazardous, domestic or industrial waste; aids to navigation; hurricane preparedness or cleanup; environmental remediation, enhancement or restoration; and similar environmentally related issues. For example, the installation of navigational aids may improve public safety and may reduce impacts to public resources.

(b) impacts to areas classified by the Department as approved, conditionally approved, restricted or conditionally restricted for shellfish harvesting. Activities which would cause closure or a more restrictive classification or management plan for a shellfish harvesting area would result in a negative factor in the public interest balance with respect to this criterion.

(c) flooding or alleviate existing flooding on the property of others. There is at least a neutral factor in the public interest balance with respect to the potential for causing or alleviating flooding problems if the applicant meets the water quantity criteria in section six of this Basis of Review.

(d) environmental impacts to the property of others. For example, the construction of a ditch that results in drawdown impacts to a wetland on an adjacent property would be an environmental impact to the property of others. The District will not consider impacts to property values or taxes.

4.2.3.2 Fish and Wildlife and their Habitats

The District's public interest review of that portion of a proposed system in, on, or over wetlands and other surface waters for impacts to "the conservation of fish and wildlife, including endangered or threatened species, or their habitats" is encompassed within the required review of the entire system under subsection 4.2.2. An applicant must always provide the reasonable assurances required under subsection 4.2.2.

4.2.3.3 Navigation, Water Flow, Erosion and Shoaling

In reviewing and balancing the criterion on navigation, erosion and shoaling in paragraph 4.2.3(c), the District will evaluate whether the regulated activity located in, on or over wetlands or other surface waters will:

(a) significantly impede navigability or enhance navigability. The District will consider the current navigational uses of the surface waters and will not speculate on uses which may occur in the future. Applicants proposing to construct bridges or other traversing works must address adequate horizontal and vertical clearance for the type of watercraft currently navigating the surface waters. Applicants proposing to construct docks, piers and other works which extend into surface waters must address the continued navigability of these waters. An encroachment into a marked or customarily used navigation channel is an example of a significant impediment to navigability. Applicants proposing temporary activities in navigable surface waters, such as the mooring of construction barges, must address measures for clearly marking the work as a hazard to navigation, including nighttime lighting. The addition of navigational aids may be beneficial to navigation. If and applicant has a U.S. Coast Guard permit issued pursuant to 14 U.S.C. Section 81 (1993), 33 C.F.R. Section 62 (1993) for a regulated activity in, on or over wetlands or other surface waters, submittal of this permit with the application may assist the applicant in addressing this criterion.

(b) cause or alleviate harmful erosion or shoaling. Applicants proposing activities such as channel relocation, artificial reefs, construction of jetties, breakwaters, groins, bulkheads and beach renourishment must address existing and expected erosion or shoaling in the proposed design. Compliance with erosion control best management practices referenced in the Florida Development Manual: A Guide to Sound Land and Water Management (1988) will be an important consideration in addressing this criterion. Each permit will have a general condition which requires applicants to utilize appropriate erosion control practices and to correct any adverse erosion or shoaling resulting from the regulated activities.

(c) significantly impact or enhance water flow. Applicants must address obstructions to sheet flow by assessing the need for structures which minimize the obstruction such as culverts or spreader swales in fill areas. Compliance with the water quantity criteria found in subsection 4.2.2.4 shall be an important consideration in addressing this criterion.

4.2.3.4 Fisheries, Recreation, Marine Productivity

In reviewing and balancing the criterion regarding fishing or recreational values and marine productivity in paragraph 4.2.3(d), the District will evaluate whether the regulated activity in, on, or over wetlands or other surface waters will cause:

(a) adverse effects to sport or commercial fisheries or marine productivity. Examples of activities which may adversely affect fisheries or marine productivity are the elimination or degradation of fish nursery habitat, and change in ambient water temperature, change in normal salinity regime, reduction in detrital export, change in nutrient levels or other adverse affects on populations of native aquatic organisms.

(b) adverse effects or improvements to existing recreational uses of a wetland or other surface water. Wetlands and other surface waters may provide recreational uses such as boating, fishing, swimming, skiing, hunting and birdwatching. An example of potential adverse effects to recreational uses is the construction of a traversing work, such as a road crossing a waterway, which could impact the current use of the waterway for waterskiing and boating.

4.2.3.5 Temporary or Permanent Nature

When evaluating the other criteria in subsection 4.2.3, the District will consider the frequency and duration of the impacts caused by the proposed activity. Temporary impacts will be considered less harmful than permanent impacts of the same nature and extent.

4.2.3.6 Historical and Archaeological Resources

In reviewing and balancing the criterion regarding historical and archaeological resources in paragraph 4.2.3(f), the District will evaluate whether the regulated activity located in, on, or over wetlands or other surface waters will impact significant historical or archaeological resources. The District will provide copies of all conceptual, individual and standard general permit applications to the Division of Historical Resources of the Department of State and solicit their comments regarding whether the regulated activity may adversely affect significant historical or archaeological resources. The applicant will be required to perform an archaeological survey and to develop and implement a plan as necessary to demarcate and protect the significant historical and archaeological resources, if such resources are reasonably expected to be impacted by the regulated activity.

4.2.3.7 Current Condition and Relative Value of Functions

When evaluating other criteria in subsection 4.2.3, the District will consider the current condition and relative value of the functions performed by wetlands and other surface waters affected by the proposed regulated activity. Wetlands and other surface waters which have had their hydrology, water quality or vegetative composition permanently impacted due to past legal alterations or occurrences, such as infestation with exotic species, usually provide lower habitat value to fish and wildlife. However, if the wetland or other surface water is currently degraded, but is still providing some beneficial functions, consideration will be given to whether the regulated activity will further reduce or eliminate those functions. The District will also evaluate the predicted ability of the wetlands or other surface waters to maintain their current functions as part of the proposed

system once it is developed. Where previous impacts to a wetland or other surface water are temporary in nature, consideration will be given to the inherent functions of these areas, relative to seasonal hydrologic changes, and expected vegetative regeneration and projected habitat functions if the use of the subject property were to remain unchanged. When evaluating impacts to mitigation sites which have not reached success pursuant to subsection 4.3.6, the District shall consider the functions that the mitigation site was intended to offset, and any additional delay or reduction in offsetting those functions that may be caused by impacting the mitigation site. Previous construction or alteration undertaken in violation of Chapter 373, F.S., or District rule, order or permit will not be considered as having diminished the condition and relative value of a wetland or other surface water.

4.2.4 Water quality

Pursuant to paragraph 4.1.1(c), an applicant must provide reasonable assurance that the regulated activity will not violate water quality standards in areas where water quality standards apply.

Reasonable assurances regarding water quality must be provided both for the short term and the long term, addressing the proposed construction, alteration, operation, maintenance, removal and abandonment of the system. The following requirements are in addition to the water quality requirements found in section five of this Basis of Review.

4.2.4.1 Short Term Water Quality Considerations

The applicant must address the short term water quality impacts of a proposed system, including:

(a) providing turbidity barriers or similar devices for the duration of dewatering and other construction activities in or adjacent to wetlands or other surface waters.

(b) stabilizing newly created slopes or surfaces in or adjacent to wetlands and other surface waters to prevent erosion and turbidity.

(c) providing proper construction access for barges, boats and equipment to ensure that propeller dredging and rutting from vehicular traffic does not occur.

(d) maintaining construction equipment to ensure that oils, greases, gasoline, or other pollutants are not released into wetlands or other surface waters.

(e) controlling the discharge from spoil disposal sites.

(f) preventing any other discharge or release of pollutants during construction or alteration that will cause water quality standards to be violated.

4.2.4.2 Long Term Water Quality Considerations

The applicant must address the long term water quality impacts of a proposed system, including:

(a) the potential of a constructed or altered water body to violate water quality standards due to its depth or configuration. For example, the depth of water bodies must be designed to insure proper mixing so that the water quality standard for dissolved oxygen will not be violated in the lower levels of the water body, but the depth should not be so shallow that the bottom sediments are frequently resuspended by boat activity. Water bodies must be configured to prevent the creation of debris traps or stagnant areas which could result in violations of state water quality standards.

(b) long term erosion, siltation or propeller dredging that will cause turbidity violations.

(c) prevention of any discharge or release of pollutants from the system that will cause water quality standards to be violated.

4.2.4.3 Additional Water Quality Considerations for Docking Facilities

Docking facilities are potential sources of pollutants to wetlands and other surface waters. To provide the required reasonable assurance that water quality standards will not be violated, the following factors must be addressed by an applicant proposing the construction of a new docking facility, or the expansion of or other alteration of an existing docking facility that has the potential to adversely affect water quality:

(a) Hydrographic information or studies shall be required for docking facilities of greater than ten boat slips. Hydrographic information or studies also may be required for docking facilities of less than ten slips, dependent upon the site-features described in paragraph 4.2.4.3(b) below. In all cases, the need for a hydrographic study, and the complexity of the study, will be dependent upon the specific project design and the specific features of the project site.

(b) The purpose of the hydrographic information or studies is to document the flushing time (the time required to reduce the concentration of a conservative pollutant to ten percent of its original concentration) of the water at the docking facility. This information is used to determine the likelihood that the facility will accumulate pollutants to the extent that water quality violations will occur. Generally, a flushing time of less than or equal to four days is the maximum that is desirable for docking facilities. However, the evaluation of the maximum desirable flushing time also takes into consideration the size (number of slips) and configuration of the proposed docking facility; the amplitude and periodicity of the tide; the geometry of the subject waterbody; the circulation and flushing of the waterbody; the quality of the waters at the project site; the type and nature of the docking facility; the services provided at the docking facility; and the number and type of other sources of water pollution in the area.

(c) The level and type of hydrographic information or studies that will be required for the proposed docking facility will be determined based upon an analysis of site-specific characteristics. As compared to sites that flush in less than four days, sites where the flushing time is greater than four days generally will require additional, more complex levels of hydrographic studies or information to determine whether water quality standards can be expected to be violated by the facility. The degree and complexity of the hydrographic study will be dependent upon the types of considerations listed in paragraph 4.2.4.3.(b), including the potential for the facility, based on its design and location, to add pollutants to the receiving waters. Types of information that can be required include site-specific measurements of: waterway geometry, tidal amplitude, the periodicity of forces that drive water movement at the site, and water tracer studies that document specific circulation patterns.

(d) The applicant shall document, through hydrographic information or studies, that pollutants leaving the site of the docking facility will be adequately dispersed in the receiving water body so as to not cause violations of water quality standards based on circulation patterns and flushing characteristics of the receiving water body.

(e) In all cases, the hydrographic studies shall be designed to document the hydrographic characteristics of the project site and surrounding waters. All hydrographic studies must be based on the factors described in paragraphs (a)-(d) above. An applicant should consult with the District prior to conducting such a study.

(f) Fueling facilities shall be located and operated so that the potential for spills or discharges to surface waters and wetlands is minimized. Containment equipment and emergency response plans must be provided to ensure that the effects of spills are minimized.

(g) The disposal of domestic wastes from boat heads, particularly from liveaboard vessels, must be addressed to prevent improper disposal into wetlands or other surface waters. A liveaboard vessel shall be defined as a vessel docked at the facility that is inhabited by a person or persons for any five consecutive days or a total of ten days within a 30 day period.

(h) The disposal of solid waste, such as garbage and fish cleaning debris, must be addressed to prevent disposal into wetlands or other surface waters.

(i) Pollutant leaching characteristics of materials such as pilings and anti-fouling paints used on the hulls of vessels must be addressed to ensure that any pollutants that leach from the structures and vessels will not cause violations of water quality standards given the flushing at the site and the type, number and concentration of the likely sources of pollutants.

4.2.4.4 Temporary Mixing Zones

A temporary mixing zone for water quality during construction or alteration may be requested by the applicant. The District shall review such request pursuant to sections 62-4.242 and 62-4.244(5), in accordance with the Operating Agreement Concerning Regulation Under Part IV, Chapter 373, F.S. adopted by reference in Section 40E-4.091, F.A.C.

4.2.4.5 Where Ambient Water Quality does not Meet State Water Quality Standards

If the site of the proposed activity currently does not meet state water quality standards, the applicant must demonstrate compliance with the water quality standards by meeting the provisions in 4.2.4.1, 4.2.4.2, and 4.2.4.3, as applicable, and for the parameters which do not meet water quality standards, the applicant must demonstrate that the proposed activity will not contribute to the existing violation. If the proposed activity will contribute to the existing violation, mitigation may be proposed as described in subsection 4.3.1.4.

4.2.5 Class II Waters; Waters Approved for Shellfish Harvesting

The special value and importance of shellfish harvesting waters to Florida's economy as existing or potential sites of commercial and recreational shellfish harvesting and as a nursery area for fish and shellfish is recognized by the District. In accordance with paragraph 4.1.1(d), the District shall:

(a) deny a permit for a regulated activity in Class II waters which are not approved for shellfish harvesting unless the applicant submits a plan or proposes a procedure to protect those waters and waters in the vicinity. The plan or procedure shall detail the measures to be taken to prevent significant damage to the immediate project area and the adjacent area and shall provide reasonable assurance that the standards for Class II waters will not be violated;

(b) deny a permit for a regulated activity in any class of waters where the location of the system is adjacent or in close proximity to Class II waters, unless the applicant submits a plan or proposes a procedure which demonstrates that the regulated activity will not have a negative effect on the Class II waters and will not result in violations of water quality standards in the Class II waters; and

(c) deny a permit for a regulated activity that is located directly in Class II or Class III waters which are classified as approved, restricted, conditionally approved or conditionally restricted for shellfish harvesting. This provision shall not apply to maintenance dredging of navigational channels, the construction of shoreline protection structures, the installation of transmission and distribution lines for carrying potable water, electricity or communication cables in rights-of-way previously used for such lines, for clam and

oyster culture, and for private, single family boat docks that meet the following criteria for installation in such waters:

1. there shall be no more than two boats moored at the dock;

2. no overboard discharges of trash, human or animal waste, or fuel shall occur at the dock;

3. any non-water dependent structures, such as gazebos or fish cleaning stations, shall be located on the uplands;

4. prior to the mooring of any boat at the dock, there shall be existing structures with toilet facilities located on the uplands;

5. any proposed shelter shall not have enclosed sides;

6. the mooring area shall be located in waters sufficiently deep to prevent bottom scour by boat propellers; and

7. any structures located over grassbeds shall be designed so as to allow for the maximum light penetration practicable.

4.2.6 Vertical seawalls

(a) The construction of vertical seawalls in estuaries or lagoons is prohibited unless one of the following conditions exists:

1. the proposed construction is located within a port as defined in Section 315.02, F.S., or Section 403.021, F.S.;

2. the proposed construction is necessary for the creation of a marina, the vertical seawalls are necessary to provide access to watercraft, or the proposed construction is necessary for public facilities;

3. the proposed construction is to be located within an existing man-made canal and the shoreline of such canal is currently occupied in whole or in part by vertical seawalls; or

4. the proposed construction is to be conducted by a public utility when such utility is acting in the performance of its obligation to provide service to the public.

(b) When considering an application for a permit to repair or replace an existing vertical seawall, the District shall generally require such seawall to be faced with riprap material, or to be replaced entirely with riprap material unless a condition specified in subparagraphs 1.-4. above exists. Nothing in this subsection shall be construed to hinder any activity previously exempt or permitted, or those activities permitted pursuant to Chapter 161, F.S.

4.2.7 Secondary Impacts

Pursuant to paragraph 4.1.1(f), an applicant must provide reasonable assurances that a regulated activity will not cause adverse secondary impacts to the water resource, as described in paragraphs (a) through (d), below. Aquatic or wetland dependent fish and wildlife are an integral part of the water resources which the District is authorized to protect under Part IV, Chapter 373, F.S. Those aquatic or wetland dependent species which are listed as threatened, endangered or of special concern are particularly in need of protection.

A proposed system shall be reviewed under this criterion by evaluating the impacts to: wetland and surface water functions identified in subsection 4.2.2; water quality; upland habitat for aquatic or wetland dependent listed species; and historical and archaeological resources. Deminimis or remotely related secondary impacts will not be considered. Applicants may propose measures such as preservation to prevent secondary impacts. Such preservation shall comply with the land preservation provisions of subsection 4.3.8. If such secondary impacts can not be prevented, the applicant may propose mitigation measures as provided for in subsections 4.3 through 4.3.9. This secondary impact criterion consists of the following four parts:

(a) An applicant shall provide reasonable assurance that the secondary impacts from construction, alteration, and intended or reasonably expected uses of a proposed system will not cause violations of water quality standards or adverse impacts to the functions of wetlands or other surface waters, as described in subsection 4.2.2. Impacts such as boat traffic generated by a proposed dock, boat ramp or dry dock facility, which causes an increased threat of collision with manatees; impacts to wildlife from vehicles using proposed roads in wetlands or surface waters; impacts to water quality associated with the use of septic tanks or propeller dredging by boats and wakes from boats; and impacts associated with docking facilities as described in paragraphs 4.2.4.3(f) and (h), will be considered relative to the specific activities proposed and the potential for such impacts. Impacts of groundwater withdrawals upon wetlands and other surface waters that result from the use of wells permitted pursuant to Chapter 40E-2, F.A.C., shall not be considered under rules adopted pursuant to Part IV, Chapter 373, F.S., since these impacts are considered in the consumptive use permit application process.

Secondary impacts to the habitat functions of wetlands associated with adjacent upland activities will not be considered adverse if buffers, with a minimum width of 15' and an average width of 25', are provided abutting those wetlands that will remain under the permitted design, unless additional measures are needed for protection of wetlands used by listed species for nesting, denning, or critically important feeding habitat. The mere fact that a species is listed does not imply that all of its feeding habitat is critically important. Buffers shall remain in an undisturbed condition, except for drainage features such as spreader swales and discharge structures,

provided the construction or use of these features does not adversely impact wetlands. Where an applicant elects not to utilize buffers of the above described dimensions, buffers of different dimensions, measures other than buffers or information may be proposed to provide the required reasonable assurance.

Deminimis or remotely related secondary impacts such as changes in air quality due to increased vehicular traffic associated with road construction will not be considered unacceptable.

(b) An applicant shall provide reasonable assurance that the construction, alteration, and intended or reasonably expected uses of a system will not adversely impact the ecological value of uplands to aquatic or wetland dependent listed animal species for enabling existing nesting or denning by these species, but not including:

1. areas needed for foraging; or

2. wildlife corridors, except for those limited areas of uplands necessary for ingress and egress to the nest or den site from the wetlands or other surface water;

Table 4.2.7-1 identifies those aquatic or wetland dependent listed species that use upland habitats for nesting or denning.

For those aquatic or wetland dependent listed animal species for which habitat management guidelines have been developed by the U.S. Fish and Wildlife Service (USFWS) or the Florida Game and Fresh Water Fish Commission (FGFWFC), compliance with these guidelines will provide reasonable assurance that the proposed system will not adversely impact upland habitat functions described in paragraph (b). For those aquatic or wetland dependent listed animal species for which habitat management guidelines have not been developed or in cases where an applicant does not propose to use USFWS or FGFWFC habitat management guidelines, the applicant may propose measures to mitigate adverse impacts to upland habitat functions described in paragraph (b), provided to aquatic or wetland dependent listed animal species.

(c) In addition to evaluating the impacts in the area of any dredging and filling in, on, or over wetlands or other surface waters, and as part of the balancing review under subsection 4.2.3, the District will consider any other relevant activities that are very closely linked and causally related to any proposed dredging or filling which will cause impacts to significant historical and archaeological resources.

(d) An applicant shall provide reasonable assurance that the following future activities will not result in water quality violations or adverse impacts to the

functions of wetlands and other surface waters as described in subsection 4.2.2.:

1. additional phases or expansion of the proposed system for which plans have been submitted to the District or other governmental agencies; and

2. on-site and off-site activities regulated under Part IV, Chapter 373, F.S., or activities described in section 403.813(2), F.S., that are very closely linked and causally related to the proposed system.

As part of this review, the District will also consider the impacts of the intended or reasonably expected uses of the future activities on water quality and wetland and other surface water functions.

In conducting the analysis under paragraph (d)2., above, the District will consider those future projects or activities which would not occur but for the proposed system, including where the proposed system would be considered a waste of resources should the future project or activities not be permitted.

Where practicable, proposed systems shall be designed in a fashion which does not necessitate future impacts to wetland and other surface water functions. If future phases or project expansion have the potential to cause adverse secondary impacts, applicants must provide sufficient conceptual design information to provide reasonable assurance that these impacts can be successfully eliminated or offset.

System expansions and future system phases will be considered in the secondary impact analysis, and if the District determines that future phases of a system involve impacts that appear not to meet permitting criteria, the current application shall be denied unless the applicant can provide reasonable assurance that those future phases can comply with permitting criteria. One way for applicants to establish that future phases or system expansions do not have adverse secondary impacts is for the applicant to obtain a conceptual approval permit for the entire project.

4.2.8 Cumulative Impacts

Pursuant to paragraph 4.1.1(g), an applicant must provide reasonable assurances that a regulated activity will not cause unacceptable cumulative impacts upon wetlands and other surface waters within the same drainage basin as the regulated activity for which a permit is sought. The impact on wetlands and other surface waters shall be reviewed by evaluating the impacts to water quality as set forth in subsection 4.1.1(c) and by evaluating the impacts to functions identified in subsection 4.2.2. If an applicant proposes to mitigate these adverse impacts within the same drainage basin as the impacts, and if the mitigation fully offsets these impacts, the District will consider the regulated activity to have no unacceptable cumulative impacts upon wetlands and other surface water, and consequently the condition for issuance in section 4.1.1(g), will be satisfied. The drainage basins within the District are identified on Figure 4.2.8-1.

When adverse impacts to water quality or adverse impacts to the functions of wetlands and other surface water, as referenced in the paragraph above, are not fully offset within the same drainage as the impacts, than an applicant must provide reasonable assurance that the proposed system, when considered with the following activities, will not result in unacceptable cumulative impacts to water quality or the functions of wetlands and other surface waters, within the same drainage basin:

(a) Projects which are existing or activities regulated under Part IV, Chapter 373 which are under construction, or projects for which permits or determinations pursuant to Sections 373.421 or 403.914 have been sought.

(b) Activities which are under review, approved, or vested pursuant to Section 380.06 or other activities regulated under Part IV, Chapter 373 which may reasonably be expected to be located within wetlands or other surface waters, in the same drainage basin, based upon the comprehensive plans, adopted pursuant to Chapter 163 of the local governments having jurisdiction over the activities, or applicable land use restrictions and regulations.

Those activities listed in paragraphs (a) and (b) which have similar types of adverse impacts to those which will be caused by the proposed system will be considered. (All citations in paragraphs (a) and (b) refer to provisions of Florida Statutes.) Whenever mitigation located within the same drainage basin fully offsets the proposed impacts to wetland functions as described in section 4.2.2 and to water quality, then the regulated activity does not result in unacceptable cumulative impacts within the same drainage basin.

The cumulative impact evaluation is conducted using an assumption that reasonably expected future applications with like impacts will be sought, thus necessitating equitable distribution of acceptable impacts among future applications.

4.2.8.1 Cumulative impacts are considered unacceptable when the proposed system, considered in conjunction with the past, present, and future activities as described in 4.2.8, as set forth in subsection 4.1.1(c), would result in a violation of state water quality standards or significant adverse impacts to functions of wetlands or other surface waters, identified in subsection 4.2.2, within the same drainage basin when considering the basin as a whole.

4.2.8.2 Applicants may propose measures such as preservation to prevent cumulative impacts. Such preservation shall comply with the land preservation provisions in subsection 4.3.8. If unacceptable cumulative impacts are expected to occur, the applicant may propose mitigation measures as provided for in sections 4.3 through 4.3.8.

TABLE 4.2.7-1

LISTED WILDLIFE SPECIES THAT ARE AQUATIC OR WETLAND DEPENDENT AND THAT USE UPLAND HABITATS FOR NESTING OR DENNING

Fishes

Species of Special Concern
Rivulus marmoratus (mangrove rivulus; rivulus)

Reptiles

Endangered
Chelonia mydas mydas (Atlantic green turtle)
Crocodylus acutus (American crocodile)
Dermochelys coriacea (leatherback turtle; leathery turtle)
Eretmochelys imbricata imbricata (Atlantic hawksbill turtle)
Kinosternon bauri (striped mud turtle) LISTED ONLY IN LOWER KEYS
Lepidochelys kempi (Atlantic ridley turtle)

Threatened
Caretta caretta caretta (Atlantic loggerhead turtle)
Thamnophis sauritus sackeni (Florida (Keys) ribbon snake) LISTED ONLY IN LOWER KEYS

Species of special concern
Alligator mississippiensis (American alligator)
Graptemys barbouri (Barbour's map turtle; Barbour's sawback turtle)
Macroclemys temmincki (alligator snapping turtle)
Pseudemys concinna suwanniensis (Suwannee cooter)

Birds

Endangered
Ammodramus maritimus mirabilis (Cape Sable seaside sparrow)
Mycteria americana (wood stork)
Rostrhamus sociabilis (snail kite)

Threatened
Charadrius alexandrinus tenuirostris (southeastern snowy plover)
Charadrius melodus (piping plover)
Columba leucocephalus (white-crowned pigeon)
Grus canadensis pratensis (Florida sandhill crane)
Haliaeetus leucocephala (bald eagle)
Picoides borealis (red-cockaded woodpecker) THIS SPECIES IS WETLAND DEPENDENT ONLY IN LEE, COLLIER, AND CHARLOTTE COUNTIES
Polyborus plancus audubonii (Audubon's crested caracara)
Sterna antillarum (least tern)
Sterna dougallii (roseate tern)

Species of special concern
Ajaia ajaia (reseate spoonbill)

Ammodramus maritumus juncicolus (Wakulla seaside sparrow)
Ammodramus maritimus peninsulae (Scott's seaside sparrow)
Aramus quarauna (limpkin)
Cistothorus palustais griseus (Worthington's marsh wren)
Cistothorus palustris marianae (Marian's marsh wren)
Egretta caerulea (little blue heron)
Egretta rufescens (reddish egret)
Egretta thula (snowy egret)
Egretta tricolor (tricolored heron; Louisiana heron)
Eudocimus albus (white ibis)
Haematopus palliatus (American oystercatcher)
Pandion haliaetus (osprey) LISTED ONLY IN MONROE COUNTY
Pelecanus occidentalis (brown pelican)
Rhynchops niger (black skimmer)

Mammals

Endangered
Felis concolor coryi (Florida panther)
Microtus pennsylvanicus dukecambelli (Duke's saltmarsh vole; Florida saltmarsh vole)
Myotis grisescens (gray bat)
Myotis sodalis (Indiana bat)
Odocoileus virginianus clavium (Key deer; toy deer)
Oryzomys agentatus (silver rice rat)
Sylvilagus palustris hefneri (Lower Keys marsh rabbit)

Threatened
Mustela vison evergladensis (Everglades mink)
Sciurus niger avicennia (Big Cypress fox squirrel; mangrove fox squirrel)
Ursus americanus floridanus (Florida black bear)

Species of special concern
Orytzomys palustris sanibeli (Sanibel Island rice rat)
Sorex longirostris eionis (Homosassa shrew)

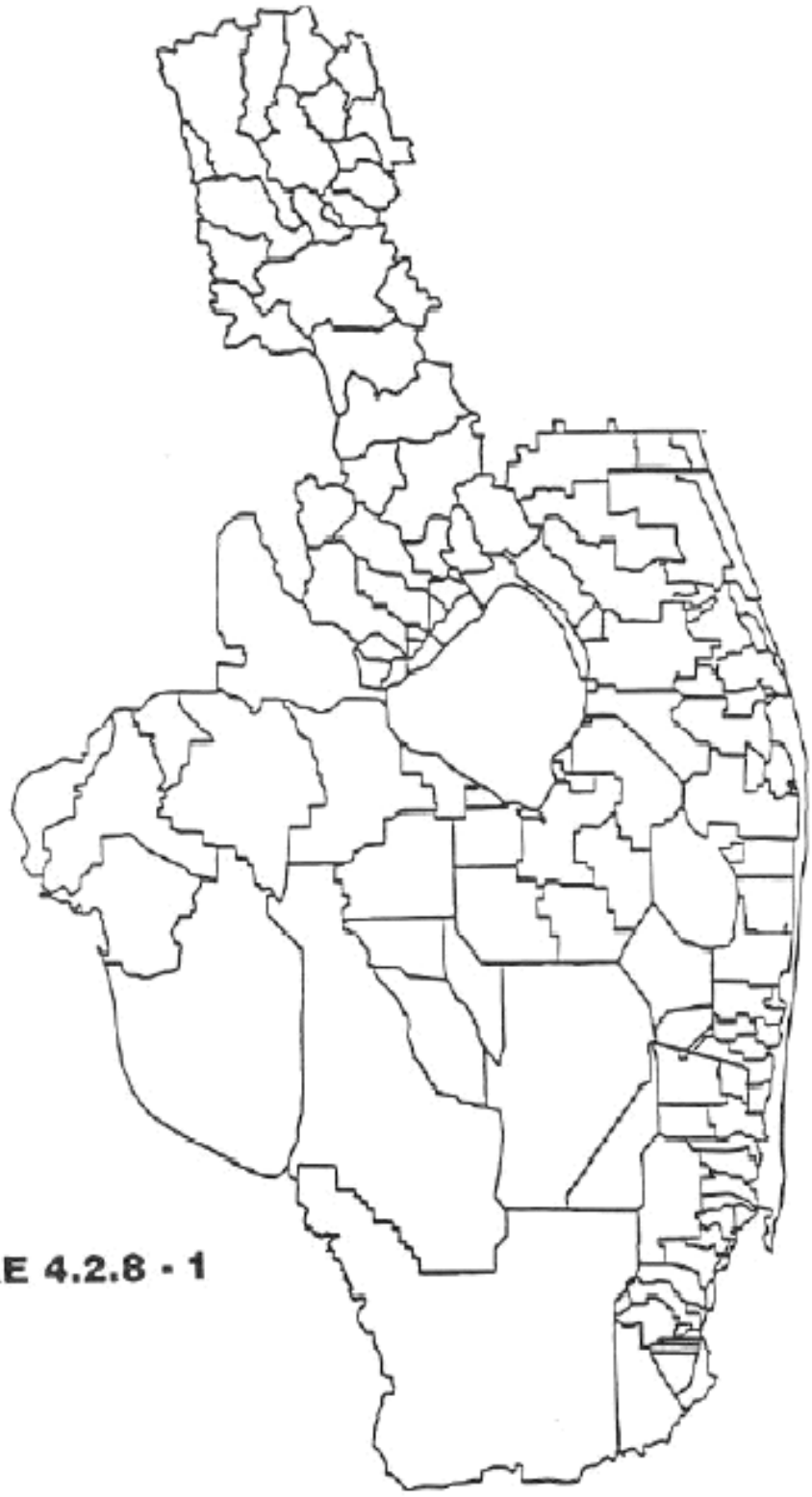


FIGURE 4.2.8 - 1

4.3 Mitigation –

Protection of wetlands and other surface waters is preferred to destruction and mitigation due to the temporal loss of ecological value and uncertainty regarding the ability to recreate certain functions associated with these features. Mitigation will be approved only after the applicant has complied with the requirements of subsection 4.2.1 regarding practicable modifications to eliminate or reduce adverse impacts. However, any mitigation proposal submitted by an applicant shall be reviewed concurrently with the analysis of any modifications pursuant to subsection 4.2.1. This section establishes criteria to be followed in evaluating mitigation proposals.

Mitigation as described in sections 4.3 - 4.3.9 is required only to offset the adverse impacts to the functions as identified in sections 4.2 - 4.2.9. caused by regulated activities. In certain cases, mitigation cannot offset impacts sufficiently to yield a permittable project. Such cases often include activities which significantly degrade Outstanding Florida Waters, adversely impact habitat for listed species, or adversely impact those wetlands or other surface waters not likely to be successfully recreated.

Applicants are encouraged to consult with District staff in pre-application conferences or during the application process to identify appropriate mitigation options.

4.3.1 Types of Mitigation

Mitigation usually consists of restoration, enhancement, creation, or preservation of wetlands, other surface waters or uplands. In some cases, a combination of mitigation types is the best approach to offset adverse impacts resulting from the regulated activity.

4.3.1.1 In general, mitigation is best accomplished through creation, restoration, enhancement, or preservation of ecological communities similar to those being impacted. However, when the area proposed to be impacted is degraded, compared to its historic condition, mitigation is best accomplished through creation, restoration, enhancement or preservation of the ecological community which was historically present. Mitigation involving other ecological communities is acceptable if impacts are offset and the applicant demonstrates that greater improvement in ecological value will result.

4.3.1.2 In general, mitigation is best accomplished when located on-site or in close proximity to the area being impacted. Off-site mitigation will only be accepted if adverse impacts are offset and the applicant demonstrates that:

(a) on-site mitigation opportunities are not expected to have comparable long-term viability due to such factors as unsuitable hydrologic conditions or ecologically incompatible existing adjacent land uses or future land uses identified in a local comprehensive plan adopted according to Chapter 163, F.S.; or

(b) off-site mitigation would provide greater improvement in ecological value than on-site mitigation.

One example of a project that would be expected to meet the criteria of paragraphs (a) or (b) above is a linear project which cannot effectively implement on-site mitigation due to documented right-of-way constraints.

4.3.1.3 Mitigation through participation in a mitigation bank shall be in accordance with subsection 4.4.

4.3.1.4 In instances where an applicant is unable to meet water quality standards because existing ambient water quality does not meet standards and the system will contribute to this existing condition, mitigation for water quality impacts can consist of water quality enhancement. In these cases, the applicant must implement mitigation measures that will cause net improvement of the water quality in the receiving waters for those parameters which do not meet standards.

4.3.1.5 To offset adverse secondary impacts from regulated activities to habitat functions that uplands provide to listed species evaluated as provided in paragraph 4.2.7(b), mitigation can include the implementation of management plans, participation in a wildlife mitigation park established by the FGFWFC, or other measures. Measures to offset adverse secondary impacts on wetlands and other surface waters resulting from use of a system can include the incorporation of culverts or bridged crossings designed to facilitate wildlife movement, fencing to limit access, reduced speed zones, or other measures designed to offset the secondary impact.

4.3.1.6 Except as provided in subsection 373.414(6), mitigation for certain mining activities shall be in accordance with subsection 373.414(6), F.S.

4.3.1.7 Mitigation or reclamation required or approved by other agencies for a specific project will be acceptable to the District to the extent that such mitigation or reclamation fulfills the requirements of sections 4.3-4.3.9 and offsets adverse impacts of the same project in accordance with the criteria in sections 4.2-4.2.8.2

4.3.1.8 Innovative mitigation proposals which deviate from the standard practices described in sections 4.3-4.3.6 may be proposed by an applicant; however, to receive District approval they must offset the adverse impacts to the functions identified in sections 4.2-4.2.8.2 caused by the regulated activities. The donation of money is not considered to be an acceptable method of mitigation, unless cash payments are specified for use in a District or Department of Environmental Protection endorsed environmental preservation, enhancement or restoration project and the payments initiate a project or supplement an ongoing project. The project or portion of the project funded by the donation of money must offset the impacts of the proposed system.

4.3.2 Mitigation Ratio Guidelines

Subsections 4.3.2 - 4.3.2.4 establish ratios for the acreage of mitigation required

compared to the acreage which is adversely impacted by regulated activities. Ranges of ratios are provided below for certain specific types of mitigation, including creation, restoration, enhancement and preservation. Mitigation ratios for wetlands which have a 50% or greater coverage of melaleuca (Melaleuca quinquenervia), will be determined pursuant to subsection 4.3.2.4. and other provisions of this section. The difference between the ranges of ratios provided for mitigation types is based on the degree of improvement in ecological value expected from each type. Creation and restoration are assigned the lowest range of ratios as these activities, when successfully conducted, add new wetlands or other surface waters which provide the same or similar functions as the area being adversely impacted. The range of ratios established for enhancement is higher than that for creation and restoration, as the area being enhanced currently provides a degree of the desired functions, and this type of mitigation serves to increase, rather than create, those functions. Preservation differs from the other types of mitigation in that it does not serve to improve the existing ecological value of an area in the short term. However, preservation does provide benefits as it can ensure that the values of the preserved area are protected and maintained in the long term, particularly when these values are not fully protected under existing regulatory programs. Therefore, the range of ratios established for preservation is higher than those for other types of mitigation. These ratios are provided as guidelines for preliminary planning purposes only. The actual ratio needed to offset adverse impacts may be higher or lower based on a consideration of the factors listed in subsections 4.3.2.1 through 4.3.2.4. For example, in instances where the proposed system results in only a small loss of ecological value in the impacted area, such as cases involving impacts to areas of low ecological value or cases where the proposed system results in a small reduction of ecological value of the impacted area, then the actual mitigation ratio would normally be in the lower end of or below the range. For other types of mitigation, ratios will be determined based upon the reduction in quality and relative value of the functions of the areas adversely impacted as compared to the expected improvement in quality and value of the functions of the mitigation area.

4.3.2.1 Creation, Restoration and Enhancement

When considering creation, restoration and enhancement as mitigation, the following factors will be considered to determine whether the mitigation proposal will offset the proposed impacts and to determine the appropriate mitigation ratio:

(a) The reduction in quality and relative value of the function of the areas adversely impacted, including the factors listed in subsection 4.2.2.3, as compared to the proposed improvement in quality and value of the functions of the area to be created, restored or enhanced.

(b) Any special designation or classification of the affected area.

(c) The presence and abundance of nuisance and exotic plants within the area to be adversely impacted.

(d) The hydrologic condition of the area to be adversely impacted and the degree to which it has been altered relative to the historic condition.

(e) The length of time expected to elapse before the functions of the area adversely impacted will be offset.

(f) The likelihood of mitigation success.

(g) For mine reclamation activities subject to Chapter 211, F.S., Part II, whether the ratio is consistent with the mine reclamation plan submitted pursuant to Chapter 378, F.S.

4.3.2.1.1 Creation and restoration have the potential to result in similar benefits, if they can be successfully accomplished. Therefore, the ratio ranges given below for these two types of mitigation are the same. Restoration is usually preferred over creation as it often has a greater chance of success due to soil characteristic, hydrologic regime, landscape position or other factors that favor re-establishment of wetland or other surface water communities. Restoration ratios will generally be at the lower end of the ratio ranges within the guidelines below. The following ratio guidelines will be used to estimate the acreage of wetland restoration or creation required:

(a) Mangrove swamps, cypress swamps, and hardwood swamps - 2:1 to 5:1 (acres created or restored: acres impacted).

(b) Saltwater marshes and freshwater marshes - 1.5:1 to 4:1 (acres created or restored: acres impacted.

4.3.2.1.2 The ratio guidelines for use in the estimation of the acreage of wetland enhancement will range from 4:1 to 20:1 (acres enhanced: acres impacted).

4.3.2.2 Preservation

(a) Preservation of important ecosystems can provide an improved level of protection over current regulatory programs. The District will consider as mitigation the preservation, by donation or conservation easement or other comparable land use restriction, of wetlands, other surface waters, or uplands. Conservation easements or restrictions must be consistent with the requirements of subsection 4.3.8. In many cases it is not expected that preservation alone will be sufficient to offset adverse impacts. Preservation will most frequently be approved in combination with other mitigation measures.

(b) When considering preservation as mitigation, the following factors will be considered to determine whether the preservation parcel would offset the proposed impacts and to determine the appropriate mitigation ratio.

1. The reduction in quality and relative value of the functions of the areas adversely impacted, including those factors listed in subsection 4.2.2.3, as compared to the quality and value of the functions of the area to be preserved and the additional protection provided to these functions by the proposed preservation. Factors used in determining this additional level of protection include the extent and likelihood that the land to be preserved would be adversely impacted if it were not preserved, considering the protection provided by existing regulations and land use restrictions.

2. Any special designation or classification of the affected area.

3. The presence and abundance of nuisance and exotic plants within the area to be adversely impacted.

4. The ecological and hydrological relationship between wetlands, other surface waters, and uplands to be preserved.

5. The extent to which proposed management activities on the area to be preserved promote natural ecological conditions, such as natural fire patterns.

6. The proximity of the area to be preserved to areas of national, state, or regional ecological significance, such as national or state parks, Outstanding Florida Waters, and other regionally significant ecological resources or habitats, such as lands acquired or to be acquired through governmental or non-profit land acquisition programs for environmental conservation, and whether the areas to be preserved include corridors between these habitats.

7. The extent to which the preserved area provides habitat for fish and wildlife, especially listed species.

8. Any special designation or classification of the area to be preserved.

9. The extent of invasion of nuisance and exotic species within the area to be preserved.

(c) Wetland and other surface water preservation ratios. Since wetlands and other surface waters are, to a large extent, protected by existing regulations, the ratio guideline for preservation of wetlands and other surface waters is substantially higher than for restoration and creation. The ratio guideline for wetland and other surface water preservation will be 10:1 to 60:1, (acreage wetlands and other surface waters preserved to acreage impacted).

(d) Upland preservation ratios. Many wildlife species that are aquatic or wetland dependent spend critical portions of their life cycles in uplands.

Uplands function as the contributing watershed to wetlands and are necessary to maintain the ecological value of those wetlands. Because of these values, the preservation of certain uplands may be appropriate for full or partial mitigation of wetland impacts, and impacts to uplands that are used by listed aquatic or wetland dependent species as described in subsection 4.2.7(b). The ratio guideline for upland preservation will be 3:1 to 20:1 (acreage of uplands preserved to acreage impacted).

4.3.2.3 To the extent that the area to be preserved offsets the adverse impact and otherwise meets the requirements of this section, wetland, other surface water, or upland habitat which is proposed to be preserved in order to prevent secondary or cumulative impacts can be considered as part of the mitigation plan to offset other adverse impacts of the system.

4.3.2.4

(a) When District staff evaluate mitigation proposals for melaleuca-dominated wetlands, the following factors, in addition to those in subsections 4.3.2.1 and 4.3.2.2, will be considered to determine whether the mitigation will offset the proposed impacts and to determine the appropriate mitigation ratio:

1. location and proximity of the property to native habitat including the ecological condition of the adjacent lands; and

2. degree of melaleuca infestation;

(b) Mitigation ratio guidelines for wetlands which have a 50% or greater coverage of melaleuca shall be as follows:

1. Creation/Restoration 0.25:1 to 0.75:1

2. Enhancement 0.7:1 to 3.0:1

3. Wetland Preservation 1.7:1 to 9.0:1

4. Upland Preservation 0.5:1 to 3.0:1

(c) Melaleuca within the wetland to be impacted shall be mapped in units not larger than 1/2 acre which differentiate coverages of 50%-75% and 76%-100%. The landowner may elect to measure coverage in more detail. The District shall allow the use of larger mapping units when the landowner can demonstrate that:

1. 1/2 acre mapping units will impose an economic hardship due to the large size of the wetland impact areas; and

2. Mapping in larger units will not result in additional acreage qualifying for the ratios in this subsection. The coverage of melaleuca shall be defined as the absolute percentage of the area in question that lies

under the crown of a melaleuca tree with a one inch or greater trunk diameter at breast height. The crown of each melaleuca tree shall be considered a solid shape without regard for holes or openings among the leaves and branches. Any valid vegetative sampling method shall be acceptable for estimating melaleuca coverage, including visual observation, use of random sample points, a grid of points, or line or belt transects. (See Bonham, C.D. 1989, *Measurements for Terrestrial Vegetation* for guidance in estimating coverage.) Aerial photography may be used to complement on-the-ground estimates of melaleuca coverage for large tracts.

(d) Mitigation ratios for wetlands which have less than a 50% coverage of melaleuca shall be determined pursuant to the guidelines set forth in sections 4.3.2.1.1, 4.3.2.1.2 and 4.3.2.2.

4.3.3 Mitigation Proposals

4.3.3.1 Applicants shall provide reasonable assurance that proposed mitigation will:

(a) offset adverse impacts due to regulated activities; and

(b) achieve mitigation success by providing viable and sustainable ecological and hydrological functions.

4.3.3.2 Applicants shall submit detailed plans describing proposed construction, establishment, and management of mitigation areas. These plans shall include the following information, as appropriate for the type of mitigation proposed:

(a) A soils map of the mitigation area and other soils information pertinent to the specific mitigation actions proposed.

(b) A topographic map of the mitigation area and adjacent hydrologic contributing and receiving areas.

(c) A hydrologic features map of the mitigation area and adjacent hydrologic contributing and receiving areas.

(d) A description of current hydrologic conditions affecting the mitigation area.

(e) A map of vegetation communities in and around the mitigation area.

(f) Construction drawings detailing proposed topographic alterations and all structural components associated with proposed activities.

(g) Proposed construction activities, including a detailed schedule for implementation.

(h) A vegetation planting scheme if planting is proposed, and schedule for implementation.

(i) Sources of plants and soils used in wetland creation.

(j) Measures to be implemented during and after construction to avoid adverse impacts related to proposed activities.

(k) A management plan comprising all aspects of operation and maintenance, including water management practices, vegetation establishment, exotic and nuisance species control, fire management, and control of access.

(l) A proposed monitoring plan to demonstrate mitigation success.

(m) A description of the activities proposed to control exotic and nuisance species should these become established in the mitigation area. The mitigation proposal must include reasonable measures to assure that these species do not invade the mitigation area in such numbers as to affect the likelihood of success of the project.

(n) A description of anticipated site conditions in and around the mitigation area after the mitigation plan is successfully implemented.

(o) A comparison of current fish and wildlife habitat to expected habitat after the mitigation plan is successfully implemented.

(p) For mitigation plans with projected implementation costs in excess of $25,000.00, an itemized estimate of the cost of implementing mitigation as set forth in subsection 4.3.7.7.

4.3.4 Monitoring Requirements for Mitigation Areas

Applicants shall monitor the progress of mitigation areas until success can be demonstrated as provided in subsection 4.3.6. Monitoring parameters, methods, schedules, and reporting requirements will be specified in permit conditions.

4.3.5 Protection of Mitigation Areas

Applicants shall propose and be responsible for implementing methods that assure that mitigation areas will not be adversely impacted by incidental encroachment or secondary activities which might compromise mitigation success.

4.3.6 Mitigation Success

Due to the wide range of types of projects which may be proposed for mitigation, specific success criteria will be determined on a case-by-case basis. Mitigation success will be measured in terms of whether the objectives of the mitigation can be realized. The success criteria to be included in the permit conditions will specify the minimum requirements necessary to attain a determination of success. The mitigation shall be deemed successful by the District when all applicable water quality standards are met, the mitigation area has achieved viable and sustainable ecological and hydrological functions and the specific success criteria contained in the permit are met. If success is not achieved

within the timeframe specified within the permit, remedial measures shall be required. Monitoring and maintenance requirements shall remain in effect until success is achieved.

4.3.7 Financial Responsibility for Mitigation

As part of compliance with paragraph 40E-4.301(1)(j), F.A.C., where an applicant proposes mitigation, the applicant shall provide proof of financial responsibility to:

(a) conduct the mitigation activities;

(b) conduct any necessary management of the mitigation site;

(c) conduct monitoring of the mitigation; and

(d) conduct any necessary corrective action indicated by the monitoring.

4.3.7.1 Applicants Not Subject to Financial Responsibility Requirements

The following applicants shall not be subject to the financial responsibility requirements in subsections 4.3.7-4.3.7.9:

(a) Applicants whose mitigation is deemed successful pursuant to subsection 4.3.6 of this Basis of Review prior to undertaking the construction activities authorized under the permit issued pursuant to Part IV, Chapter 373, F.S.

(b) Applicants whose mitigation is estimated to cost less than $25,000.00.

(c) Federal, state, county and municipal governments, state political subdivisions, investor-owned utilities regulated by the Public Service Commission, and rural electric cooperatives.

(d) Mitigation banks which comply with the financial responsibility provisions of section 4.4.10 of this Basis of Review.

4.3.7.2 Amount of financial responsibility

The amount of financial responsibility provided by the applicant shall be in an amount equal to 110 percent of the cost estimate determined pursuant to subsection 4.3.7.8 below, for each phase of the mitigation plan submitted under the requirements of sections 4.3 - 4.3.8.

4.3.7.3 Documentation

The permit applicant shall provide draft documentation of the required financial responsibility mechanism described below, and shall submit to the District the executed or finalized documentation within the time frames specified in the permit.

4.3.7.4 General Terms for Financial Responsibility Mechanisms

In addition to the specific provisions regarding financial responsibility mechanisms set forth in subsection 4.3.7.6 below, the following, as they relate to the specific mechanism proposed, shall be complied with:

(a) The form and content of all financial responsibility mechanisms shall be approved by the District.

(b) The mechanisms shall name the District as sole beneficiary or shall be payable solely to the District. However, any local pollution control program acting pursuant to Section 403.182, F.S., may be a co-beneficiary of the financial assurance mechanism. The original financial responsibility mechanism shall be retained by the District.

(c) The financial responsibility mechanisms shall be established with a state or national bank, savings and loan association, or other financial institution licensed in this state. In the case of letters of credit, the letter of credit must be issued by an entity which has authority to issue letters of credit and whose letter of credit operations are regulated and examined by a federal or state agency. In the case of a surety bond, the surety bond must be issued by a surety company registered with the state of Florida.

(d) The financial responsibility mechanisms shall be effective on or prior to the date that the activity authorized by the permit commences and shall continue to be effective through the date of notification of final release by the District in accordance with subsection 4.3.7.7.2 below of this Basis of Review.

(e) A co-beneficiary as provided in subsection (b) shall provide written notice to the District prior to withdrawing or transferring any portion of the funds therein.

(f) The financial responsibility mechanisms shall provide that it can not be revoked, terminated or cancelled without first providing an alternative financial responsibility mechanism which meets the requirements of subsections 4.3.7-4.3.7.9. Within 90 days of receipt by the permittee of actual or constructive notice of revocation, termination or cancellation of a financial responsibility mechanism or other actual or constructive notice of cancellation, the permittee shall provide an alternate financial responsibility mechanism which meets the requirements of subsections 4.3.7 - 4.3.7.9.

4.3.7.5 If the permittee fails to comply with the terms and conditions of the permit, subsection 4.3.7 or fails to complete the mitigation and monitoring within the timeframes specified in the permit conditions or any extension thereof, such failure shall be deemed a violation of chapter 40E-4, F.A.C., and the permit issued thereunder. In addition to any other remedies for such violation as the District may have, the District, upon notice as provided in the mechanism or if none, upon reasonable notice, may draw upon the financial mechanism.

4.3.7.6 Financial Responsibility Mechanisms

Financial responsibility for the mitigation, monitoring and corrective action for the project may be established by any of the following methods, at the discretion of the applicant:

(a) Performance bond;

(b) Irrevocable letter of credit

(c) Trust fund agreement;

(d) Deposit of cash or cash equivalent into an escrow account;

(e) An audited annual financial statement submitted by a Certified Public Accountant representing that the applicant has a tangible net worth equal to or in excess of the cost of the mitigation plan. For purposes of this sub-paragraph, "tangible net worth" means total assets, not including intangibles such as goodwill and right to patents or royalties, minus total liabilities, computed in accordance with generally accepted accounting principles.

(f) A demonstration that the applicant meets the financial test and corporate guarantee requirements set forth in 40 C.F.R. Section 264.143(f) incorporated herein by reference. Where the referenced test is used to provide evidence of financial resources necessary to conduct mitigation activities the term "closure and post-closure cost estimates" as set forth therein, shall be construed to mean "mitigation cost estimates."

(g) guarantee bond;

(h) insurance certificate;

(i) A demonstration that the applicant meets the self-bonding provisions set forth at 30 C.F.R. Section 800.23 incorporated herein by reference. Where the referenced provisions are used to provide evidence of financial responsibility to conduct mitigation activities, the term "surface coal mining and reclamation operations," as set forth therein, shall be construed to mean "mitigation activities."

4.3.7.7 Cost Estimates

For the purposes of determining the amount of financial responsibility that is required by this subsection, the applicant shall submit a detailed written estimate, in current dollars, of the total cost of conducting the mitigation, including any maintenance and monitoring activities and the applicant shall comply with the following:

(a) The cost estimate for conducting the mitigation and monitoring shall include all associated costs for each phase thereof, including earthmoving, planting, structure installation, maintaining and operating any structures,

controlling nuisance or exotic species, fire management, consultant fees, monitoring activities and reports.

(b) The applicant shall submit the estimates, together with verifiable documentation, to the District along with the draft of the financial responsibility mechanism.

(c) The costs shall be estimated based on a third party performing the work and supplying materials at the fair market value of the services and materials. The source of any cost estimates shall be indicated.

4.3.7.7.1 Partial Releases

The permittee may request the District to release portions of the financial responsibility mechanism as phases of the mitigation plan, such as earth moving or other construction or activities for which cost estimates were submitted in accordance with subsection 4.3.7.7 are successfully completed. The request shall be in writing and include documentation that the phase or phases have been completed and have been paid for or will be paid for upon release of the applicable portion of the financial responsibility mechanism. The District shall authorize the release of the portion requested upon verification that the construction or activities have been completed in accordance with the mitigation plans.

4.3.7.7.2 Final Release

Within thirty (30) days of the District determining that the mitigation is successful in accordance with subsection 4.3.6, the District shall so notify the permittee and

shall authorize the return and release of all funds held or give written authorization to the appropriate third party for the cancellation or termination of the financial responsibility mechanism.

4.3.7.8 Financial Responsibility Conditions

For applicants subject to the financial responsibility of subsections 4.3.7 - 4.3.7.9, the District will include the following conditions on the permit.

(a) A permittee must notify the District by certified mail of the commencement of a voluntary or involuntary proceeding under Title XI (Bankruptcy), U.S. Code naming the permittee as debtor within 10 business days after the commencement of the proceeding.

(b) A permittee who fulfills the requirements of subsections 4.3.7 - 4.3.7.9 by obtaining a letter of credit, performance bond or other form of surety providing the same level of financial responsibility will be deemed to be without the required financial assurance in the event of bankruptcy, insolvency or suspension or revocation of the license or charter of the issuing institution. The permittee must reestablish in accordance with subsections 4.3.7 -

4.3.7.9 a financial responsibility mechanism within 60 days after such event.

(c) When transferring a permit in accordance with section 40E-4.351, F.A.C., the new owner or person with legal control shall submit documentation to satisfy the financial responsibility requirements of subsections 4.3.7 - 4.3.7.9. The prior owner or person with legal control of the project shall continue the financial responsibility mechanism until the District has approved the permit transfer and substitute financial responsibility mechanism.

4.3.7.9 Financial Responsibility Mechanisms For Multiple Projects

A applicant may use a mechanism specified in subsection 4.3.7.6 above to meet the financial responsibility requirement for multiple projects. The financial responsibility mechanism must include a list of projects and the amount of funds assured for each project. The mechanism must be no less than the sum of the funds that would be necessary in accordance with subsection 4.3.7.2 above, as if separate mechanisms had been established for each project. As additional permits are issued which require mitigation, the amount of the financial responsibility mechanism may be increased in accordance with subsection 4.3.7.2, above and the project added to the list.

4.3.8 Real Property Conveyances

(a) All conservation easements shall be granted in perpetuity without encumbrances, unless such encumbrances do not have the potential to adversely affect the ecological viability of the mitigation. All liens against the conservation easement site shall release, be subordinated to, or joined with the conservation easement. All conservation easements shall be consistent with Section 704.06, F.S.; and shall contain restrictions that ensure the ecological viability of the site.

(b) All real property conveyances shall be in fee simple and by statutory warranty deed, special warranty deed, or other deed, without encumbrances that adversely affect the integrity of the preservation objectives. The District shall also accept a quit claim deed if necessary to aid in clearing minor title defects or otherwise resolving boundary questions.

4.3.9 Mitigation Reduction Through a Melaleuca Eradication Program

(a) The intent of this section is to encourage landowners to maintain their land free of exotic vegetative species by providing a regulatory incentive in the form of future reductions in required mitigation. A landowner whose property contains melaleuca (Melaleuca quinquenervia), may elect to participate in a melaleuca eradication program. Landowners who implement a successful melaleuca eradication program which has been approved by the District may earn a reduction in mitigation requirements up to a maximum of 50% to be used towards mitigating future wetland impacts resulting

from regulated activities undertaken on the subject property. The development and implementation of a melaleuca eradication program pursuant to this section shall not require an Environmental Resource Permit or a permit fee.

(b) In order to be eligible for the future mitigation reduction, a landowner must submit a plan to District staff for review and approval and successfully implement the melaleuca eradication program. The submitted plan must detail the extent of melaleuca coverage over the entire property, including both wetlands and uplands, for which the melaleuca eradication program is to be implemented. The plan shall differentiate between wetland communities and upland communities, and shall specify melaleuca coverages and acreages for each community type which the landowner proposes to include in the melaleuca eradication program. Each vegetative community type shall be mapped using the Florida Land Use, Cover and Forms Classification System (FLUCCS) to a minimum of Level III.

(c) The plan must include a map showing all of the landowner's property holdings which are contiguous to the property which is the subject of the melaleuca eradication program. Landowners may submit proposals to subdivide large land holdings based on phase boundaries or operational units.

(d) The melaleuca eradication plan must specify the following:

1. the methodology to be used initially to eliminate or eradicate the existing melaleuca population;

2. the subsequent management and maintenance procedures that will be undertaken on the property to ensure that:

   a. the area has no living mature or sapling melaleuca trees; and

   b. less than 1% of the total land area included in the melaleuca removal program contains live melaleuca seedlings.

(e) The melaleuca eradication program must include a monitoring plan to document the success of the melaleuca eradication efforts over time. In order to be approved, the melaleuca eradication plan must provide reasonable assurances that:

1. the plan is designed to achieve a significant overall improvement of ecological conditions;

2. the plan is capable of being successfully implemented based on reasonable scientific judgement given due consideration of such factors as adjacent land uses and proximate seed sources;

3. the initial eradication methodology and subsequent management and maintenance procedures will not adversely impact wetlands, native upland habitat or listed species;

4. the plan will not eliminate melaleuca in some areas of the property while facilitating melaleuca encroachment or proliferation into other areas of the property;

5. the plan will not allow invasion by other exotic vegetation (category I and II species of trees, shrubs and vines as specified in the Florida Exotic Pest Plant Council's List of Florida's Most Invasive Species) in the areas where melaleuca has been removed.

4.3.9.1 Wetland boundaries shall be determined pursuant to Chapter 62-340, F.A.C. (Delineation of the Landward Extent of Wetlands and Surface Waters). For the purposes of this section wetland boundaries may be established by photo-interpretation and ground truthing. If a landowner wishes to obtain greater certainty regarding the establishment of wetland boundaries as a part of a melaleuca eradication program, the District shall conduct a formal wetland determination pursuant to section 40E-4.042, F.A.C., over the area included in the melaleuca eradication program. The fee for such a determination pursuant to this section shall be waived and the formal wetland determination shall remain in effect for the life of the melaleuca eradication program.

4.3.9.2

(a) The melaleuca eradication program and reduction in mitigation requirements do not obviate the requirements of section 4.2.1, which specifies the criteria for the elimination or reduction of wetland impacts. Therefore, the determination of mitigation reduction for future wetland impacts does not guarantee that a specific wetland impact will be permittable in the future. Additionally, future wetland impacts do not need to be identified until such time as the landowner proposes to undertake regulated activities requiring a permit pursuant to Part IV of Chapter 373, F.S.

(b) A landowner must implement the approved melaleuca eradication program for a minimum of three years before a reduction in mitigation requirements may be granted. (See Figure 4.3-1, "Incentive Graph".) If the landowner is in compliance with the melaleuca eradication program, the mitigation reduction will be based on the length of time the melaleuca eradication program is successfully implemented and the initial extent of melaleuca coverage.

(c) Coverage of melaleuca shall be defined as the absolute percentage of the area in question that lies under the crown of a melaleuca tree with a one inch or greater trunk diameter at breast height. The crown of each melaleuca tree shall be considered a solid shape without regard for holes or openings among the leaves and branches. A stratified sampling approach which divides the property into units with uniform melaleuca coverages

may be an efficient sampling method for some properties. Any valid vegetative sampling methodology shall be acceptable for estimating melaleuca coverage including visual observation, use of random sample points, a grid of points, or line or belt transects. (See Bonham, C.D. 1989, Measurements for Terrestrial Vegetation for guidance in estimating coverage.)

For properties with a complex mosaic of melaleuca coverages within different community types, a weighted average will be used to determine the initial coverage of melaleuca on the property. The property must be mapped in units which differentiate percentages of melaleuca coverage and the acreage of the unit. For each unit, the acreage and percent melaleuca coverage will be multiplied together to determine an acre-coverage value. Acre-coverage values for all units will be added together and this total will be divided by the total acreage of all the units. This result will be multiplied by 100% to obtain the initial overall percent coverage for the site. The formula for determining the weighted average for properties with a mosaic of melaleuca coverages shall be as follows:

unit acreage X percent melaleuca coverage = acre-coverage value (Σ acre-coverage values for all units/total acreage of all units) X 100% = initial percent melaleuca coverage for site

The initial percent of melaleuca coverage for the site shall be used in conjunction with the time the landowner has invested in implementing the incentive program, in order to calculate the percent of reduction in future mitigation requirements. The percent of reduction in future mitigation shall be determined according to Figure 4.3-1, "Incentive Graph". The mitigation reduction shall be applied to the amount of mitigation required for the wetland impact based on the initial coverage of melaleuca in that wetland prior to initiating melaleuca eradication activities.

The District will accept alternative methods of calculating the initial percent melaleuca coverage for the site when:

1. it can be demonstrated that there are extenuating factors to consider such as the spatial distribution of the melaleuca throughout the property; and

2. the alternative method accurately quantifies the extent of melaleuca coverage on the property through the use of any valid vegetative sampling methodology.

4.3.9.3

(a) The District will enter into a stewardship agreement with each landowner who elects to implement an approved melaleuca eradication plan. The stewardship agreement will include the approved melaleuca eradication plan and will document the original extent of melaleuca on the subject property, the community types mapped by FLUCCS codes, the date of initiation of the melaleuca eradication program, the anticipated length of time of program implementation, the methodology of melaleuca eradication, monitoring requirements, and maintenance frequency and methodology.

The stewardship agreement will also document the percent reduction in future mitigation requirements based on the initial percent of melaleuca coverage for the site and the anticipated length of time in the program.

(b) District staff will prepare a recommendation for approval or denial of each melaleuca eradication plan and stewardship agreement and present that recommendation to the Governing Board of the District based upon the applicant's compliance with the criteria outlined in subsection 4.3.9(e). The Governing Board's approval or denial will become final agency action. The stewardship agreement shall be legally binding on both parties but may be modified upon written agreement of both the landowner and the District. If a landowner sells a property or portion thereof, which is the subject of an approved melaleuca eradication program, the landowner shall apply to the District to modify the stewardship agreement accordingly.

(c) Melaleuca eradication plans shall be submitted to the appropriate District Service Center serving the area in which the activity is proposed as designated in Rule 40E-1.6025, F.A.C., and shall be accompanied by the information required in subsection 4.3.9.

1. District staff shall notify the applicant in writing via regular mail of its proposed recommendation that the Governing Board approve or deny the eradication plan. This notification shall occur within sixty (60) days following receipt of a completed eradication plan. If staff's recommendation is for approval, the District shall also simultaneously forward a draft stewardship agreement to the applicant for review, approval and execution.

2. District staff shall schedule consideration of the proposal by the Governing Board at its next available, regularly scheduled meeting as follows:

   a. Immediately upon receipt of a stewardship agreement executed by the applicant, or

   b. immediately after notifying the applicant that staff's recommendation is for denial.

3. The applicant shall be notified of the date and time of this meeting - or any subsequent meeting if final agency action is not taken - via regular mail to be received by the applicant at least 7 days in advance of the Governing Board meeting.

4.3.9.4

(a) The incentives of the melaleuca eradication program can not be used if other local, county, regional, state or federal requirements to remove the

melaleuca have previously been imposed on the property for any wetland mitigation purposes.

(b) The landowner must remain in compliance with the terms of the stewardship agreement in order to receive the benefit of the future mitigation reduction. If the landowner does not remain in compliance with the terms of the stewardship agreement, the District will in no way be compelled to honor the reduction in mitigation requirements for the prior melaleuca eradication work on the property.

4.3.9.5 A landowner who wishes to obtain greater certainty regarding potential development of a property may combine an application for conceptual approval with a melaleuca eradication program. The District will review the conceptual application in accordance with section 40E-4.305, F.A.C. If a landowner wishes to combine a conceptual approval with a melaleuca eradication program, the fee for the conceptual approval will be waived.

Incentive Graph

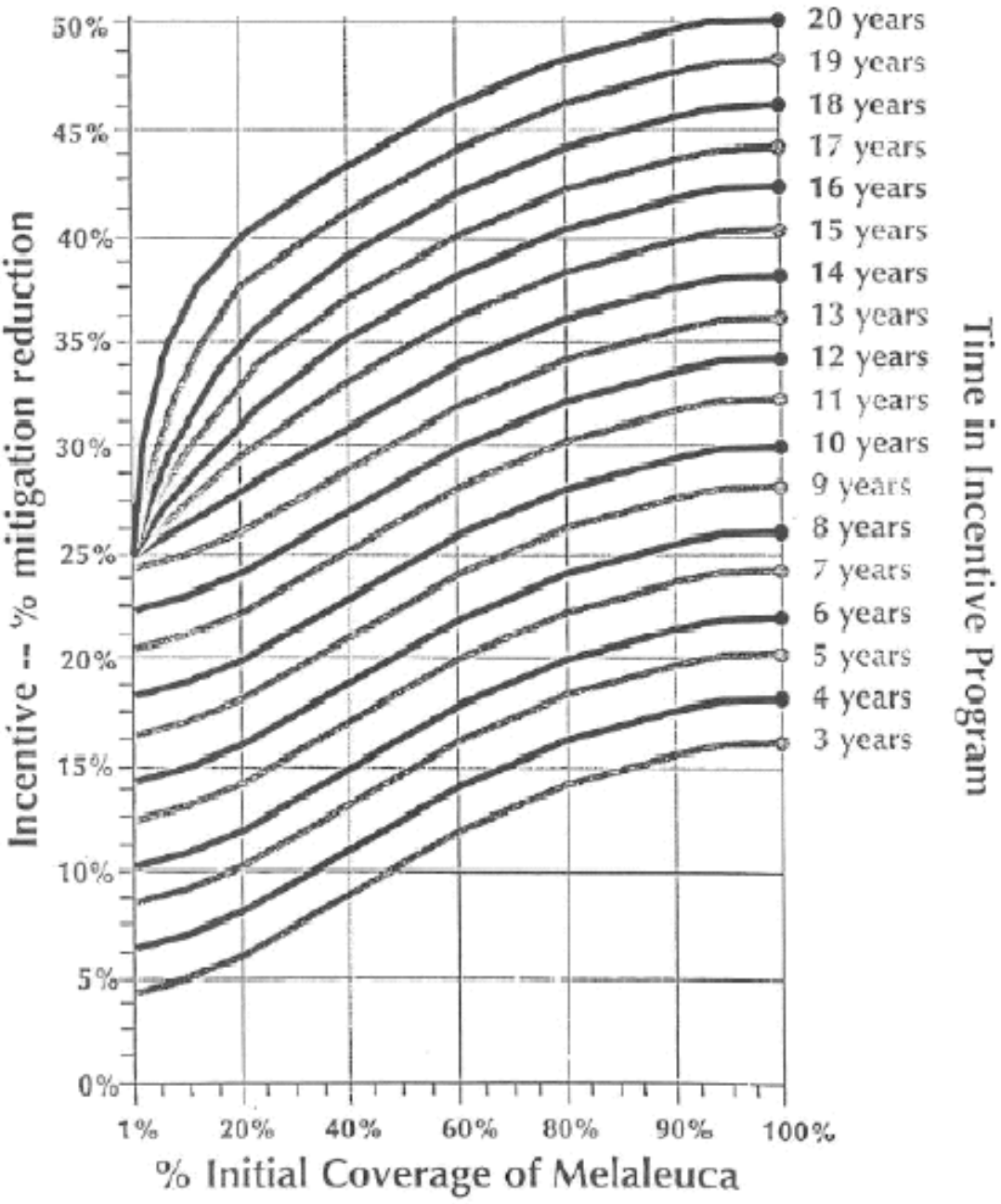


Fig. 4.3-1

4.4 Mitigation Banking -

4.4.1 Intent

4.4.1.1 The Environmental Reorganization Act of 1993 directed the District to adopt rules governing the creation and use of mitigation banks to offset adverse impacts caused by activities regulated under Part IV of Chapter 373, F.S. This section, in addition to other rules promulgated under Part IV of Chapter 373, F.S., is intended to meet this requirement.

4.4.1.2 The District recognizes that, in certain instances, adverse impacts of activities regulated under Part IV of Chapter 373, F.S., can be offset through participation in a Mitigation Bank. This rule provides criteria for this mitigation alternative to complement existing mitigation criteria and requirements. This section does not supersede any other criteria and requirements in rules promulgated under Part IV of Chapter 373, F.S.

4.4.1.3 The District intends that Mitigation Banks be used to minimize mitigation uncertainty associated with traditional mitigation practices, provide greater assurance of mitigation success, and optimize opportunities to restore any degraded habitats which may be incorporated into the bank. It is anticipated that the consolidation of multiple mitigation projects into larger contiguous areas will provide greater assurance that the mitigation will yield long-term, sustainable, regional ecological benefits. Mitigation Banks should emphasize restoration and enhancement of degraded ecosystems and the preservation of uplands and wetlands as intact ecosystems rather than alteration of landscapes to create wetlands. The establishment and use of mitigation banks in or adjacent to areas of national, state, or regional ecological significance is encouraged, provided the area in which the mitigation bank is proposed to be located is determined appropriate for mitigation banking and the bank meets all applicable permit criteria.

4.4.1.4 Nothing in this section shall affect the mitigation requirements set forth in any mitigation bank agreement or any permit issued pursuant to Chapter 84-79, Laws of Florida, or Part IV of Chapter 373, F.S., prior to the effective date of this section. If a permittee wishes to substantially modify a mitigation bank previously established by agreement or permit, the permittee must comply with this section. This section does not prohibit an applicant from proposing project-specific pre-construction mitigation, or off-site mitigation, without establishing a Mitigation Bank pursuant to this section.

4.4.2 Use of a Mitigation Bank

4.4.2.1 Use of a Mitigation Bank is appropriate, desirable, and a permittable mitigation option when the Mitigation Bank will offset the adverse impacts of the project; and

(a) on-site mitigation opportunities are not expected to have comparable long-term viability due to such factors as unsuitable hydrologic conditions or ecologically incompatible existing adjacent land uses or future land uses identified in a local comprehensive plan adopted according to Chapter 163, F.S.; or

(b) use of the Mitigation Bank would provide greater improvement in ecological value than on-site mitigation.

4.4.2.2 In some cases, a combination of on-site mitigation and participation in a Mitigation Bank will be appropriate to offset adverse impacts of a project.

4.4.3 Criteria for Establishing a Mitigation Bank

The following criteria shall be met to establish a Mitigation Bank:

4.4.3.1 The banker shall provide reasonable assurance that the proposed Mitigation Bank will:

(a) improve ecological conditions of the regional watershed;

(b) provide viable and sustainable ecological and hydrological functions for the proposed mitigation service area;

(c) be effectively managed in the long term;

(d) not destroy areas with high ecological value;

(e) achieve mitigation success; and

(f) be adjacent to lands which will not adversely affect the long-term viability of the Mitigation Bank due to unsuitable land uses or conditions.

4.4.3.1.2 The banker shall also provide reasonable assurance that any surface water management system constructed within the mitigation bank area will meet the conditions of issuance of Chapters 40E-4, 40E-40, 40E-41 or 40E-400, F.A.C. as applicable.

4.4.3.2 A Mitigation Bank may be implemented in phases if each phase independently meets the requirements of subsections 4.4.3.1 and 4.4.3.1.2 above.

4.4.3.3 The banker shall:

(a) have sufficient legal or equitable interest in the property to meet the requirements of section 4.4.9; and

(b) meet the financial responsibility requirements of section 4.4.10.

4.4.4 Permit Applications for an Individual or Conceptual Approval Environmental Resource Permits for a Mitigation Bank

Any person or entity proposing to establish a Mitigation Bank must apply for an Environmental Resource Permit. An application for an Individual or Conceptual Approval Environmental Resource Permit for a mitigation bank shall constitute an application for any related activity which would require a permit authorized under Chapters 40E-4, 40E-40, 40E-41 and 40E-400, F.A.C. Therefore, a separate application for a permit to construct a

surface water management system proposed as part of the mitigation bank is not required. Environmental Resource Permit applications to establish or conceptually approve a Mitigation Bank shall be processed according to Chapter 120, F.S. To provide the District with reasonable assurances that the proposed Mitigation Bank will meet the criteria in this section, each permit application submitted to the District shall include the information needed to review any permit required under Chapters 40E-4, 40E-40, 40E-41 and 40E-400, F.A.C. and the information specified below as appropriate for the project:

4.4.4.1 A description of the location of the proposed Mitigation Bank which shall include:

(a) a map at regional scale showing the project area in relation to the regional watershed and proposed mitigation service area;

(b) a vicinity map showing the project area in relation to adjacent lands and off-site areas of ecologic or hydrologic significance which could affect the long term viability or ecological value of the bank;

(c) an aerial photograph identifying boundaries of the project area;

(d) a highway map showing points of access to the Mitigation Bank for site inspection; and

(e) a legal description of the proposed Mitigation Bank.

4.4.4.2 A description of the ecological significance of the proposed Mitigation Bank to the regional watershed in which it is located.

4.4.4.3 A description and assessment of current site conditions which shall include:

(a) a soils map of the project area;

(b) a topographic map of the project area and adjacent hydrologic contributing and receiving areas;

(c) a hydrologic features map of the project area and adjacent hydrologic contributing and receiving areas;

(d) current hydrologic conditions in the project area;

(e) a vegetation map of the project area;

(f) ecological benefits currently provided to the regional watershed by the project area;

(g) adjacent lands, including existing land uses and conditions, projected land uses according to comprehensive plans adopted pursuant to Chapter 163, F.S., by local governments having jurisdiction, and any special designations or classifications associated with adjacent lands or waters; and

(h) a disclosure statement of any material fact which may effect the contemplated use of the property.

4.4.4.4 A mitigation plan describing the actions proposed to establish, construct, operate, manage and maintain the Mitigation Bank which shall include:

(a) construction-level drawings detailing proposed topographic alterations and all structural components associated with proposed activities;

(b) proposed construction activities, including a detailed schedule for implementation;

(c) the proposed vegetation planting scheme and detailed schedule for implementation;

(d) measures to be implemented during and after construction to avoid adverse impacts related to proposed activities;

(e) a detailed long term management plan comprising all aspects of operation and maintenance, including water management practices, vegetation establishment, exotic and nuisance species control, fire management, and control of access; and

(f) a proposed monitoring plan to demonstrate mitigation success.

4.4.4.5 An assessment of improvement or changes in ecological value anticipated as a result of proposed mitigation actions which shall include:

(a) a description of anticipated site conditions in the Mitigation Bank after the mitigation plan is successfully implemented;

(b) a comparison of current fish and wildlife habitat to expected habitat after the mitigation plan is successfully implemented; and

(c) a description of the expected ecological benefits to the regional watershed.

4.4.4.6 Evidence of sufficient legal or equitable interest in the property which is to become the Mitigation Bank to meet the requirements of section 4.4.9.

4.4.4.7 Draft documentation of financial responsibility meeting the requirements of section 4.4.10.

4.4.4.8 A person or entity who wishes to obtain an estimation of the legal and financial requirements necessary for a mitigation bank, information necessary for evaluation of an application for an individual permit for a mitigation bank, and potential credits to be awarded pursuant to a mitigation bank individual permit may apply for a mitigation bank conceptual approval. An application for a mitigation bank conceptual approval must contain the information listed in 4.4.4.1-8 above.

4.4.5 Establishment of Mitigation Credits

4.4.5.1 Based upon the information submitted by the applicant, and an assessment of the proposed Mitigation Bank pursuant to the criteria in this section, the District will assign a number of Mitigation Credits to the proposed Mitigation Bank, or phases thereof.

4.4.5.2 A Mitigation Credit is a unit of measure which represents the increase in ecological value resulting from restoration, enhancement, preservation, or creation activities. For purposes of establishing a standard unit of measure, one Mitigation Credit is equivalent to the ecological value gained by the successful creation of one acre of wetland. Mitigation Credits assigned for enhancement, restoration or preservation of wetlands or uplands will be based on the extent of improvement in ecological value resulting from these activities relative to that obtained by successfully creating one acre of wetland. In determining the degree of improvement in ecological value, the following factors will be considered:

(a) The extent to which target hydrologic regimes can be achieved and maintained.

(b) The extent to which management activities promote natural ecological conditions, including natural fire patterns.

(c) The proximity to areas of national, state, or regional ecological significance, such as national or state parks, Outstanding National Resource Waters, Outstanding Florida Waters, and other regionally significant ecological resources or habitats, such as lands acquired or to be acquired through governmental or non-profit land acquisition programs for environmental conservation, and the establishment of corridors to those resources or habitats.

(d) The quality and quantity of wetland or upland restoration, enhancement, preservation, or creation.

(e) The ecological and hydrological relationship between wetlands and uplands in the Mitigation Bank.

(f) The extent to which the Mitigation Bank provides habitat for fish and wildlife, especially habitat for species listed as threatened, endangered or of special concern, or provides habitats which are unique for that mitigation service area.

(g) The extent to which the lands that are to be preserved are already protected by existing state, local or federal regulations or land use restrictions.

(h) The extent that lands to be preserved would be adversely affected if they were not preserved.

(i) Any special designation or classification of the affected waters and lands.

4.4.5.3 No credit shall be available for freshwater wetland creation until the success of the created wetlands is demonstrated.

4.4.5.4 Some Mitigation Credits may be withdrawn prior to meeting all of the performance criteria specified in the individual permit. The number of credits and schedule for release shall be determined based upon the performance criteria for the Mitigation Bank, and the success criteria for each mitigation activity. A Mitigation Bank will be credited with its maximum number of Mitigation Credits only after meeting the mitigation success criteria specified in the permit. However, no credits shall be released prior to meeting the requirements of Section 4.4.9.

4.4.5.5 Mitigation Credits available for withdrawal may be transferred, sold or used subject to the provisions of this section.

4.4.5.6 If at any time the banker is not in material compliance with the terms of the individual permit, no Mitigation Credits may be withdrawn. Mitigation Credits shall again be available for withdrawal if the banker comes back into compliance.

4.4.5.7 The individual permit shall contain a ledger listing the number and type of Mitigation Credits in the Mitigation Bank. The ledger will provide the maximum number and type of Mitigation Credits which would be available for withdrawal when the Mitigation Bank meets all of the performance criteria in the permit.

4.4.5.8 Mitigation Credits may be sold whole or in part at the banker's discretion. Mitigation Credits may be sold or resold until they are used to offset adverse impacts.

4.4.5.9 The District shall maintain a ledger of the Mitigation Credits available in each Mitigation Bank. Mitigation Credits shall be withdrawn as a non-substantial modification of the individual permit. To withdraw Mitigation Credits, the permit applicant must document that Mitigation Credits have been reserved, sold or transferred to the permit applicant, and that the Mitigation Credits have been withdrawn from the Mitigation Bank. If the agency permitting the impact determines that use of the Mitigation Credits proposed by the applicant is appropriate to offset the adverse impacts, it shall notify the District. Upon receipt of this notice, the District shall determine if a sufficient number and type of Mitigation Credits are available, withdraw the Mitigation Credits, and notify the agency permitting the impact and the banker in writing of the withdrawal of the Mitigation Credits and the remaining balance of Mitigation Credits.

4.4.5.10 When the Department is the banker, the Department shall maintain its own ledger. The Department shall annually submit a report of the Mitigation Credits sold, transferred, or used from its Mitigation Bank to the District.

4.4.6 Contribution of Lands

A permit applicant may contribute land to a Mitigation Bank if:

(a) the adverse impacts to be offset by the land donation are within the mitigation service area of the Mitigation Bank, except as provided in Section 4.4.8.4;

(b) the land will offset adverse impacts of the proposed project;

(c) the land is adjacent to or will become a District approved Mitigation Bank;

(d) the land will improve or enhance the ecological value of a District approved Mitigation Bank;

(e) the land will be encumbered pursuant to the requirements of section 4.4.9; and

(f) the grantee of the conservation easement or fee simple interest agrees to accept such conveyance.

4.4.7 Contribution of Funds

Funds may be contributed to a Mitigation Bank by purchasing Mitigation Credits from the banker.

4.4.8 Mitigation Service Area

4.4.8.1 A Mitigation Service Area will be established for each Mitigation Bank in the individual permit. Except as provided herein, Mitigation Credits may only be withdrawn to offset adverse impacts in the Mitigation Service Area. The extent of the Mitigation Service Area will depend upon whether adverse impacts within the Mitigation Service Area can be adequately offset by the Mitigation Bank.

4.4.8.2 A Mitigation Service Area may be larger than the regional watershed if adverse impacts to wetlands outside the regional watershed could be adequately offset by the Mitigation Bank because of local ecological or hydrological conditions. A Mitigation Service Area may be smaller than a regional watershed, such as in an aquatic preserve, Outstanding Florida Water, or Area of Critical State Concern, if adverse impacts throughout the regional watershed could not be offset by the Mitigation Bank because of local ecological or hydrological conditions.

4.4.8.3 Mitigation Service Areas may overlap and multiple Mitigation Service Areas may be approved for a regional watershed.

4.4.8.4 In addition to projects located wholly within the Mitigation Service Area of a Mitigation Bank, the following projects are eligible to use a Mitigation Bank if the requirements in section 4.4.2 are met:

(a) Projects with adverse impacts partially located within the Mitigation Service Area.

(b) Linear projects, such as roadways, transmission lines, distribution lines, pipelines, or railways.

(c) Projects with total adverse impacts of less than one-half acre in size.

4.4.8.5 When Mitigation Credits are applied to offset adverse impacts within the regional watershed, the mitigation credit requirement shall be the same as that specified for mitigation on the project site.

4.4.8.6 When Mitigation Credits are applied to offset adverse impacts outside the regional watershed, the mitigation credit requirement may be higher than that specified for mitigation on the project site, if necessary to adequately offset the adverse impacts of the project.

4.4.9 Land Use Restrictions on Mitigation Banks

4.4.9.1 Before Mitigation Credits may be used from a Mitigation Bank or any phase of a Mitigation Bank, the banker shall either (1) cause a fee interest to be conveyed to the District, or (2) cause a conservation easement to be conveyed to both the Department of Environmental Protection and the District. The grantor may convey a conservation easement to additional grantees provided that such conveyance is consistent with the preservation requirements of the permit. Mitigation Banks on Federally owned land shall be encumbered in perpetuity by conservation easements or other mechanisms ensuring preservation in accordance with the individual permit.

4.4.9.2 All conservation easements shall be granted in perpetuity without encumbrances, unless such encumbrances do not adversely affect the ecological viability of the Mitigation Bank. All conservation easements shall be of a form and content sufficient to ensure preservation of the Mitigation Bank according to the permit, and shall, at a minimum, meet the requirements and restrictions of Section 704.06, F.S., except as provided in the individual permit, and meet the requirements of subsection 4.4.9.9.

4.4.9.3 All real property conveyances shall be in fee simple and by statutory warranty deed, special warranty deed, or other deed, without encumbrances that adversely affect the District's title to the Mitigation Bank property or preservation of the Mitigation Bank according to the permit. The District shall accept a quit claim deed if necessary to aid in clearing minor title defects or otherwise resolve a boundary question in the Mitigation Bank.

4.4.9.4 The grantor of the property or conservation easement shall provide the following unless the District determines such items are not necessary to ensure preservation of the Mitigation Bank according to the permit:

(a) A survey of the property or the area within the conservation easement. The survey must be certified by a land surveyor registered in the State of Florida as meeting the requirements of the District, and the minimum technical standards set forth by the Florida Board of Professional Land Surveyors in Chapter 21 HH-6, F.A.C., pursuant to Section 472.027, F.S.

(b) A certified appraisal of the market value of the property or interest to be conveyed to determine the appropriate amount of title insurance.

(c) Assurance of the marketability of the interest in real property being acquired in the form of a marketable title commitment and owner's title policy (ALTA Form B) in an amount at least equal to the fair market value, as established in subsection 4.4.9.4(b), of the real property. The coverage, form and exceptions of the title insurance policy shall ensure that the Mitigation Bank will be preserved according to the individual permit.

(d) If a fee simple interest is being conveyed, a Phase I environmental audit identifying any environmental problems which may affect the liability of the District and any additional audits as are necessary to disclose the presence of any substance or condition that could subject the District to liability.

4.4.9.5 The grantor shall pay the documentary revenue stamp tax and all other taxes or costs associated with the conveyance, including the cost of recording the deed or easement and any other recordable instruments required by the District, unless prohibited or exempt by law, as a condition of the receipt of the conveyance.

4.4.9.6 All real estate taxes and assessments which are or which may become a lien against the property shall be satisfied of record by the grantor before or at closing. If required by Section 196.295, F.S., the grantor shall place funds in escrow with the county tax collector.

4.4.9.7 The grantor shall remove all abandoned personal property and solid waste from the property that reduces the proposed ecological value of the property, will adversely affect the construction, implementation or management of the bank, or poses a liability risk to the District, as a condition of receipt of the conveyance.

4.4.9.8 The grantor shall provide in the conservation easement that the banker and the District shall have access to the property to perform all acts necessary to ensure compliance with the individual permit and any permits issued under this Part.

4.4.9.9 The banker shall record the conservation easement or property deed within 30 days of issuance of the individual permit, or as otherwise required in the individual permit. The banker shall submit to the District a certified copy of the recorded conservation easement or property deed within 30 days of recording.

4.4.10 Financial Responsibility

4.4.10.1 To provide reasonable assurances that the proposed Mitigation Bank will meet the requirements of this section and the associated permit conditions, non-governmental bankers shall provide proof of financial responsibility for: (1) the construction and implementation phase of the bank, and (2) the long term management of the bank, as required in this section. Governmental entities shall provide proof of financial responsibility pursuant to Section 4.4.10.8. The amount of financial responsibility provided in the mecha-

nisms required in this section shall be based on the cost estimates determined pursuant to Section 4.4.10.6.

4.4.10.2 Financial Responsibility Documentation.

The applicant shall provide draft documentation of the required financial responsibility mechanisms described below with the permit application, and shall submit to the District the executed or finalized documentation within the time frames specified in the permit. The provisions of this section shall also apply for any modifications to the individual permit.

4.4.10.3 General Terms for Financial Responsibility Mechanisms

In addition to the specific provisions regarding financial responsibility mechanisms for construction and implementation in subsection 4.4.10.4 and long term management in subsection 4.4.10.5, the following terms shall be complied with:

(a) The financial mechanisms shall name the District as sole beneficiary or shall be payable to the District. If the financial responsibility mechanism is of a type which is retained by the beneficiary according to industry standards, it shall be retained by the District.

(b) The financial institution issuing or maintaining the financial responsibility mechanism must have the legal authority to conduct such operations and must be regulated and examined by a Federal agency or the State of Florida. If insurance is provided to the financial institution by a Federal agency, the amount of insurance shall not be less than the amount of financial responsibility required by this section. Surety or guarantee bonds must be issued by a surety company registered with the State of Florida.

(c) No person shall withdraw or transfer any portion of the monies provided for financial responsibility without first obtaining prior written approval from the District, which shall be granted provided that such withdrawal or transfer does not reduce the amount of financial responsibility below the cost requirements in Sections 4.4.10.4(c) and 4.4.10.5(b), as applicable.

(d) The financial responsibility mechanisms shall not expire or terminate prior to completion of the applicable permit conditions.

(e) The financial responsibility mechanisms shall not be terminated or cancelled by the banker. Within 90 days of receipt of a notice of cancellation of a financial responsibility mechanism or other actual or constructive notice of cancellation, the banker shall provide an alternate financial responsibility mechanism which meets the requirements of this section.

(f) If the Mitigation Bank has failed to comply with the terms and conditions of the permit, the District upon reasonable notice may draw upon the financial mechanism.

4.4.10.4 Financial Responsibility for Construction and Implementation

(a) No financial responsibility shall be required where the construction and implementation of the Mitigation Bank, or a phase thereof, is completed and successful prior to the withdrawal of any credits.

(b) Financial responsibility for the construction and implementation of each phase of the Mitigation Bank may be established by guarantee bonds, performance bonds, insurance certificates, irrevocable letters of credit, trust fund agreements, or securities. If bonds or an irrevocable letter of credit are used as the financial mechanism, a standby trust fund shall be established, in a form meeting standard industry practices, in which all payments under the bonds or letter of credit shall be directly deposited.

(c) The amount of financial responsibility established shall equal the cost of construction and implementation of each phase of the Mitigation Bank which is being implemented, pursuant to Section 4.4.10.6. When a current phase has been completely constructed, implemented and is trending towards success according to the terms of the permit, the respective amount of financial responsibility shall be released.

(d) The financial responsibility mechanism shall become effective at least 60 days prior to initiation of construction of the next phase of the Mitigation Bank, or as otherwise required by the individual permit prior to initiation of implementation and construction of the subject phase.

4.4.10.5 Financial Responsibility for the Long Term Management

(a) A banker shall establish a trust fund agreement to provide financial responsibility for the long term management of the Mitigation Bank, or phase thereof. Trust fund agreements shall be submitted in a format which meets standard industry practices.

(b) The amount of financial responsibility shall equal the cost of long term management, pursuant to Section 4.4.10.6, for all previously constructed phases and the current phase for which credits have been approved for withdrawal.

(c) The trust fund agreement shall be effective and fully funded at least 60 days prior to the withdrawal of credits from the Mitigation Bank, or phase thereof, or as otherwise provided in the individual permit prior to the withdrawal of credits.

4.4.10.6 Cost Estimates

(a) For the purposes of determining the amount of financial responsibility that is required in this section, the banker shall submit a detailed written esti-

mate, in current dollars, of the total cost of construction and implementation and long term management of the Mitigation Bank.

(b) The cost estimate for construction and implementation shall include all costs associated with completing construction and implementation of the Mitigation Bank, or phase thereof, including earthmoving, planting, structure installation, consultant fees, monitoring activities and reports.

(c) The cost estimate for the long term management of the Mitigation Bank shall be based on the costs of maintaining and operating any structures, controlling nuisance or exotic species, fire management, consultant fees, monitoring activities and reports, and any other costs associated with long term management. The amount of financial responsibility shall equal the cost of long term management for all previously constructed phases and the current phase for which the withdrawal of credits is imminent.

(d) The banker shall submit the estimates, together with verifiable documentation, to the District along with the proof of financial responsibility.

(e) The costs shall be estimated based on a third party performing the work at the fair market value of services. The source of any cost estimates shall be indicated.

4.4.10.7 Cost Adjustments

(a) The banker shall, every two years, adjust the amount of financial responsibility provided for construction, implementation, and long term management. Every two years the banker shall submit to the District a cost adjustment statement accompanied by supporting documentation. Construction, implementation, and long term management costs shall be listed separately. The District shall review the cost adjustment statement and supporting documentation to determine if it reflects all construction, implementation, and long term management costs. The District shall approve the cost adjustment statement if all such costs are reflected.

(b) At each cost adjustment, the banker shall revise the construction and implementation cost estimate for inflation and changes in the costs to complete the current phase of the Mitigation Bank.

(c) At each cost adjustment, the banker shall revise the long term management cost estimate for inflation and changes in the costs to carry out the long term management conditions of the permit.

(d) Revised cost estimates shall be used as the basis for modifying the financial mechanism. If the value of the financial mechanism is less than the total amount of the current construction and implementation and long term management cost estimates, the banker shall, upon District approval of the cost adjustment statement, increase the value of the financial mechanism

to reflect the new estimate within 60 days. If the value of the funding mechanism is greater than the total amount of the current cost estimate, the banker may reduce the value of the funding mechanism to reflect the new estimate upon receiving District approval of the cost adjustment statement.

(e) The District shall require adjustment of the amount of financial responsibility provided for construction, implementation or long term management at times other than the cost adjustment period when the costs associated with compliance with the permit conditions exceed the current amount of financial responsibility and such financial assurances are deemed necessary to ensure compliance with the permit conditions.

4.4.10.8 Financial Responsibility for Governmental, Non-Department, Mitigation Banks

(a) Governmental entities other than the Department shall demonstrate that they can meet the financial responsibility requirements for construction and implementation in Section 4.4.10.4 by any of the mechanisms in Section 4.4.10.4 above, or by other financial mechanisms which meet the requirements of this section.

(b) Governmental entities other than the Department shall establish a trust fund for the long term management of the Mitigation Bank in accordance with Section 4.4.10.5 above. The trust fund agreement for long term management may be funded as Mitigation Credits are withdrawn, provided that the trust fund agreement is fully funded when all Mitigation Credits are withdrawn. Governmental entities shall comply with the cost adjustment provisions in Section 4.4.10.7.

4.4.11 Individual or Conceptual Approval Environmental Resource Permit for a Mitigation Bank

If the Mitigation Bank proposal meets the criteria in this section, the District shall issue either an individual permit or a Conceptual Approval to the banker.

4.4.11.1 The individual permit authorizes the implementation and operation of the Mitigation Bank and sets forth the rights and responsibilities of the banker for the implementation, management, maintenance and operation of the Mitigation Bank. The individual permit shall include the following:

(a) A description of the Mitigation Service Area.

(b) The maximum number of Mitigation Credits available for use when the Mitigation Bank, or phase thereof, is deemed successful, the type of Mitigation Credits awarded, and the number and schedule of Mitigation Credits available for use prior to success.

(c) The success criteria by which the Mitigation Bank will be evaluated.

(d) The financial responsibility mechanism(s) which must be employed by the banker including the procedure for drawing on the financial mechanisms by the District, and provisions for adjustment of the financial responsibility mechanism.

(e) Requirements for the execution and recording of the conservation easement or conveyance of the fee interest as provided in section 4.4.9.

(f) A ledger listing Mitigation Credits available in the Mitigation Bank.

(g) A schedule for implementation of the Mitigation Bank, and any phases therein.

(h) The long term management requirements for the Mitigation Bank.

(i) The conditions required pursuant to Chapters 40E-4, 40E-40, 40E-41 or 40E-400, F.A.C., as applicable, for construction and operation of any surface water management system proposed within the Mitigation Bank.

4.4.11.2 An individual permit issued in accordance with 4.4.11 shall automatically expire five years from the date of issuance if the banker has not recorded a conservation easement or conveyed fee simple interest, as appropriate, over the real property within the Mitigation Bank, or phase thereof, in accordance with the individual permit, or, when no property interest is required to be recorded, the individual permit shall automatically expire if no construction has been commenced pursuant thereto. Except as provided above, an individual permit shall be perpetual unless revoked or modified.

4.4.11.3 A Mitigation Bank Conceptual Approval estimates the legal and financial requirements necessary for the Mitigation Bank, information necessary for evaluation of the application for an individual permit for the mitigation bank, and potential Mitigation Credits to be awarded pursuant to the individual permit. The Mitigation Bank Conceptual Approval does not authorize the use or withdrawal of Mitigation Credits, or any construction within the Mitigation Bank. The level of detail provided in the Mitigation Bank Conceptual Approval will depend on the level of detail submitted with the application. A Mitigation Bank Conceptual Approval shall be valid for a term of five years from the date of issuance.

4.4.12 Surrender, Transfer, or Modification of an Individual or Conceptual Approval Environmental Resource Permits for a Mitigation Bank

4.4.12.1 A banker may apply to surrender an individual permit, or permitted phase thereof, by submitting a written request to the District. The written request must identify which phase of the Mitigation Bank will be surrendered, indicate the extent of mitigation work performed in that phase, and describe the conservation property interest encumbering that phase. The District shall authorize release from an individual permit when no

credits have been sold and relinquishment of the phase would not compromise the ecological value of the remaining portions of the Mitigation Bank.

4.4.12.2 If a property interest has been conveyed as provided in Section 4.4.9 for an individual permit which is surrendered as provided in Section 4.4.12.1 above, the District shall convey the property interest back to the grantor of that interest.

4.4.12.3 If a surface water management system has been constructed or altered within the Mitigation Bank, the banker shall obtain any permits required pursuant to Chapters 40E-4, 40E-40, 40E-41 and 40E-400, F. A. C., to abandon the surface water management system.

4.4.12.4 To transfer an individual permit, the banker shall meet the requirements of Rule 40E-1.6107, F.A.C., and the entity to which the permit will be transferred must provide reasonable assurances that it can meet the requirements of sections 4.4.9 and 4.4.10.

4.4.12.5 An Individual Environmental Resource Permit for a Mitigation Bank can be issued as a modification to a Mitigation Bank Conceptual Approval.

4.4.13 Department of Environmental Protection Mitigation Banks

The Department may construct, operate, manage, and maintain a Mitigation Bank pursuant to this section after obtaining an individual permit from the District.

4.4.13.1 The Department may apply to establish a Mitigation Bank by submitting a Mitigation Bank plan which meets the applicable permitting criteria of this section, in one of the following formats:

(a) A Mitigation Bank plan identifying one or more parcels of lands to be acquired for mitigation site(s).

(b) A Mitigation Bank plan identifying one or more parcels of land in which the Department has a legal or equitable interest.

4.4.13.2 The Department shall maintain the land within the Regional Mitigation Bank pursuant to the terms of the individual permit. Any change in the land use shall require a modification of the Mitigation Bank Permit.

4.4.13.3 Notwithstanding any other provision of this Chapter, the Department may sell, transfer, or use Mitigation Credits prior to acquiring the proposed mitigation site as set forth in its individual permit.

4.4.13.4 Department Financial Responsibility

A portion of the funds contributed to a Department Mitigation Bank from the sale of credits shall be dedicated for the construction and implementation of the Mitigation Bank, and a portion of the funds shall be dedicated for the long-term management of the bank as set forth in the individual permit. Funds derived from the sale of Mitigation Credits which

are not necessary for the construction, implementation, and long-term management of a Department Regional Mitigation Bank shall be dedicated for the initiation of other Department Mitigation Banks, or expansion of other Department land acquisition or restoration projects which improve regional ecological conditions.

4.4.13.5 Procedures for Establishment of Mitigation Banks

Mitigation Banks established by the Department shall be permitted pursuant to the procedures encompassed in the Operating Agreement Concerning Regulation Under Part IV, Chapter 373, F.S. adopted by reference in Section 40E-4.091, F.A.C.

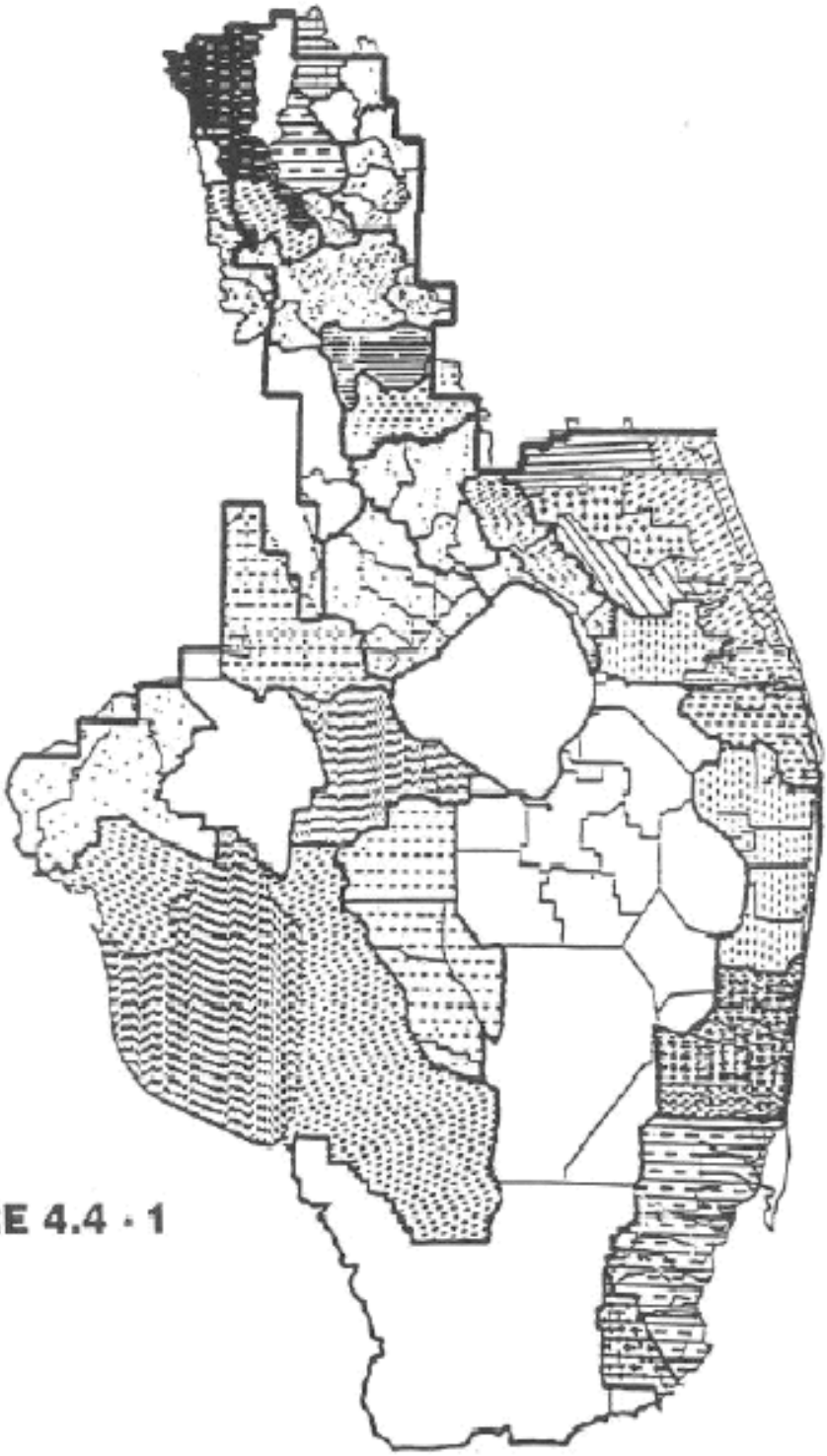


FIGURE 4.4 - 1

4.5 Formal Determination of Landward Extent of Wetlands and other Surface Waters -

Pursuant to subsection 373.421(2), F.S., the Governing Board has established a procedure by which a real property owner, an entity that has the power of eminent domain, or any person who has a legal or equitable interest in real property may petition the District for a formal determination for that property. A formal wetland determination means the District will determine the locations on the property of the landward extent (boundaries) of the wetlands and other surface waters defined by Chapter 62-340, F.A.C., as ratified in Section 373.4211, F.S.

4.5.1 Procedure

To petition for a formal determination, the petitioner must submit to the District the following:

(a) four copies of completed Form No. 0972, including copies of all items required by the form, and

(b) the appropriate non-refundable formal determination fee pursuant to section 40E-1.607, F.A.C.

Within 30 days of receipt of a petition for a formal determination, the District shall notify the petitioner of any missing or insufficient information in the petition documentation submitted which may be necessary to complete review of the petition.

The District shall complete the determination and shall issue a notice of intended agency action within 60 days after the petition is deemed complete. The District shall publish the notice of intended agency action on the petition in a newspaper of general circulation in the county or counties where the property is located.

Sections 120.57 and 120.569, F.S., apply to formal determinations made pursuant to this section. Any person whose substantial interests will be affected by the District's proposed action on the petition may request an administrative hearing on the proposed action pursuant to section 40E-1.511, F.A.C. If no request for an administrative hearing is filed, the Executive Director will then take final action on the petition for the formal determination.

The Executive Director will only issue a formal determination if the petitioner has satisfied all the requirements of section 4.5. A person requesting a formal determination may withdraw the petition without prejudice at any point before final agency action.

4.5.2 Types of Formal Determinations

A petitioner can request a formal determination consisting of a certified survey, an approximate delineation, or combinations thereof, as described below.

(a) The survey of the extent of wetlands and other surface waters shall be certified pursuant to chapter 472, F.S., to meet the minimum technical standards in chapter 61G17-6, F.A.C. A petitioner seeking a certified surveyed delineation shall have a land surveyor registered in the State of Florida survey the verified boundaries of wetlands and other surface waters, and shall have the surveyor or surveyor's representative accompany the District representative on the delineation verification described in subsection 4.5.3. The certified survey shall also contain a legal description of, and acreage contained within, the boundaries of the property for which the determination is sought. The boundaries of wetlands and other surface waters shall be witnessed to the property boundaries, and shall be capable of being mathematically reproduced from the survey. The petitioner shall submit five copies of the survey, along with five copies of the survey depicted on aerial photographs, to the District to complete the petition.

(b) An approximate delineation shall consist of a boundary produced by using global positioning system (GPS), a boundary drawn on rectified aerial photographs, a geo-reference image produced from a boundary drawn on a non-rectified aerial photograph, or any combination thereof.

1. A range of variability shall be determined for all approximate delineations by comparing a number of specific boundary points indicated on the aerial photograph, or located by GPS, to field located boundary points. The District shall determine the number and location of comparison sites using the total linear feet of delineated boundary such that the total number of sites reflects at least one site for every 1000 feet of delineated boundary. No fewer than three boundary point comparisons shall be performed for each approximate delineation. For GPS approximate delineations, the petitioner shall conduct a specific purpose survey, as defined in chapter 61G17-6, F.A.C., to show the relationship of field located boundary points to the GPS located boundary points. The range of variability shall be the greatest deviation measured at the comparison boundary points. An approximate delineation method cannot be used if the range of variability is equal to or greater than plus or minus 25 feet.

2. An aerial photograph shall serve as the basis for an approximate delineation only when the aerial photograph accurately depicts the boundaries of the wetlands and other surface waters by a clear expression of vegetative or physical signatures as verified by groundtruthing. If a submitted aerial photograph does not provide an accurate depiction, then the landward extent of wetlands and other surface waters shall be delineated by flagging the boundary, and the formal determination shall be produced using GPS or a certified survey.

3. Following any verification and adjustment as required in subsection 4.5.3, the petitioner shall submit five copies of the following to complete the petition: a hand drawn delineation on a rectified aerial photograph; the geo-referenced image of the delineation and aerial photograph with the delineation; or the GPS depiction of the delineation on an aerial photograph.

4. When a subsequent permit application includes regulated activities within 200 feet of the landward extent of the range of variability of an approximate delineation at a given location, the applicant shall establish in the field the exact boundary of the wetlands and other surface waters at that location.

4.5.3 Locating the Surface Waters and Wetlands Boundary Line

If the property is 10 acres or greater in size, the petitioner or petitioner's agent shall initially delineate the boundaries of wetlands and other surface waters by either flagging the boundary for a certified survey or GPS, or estimating the extent of wetlands and other surface waters on aerial photographs, prior to the District's inspection of the site. A District representative will then verify the location of the boundary line and indicate to the petitioner any necessary adjustments in the initial delineation needed to reflect an accurate boundary. For properties less than 10 acres in size, the petitioner is not required to approximate the delineation.

4.5.4 Duration

The formal determination shall be binding for five years provided physical conditions on the property do not change so as to alter the boundaries of wetlands and other surface waters during that period.

4.5.5 Formal Determinations for Properties with an Existing Formal Determination

Within sixty days prior to the expiration of a formal determination, the property owner, an entity that has the power of eminent domain, or any other person who has a legal or equitable interest in the property may petition for a new formal determination for the same parcel of property and such determination shall be issued, approving the same extent of surface waters and wetlands in the previous formal determination, as long as physical conditions on the property have not changed, other than changes which have been authorized by a permit pursuant to this part, so as to alter the boundaries of surface waters or wetlands and the methodology for determining the extent of surface waters and wetlands ratified by Section 373.421, F.S., has not been amended since the previous formal determination.

4.5.6 Nonbinding Determinations

The District may issue informal nonbinding pre-application determinations or otherwise initiate nonbinding determinations on its own initiative.

5.0 WATER QUALITY CRITERIA

5.1 State Standards -

Projects shall be designed and operated so that off-site discharges will meet State water quality standards, as set forth in Chapter 17-302, Florida Administrative Code.

5.2 Retention / Detention Criteria -

5.2.1 Volumetric Requirements

(a) Retention, detention, or both retention and detention in the overall system, including swales, lakes, canals, greenways, etc., shall be provided for one of the three following criteria or equivalent combinations thereof:

1. Wet detention volume shall be provided for the first inch of runoff from the developed project, or the total runoff of 2.5 inches times the percentage of imperviousness, whichever is greater.

2. Dry detention volume shall be provided equal to 75 percent of the above amounts computed for wet detention.

3. Retention volume shall be provided equal to 50 percent of the above amounts computed for wet detention. Retention volume included in flood protection calculations requires a guarantee of long term operation and maintenance of system bleed-down ability. Examples of such guarantee include evidence of excellent soil percolation rates, such as coastal ridge sands, or an operations entity which specifically reserves funds for operation, maintenance and replacement (example: Orange County MSTU). (NOTE: Orange County subdivision regulation criteria for retention - published by Orange County in Orange County Subdivision Regulations - may be utilized for Orange County MSTU projects in lieu of District retention criteria where retention volumes exceed one half inch. This information is hereby published by reference and incorporated into this rule.)

(b) Systems with inlets in grassed areas will be credited with up to 0.2 inches of the required wet detention amount for the contributing areas. Full credit will be based on a ratio of 10:1 impervious area (paved or building area) to pervious area (i.e. the grassed area) with proportionately less credit granted for greater ratios.

5.2.2 Land Use and Coverage Criteria

(a) Commercial or industrial zoned projects shall provide at least one half inch of dry detention or retention pretreatment as part of the required retention / detention, unless reasonable assurances can be offered that hazardous materials will not enter the project's surface water management system.

Such assurances include, for example, deed restrictions on property planned for re-sale, type of occupancy, recorded lease agreements, local government restrictive codes, ordinances, licenses, and engineered containment systems.

(b) Projects having greater than 40% impervious area and which discharge directly to the following receiving waters shall provide at least one half inch of dry detention or retention pretreatment as part of the required retention/ detention. Receiving waters being addressed are:

1. Lake Okeechobee and the Kissimmee River.

2. Water bodies designated as Class I or Class II waters by the Florida Department of Environmental Protection.

3. Canals back-pumped to Lake Okeechobee or to the Conservation areas, or proposed for back-pumping.

4. Other areas, such as the Savannas in St. Lucie and Martin Counties; the Six Mile Cypress Strand; the Big Cypress area of Collier County; and lands acquired by the District pursuant to Section 373.59, Florida Statutes, Water Management Lands Trust Fund (Save Our Rivers); mitigation bank lands, as set forth in Section 4.4.

5. Outstanding Florida Waters as defined in Chapter 17-3.302, Florida Administrative Code; and Aquatic Preserves as created and provided for in Chapter 258, Florida Statutes.

6. Water bodies within a District permitted public water supply wellfield cone-of-depression which are not separated from the aquifer by strata at least ten feet thick and having an average saturated hydraulic conductivity of less than 0.1 foot per day; where the cone-of-depression is defined by one of the following:

   a. in those areas of the District where no local wellfield protection ordinance has been adopted by the local governing body, the one foot drawdown line as expressed in the water table aquifer under conditions of no rainfall and 100 days of pumpage at the permitted average daily pumpage rate (where significant canal recharge is indicated, canal recharge representative of a 1 in 100 year drought will be considered);

   b. Broward County Wellfield Protection Ordinance contour for Zone 3 (Broward County Wellfield Protection Ordinance 84-60, as incorporated into Broward County Code Chapter 27, Article XIII, enacted in August 1984). This information is hereby published by reference and incorporated into this rule.

c. Dade County Wellfield Protection Ordinance contour showing maximum limits (Section 24-12.1 Protection of Public Potable Water Supply Wells; Chapter 24 Environmental Protection; Code of Metropolitan Dade County, Florida). This information is hereby published by reference and incorporated into this rule.

(c) Water surface and roofed areas can be deducted from site areas only for water quality pervious/impervious calculations. The water surface area meeting dimensional criteria may also be subtracted from the total site area when making final water quality treatment volume calculations.

(d) In cases of widening existing urban public highway projects, the District shall reduce the water quality requirements, if the applicant provides documentation which demonstrates that all reasonable design alternatives have been considered, and which provides evidence that the alternatives are all cost-prohibitive.

(e) Projects located within cones of depression - Retention/detention area locations shall not reduce hydraulic recharge distances to public water supply wells in excess of 2 percent, nor shall wet retention/detention areas be closer to public water supply wells than 300 feet.

5.3 Incorporation of Natural Areas and Existing Water Bodies –

5.3.1 Natural Water Bodies and Existing Water Bodies

Natural areas and existing water bodies may be used for retention/detention purposes when not in conflict with environmental (see subsection 4.2.2.4), water quality, (see Sections 4.2.4 - 4.2.4.5 herein) or public use considerations. Candidate areas for such purposes include:

(a) Previously degraded areas,

(b) Man made areas such as borrow pits, for example,

(c) Extensive areas which have the ability to absorb impacts easily,

(d) Areas incorporated into a system with mitigation features.

5.4 Underground Exfiltration Systems –

(a) Systems shall be designed for the retention volumes specified in Section 5.2.1 for retention systems, exfiltrated over one hour for retention purposes, prior to overflow, and based on test data for the site. (Note: such systems will not be acceptable on projects to be operated by entities other than single owners or entities with full time maintenance staff.)

(b) A safety factor of two or more shall be applied to the design to allow for geological uncertainties.

(c) A dry system is one with the pipe invert at or above the average wet season water table.

5.5 Sewage Treatment Percolation Ponds –

Above ground percolation pond dikes shall not be within 200 feet of water management lakes or 100 feet of dry retention/detention areas, or the applicant must provide reasonable assurance that effluent will not migrate into the water management lakes or detention areas. Reasonable assurance may be provided by:

(a) Documentation of volume and rate of application of effluent to the percolation ponds, and

(b) submittal of net flow analyses.

5.6 Criteria for Creation of Water Bodies –

The creation of water bodies shall meet both of the following criteria:

(a) Entrapped salt water, resulting from inland migration of salt water or penetration of the freshwater/salt water interface, will not adversely impact existing legal water users.

(b) Excavation of the water body shall not penetrate a water-bearing formation exhibiting poorer water quality for example, in terms of chloride concentrations.

5.7 Impervious Areas –

Runoff shall be discharged from impervious surfaces through retention areas, detention devices, filtering and cleansing devices, or subjected to some other type of Best Management Practice (BMP) prior to discharge from the project site. For projects which include substantial paved areas, such as shopping centers, large highway intersections with frequent stopped traffic, and high density developments, provisions shall be made for the removal of oil, grease and sediment from storm water discharges.

5.8 Stagnant Water Conditions –

Configurations which create stagnant water conditions such as hydraulically dead end canals are to be avoided, regardless of the type of development.

5.9 Water Quality Monitoring –

All new drainage projects will be evaluated based on the ability of the system to prevent degradation of receiving waters and the ability to conform to State water quality standards (see Chapters 62-4, and 62-302, F.A.C.).

5.9.1

(a) There are areas within the District where water quality considerations are extremely important, because of the sensitivity of the area. These areas include:

1. Lake Okeechobee and the Kissimmee River.

2. Water bodies designated as Class I or Class II waters by the Florida Department of Environmental Protection.

3. Canals back-pumped to Lake Okeechobee or to the Conservation areas, or proposed for back-pumping.

4. Sensitive areas, such as the Savannas in St. Lucie and Martin Counties, the Six Mile Cypress Strand and Estero Bay Aquatic Preserve in Lee County and the Big Cypress area of Collier County.

5. Outstanding Florida Waters as defined in Chapter 62-302, Florida Administrative Code.

(b) New developments which plan to utilize sensitive areas for disposal of stormwater will be given more detailed evaluation by the District Staff. In addition, new projects entailing a more intensified land use, such as industrial parks, and planning to discharge to a sensitive receiving water, directly or indirectly, shall be required to institute a water quality monitoring program if the applicant is unable to provide adequate assurances (by such means as routing drainage of areas where polluting materials would be located away from the surface water management system; developing restrictive covenants, or similar documents, which would have the effect of prohibiting polluting materials on the project site; or proposing other methods of assurance) that degradation of the receiving body water quality will not occur. The following listing of land use intensity is in ascending order.

1. Wetlands (including transition zones adjacent thereto)

2. Forested lands

3. Rangeland

4. Agricultural

5. Urban and built-up land

5.9.2 Monitoring is required for sites with high pollutant generating potential, such as industrial sites, and Class I and II solid waste disposal sites.

5.9.3 There are two reasons for requiring water quality monitoring by permittees, as follows:

(a) Such data can be used to determine if the pollution abatement practices incorporated into the design for the drainage system are functioning properly.

(b) In some cases there may be a real and immediate concern regarding degradation of quality in the receiving waters, regardless of the apparent pollutant removal efficiency of the drainage system.

5.9.4 The reason for the monitoring requirement will be stated in the Staff Report for each Permit. Also included in the permit will be the monitoring and reporting schedules and the parameters of interest. Each monitoring program will be designed specifically for the land use or individual project in question and will include applicable surface and ground water sampling. Staff shall specify applicable project specific parameters such as those listed in Chapter 62-302, F.A.C. The applicant shall use a Florida Department of Environmental Protection- or Florida Department of Health and Rehabilitative Services-certified laboratory for all water quality sampling and analysis. The District recommends that the applicant submit final results from the laboratory on a DOS-formatted 3.5" computer disk which will be supplied by the District. The disk will contain a program requiring the input of all pertinent data associated with the water quality monitoring special condition(s). If the permittee or their contracted laboratory does not have MS-DOS computer capabilities, water quality analysis may be submitted on paper. Examples of records to be supplied are as follows: sample date, sample location with D for discharge or N for no discharge, water discharge rates (cfs) and concentration values of indicated elements or compounds.

5.9.5 As a general rule, monitoring required of permittees will be confined to points within their boundaries. If additional sampling is needed in order to assess off-site impacts of the projects, the responsible party (the permittee or District) will be named in the permit. The determination of the responsible party will be based upon the accessibility of the monitoring site to the permittee.

5.9.6 Applicants are advised that Staff Reports written and Permits issued for projects not requiring monitoring at this time will normally include a statement to the effect that water quality monitoring may be required in the future. This should not be construed as an indication that the District is contemplating the implementation of a program of intensive water quality monitoring by all permittees. If water quality problems develop in specific areas, however, permittees will be put on notice in this manner that they may have to determine the quality of the water which they are discharging.

5.10 Solid Waste Facilities –

(a) Surface water management systems for Class I and II solid waste facilities, as defined by Chapter 62-701, F.A.C., shall be so designed, constructed, and operated as to maintain the integrity of the landfill at all times (during construction, operation, closure and post closure). Applicant must provide assurances that:

1. all flows will be conveyed at non-erosive velocities,

2. the project is designed to minimize erosion.

(b) Design features in support of this requirement include features such as:

1. slopes adequate to promote runoff but not affect slope stability,

2. intermediate benches or swales which reduce runoff velocities and limit erosion,

3. vegetation of closed portion of landfill.

(c) Class I and II landfill projects shall provide adequate assurance that leachate will not enter the surface water management system. This assurance may be provided through affirmative demonstration that the requirement of Chapter 62-701, F.A.C. for design and emplacement of liners, leachate collection systems, and treatment and disposal of leachate will be met.

(d) Borrow pits shall not be included in the surface water management system unless the applicant can affirmatively demonstrate that leachate will not enter the borrow pit, and that the water quality standards in Chapters 62-4 and 62-302, F.A.C. will be met.

(e) Dewatering operations at active, unlined landfills will not be permitted.

(f) For Class I and II landfills the District shall require additional Best Management Practices, such as:

1. Detention in excess of the quantities stated in Section 5.2.

2. Dry detention areas.

3. Dry conveyance swales with adequate dimensions to permit maintenance.

4. Filter mechanisms for additional water quality enhancement prior to discharge.

5. Skimmers in front of discharge structures to restrict discharge of floatable materials.

6. Screw gates on water control structures capable of restricting discharge of poor quality surface water.

7. Vegetation of appropriate portions of the water management system, such as conveyance swales.

(g) To provide information for assessing the need for Best Management Practices at a specific site, District staff will require a hydrogeologic investigation that shall, at a minimum, provide information on:

1. the hydrogeologic properties of the formations underlying the landfill, including aquifer and characteristics, groundwater elevations and direction and rate of groundwater flow,

2. location of existing wells within one-half mile of the site perimeter,

3. locations and specifications of existing or proposed monitor wells,

4. the location and chemical composition of any known leachate plumes.

(h) Applicants should consult with District staff prior to or at pre-application Technical Advisory Committee meetings to determine the specific requirements which will apply for a particular project.

6.0 WATER QUANTITY CRITERIA

6.1 General –

This document refers, in common engineering language, to flood and drought frequency impacts interchangeably with rainfall frequency. The Applicant is cautioned however that water resource impacts are of interest in the permit process, and that additional calculations may be required to identify other combinations of site conditions and rainfall frequencies which might result in impacts of the specified frequency. Examples include designs affected by spring tides, fluctuating tides and fluctuating receiving water stages.

6.2 Discharge Rate –

Off-site discharge rate is limited to rates not causing adverse impacts to existing off-site properties, and:

(a) historic discharge rates, or

(b) rates determined in previous District permit actions, or

(c) rates specified in District criteria (see Appendix 2).

6.3 Design Storm –

Unless otherwise specified by previous District permits or District criteria, a storm event of 3 day duration and 25 year return frequency shall be used in computing off-site discharge rates. Applicants are advised that local drainage districts or local governments may require more stringent design storm criteria. An applicant who feels its project is subject to unusual site specific conditions may, as a part of the permit application process, request an alternate discharge rate.

6.4 Flood Protection of Building Floors –

Building floors shall be at or above the 100 year flood elevations, as determined from the most appropriate information, including Federal Flood Insurance Rate Maps. Both tidal flooding and the 100 year, 3 day storm event shall be considered in determining elevations.

Lower floor elevations will be considered for agricultural buildings which are non-residential and are not routinely accessed by the public. For example, agricultural structures such as barns or equipment sheds would normally qualify for a lower finished floor elevation. Applicants are cautioned that potential water quality impacts caused by flooding of contents housed in a structure will be considered in allowing a reduced finished floor elevation.

6.5 Flood Protection of Roads and Parking Lots –

Many local governments have criteria for the protection of roads and parking lots from flooding.

(a) In cases where criteria are not specified by the local government with jurisdiction, the following design criteria for drainage and flood protection shall be used:

frequency - 5 years

duration - 1 day (road centerlines)

1 hour (parking lots served by exfiltration systems)

(b) If the local government with jurisdiction has set flood protection criteria for roads and parking lots within commercial projects, the District will not require the applicant to meet District road and parking lot flood protection criteria. This shall only be allowed for commercial projects which are to remain single owner projects. Such criteria may provide lesser degrees of flood protection than required under District criteria. Projects which are not permitted pursuant to District criteria will be special conditioned, as notice to the Permittee and local government, that a substandard design has been permitted. The applicant shall, however, meet District criteria for water quality, off-site discharge and building floor elevations.

(c) In each basin, the minimum roadway crown elevation shall be at least 2 feet higher than the control elevation, in order to protect the road subgrade.

6.6 Flood Plain Encroachment –

No net encroachment into the floodplain, between the average wet season water table and that encompassed by the 100 year event, which will adversely affect the existing rights of others, will be allowed.

6.7 Historic Basin Storage –

Provision must be made to replace or otherwise mitigate the loss of historic basin storage provided by the project site.

6.8 Offsite Lands –

Onsite works such as swales and dikes shall be used to allow the passage of drainage from offsite areas to downstream areas. Diking of project development areas or other equivalent methods shall be used to contain water at or above stages identified in the project discharge computations.

6.9 Minimum Drainage –

(a) Residential projects shall have systems with the calculated ability to discharge by surface flow or subsurface percolation at least 3/8 inch per day during or subsequent to the storm of the allowable discharge frequency and duration, so that lowering of the water surface elevations within the

water management system to the maximum depth compatible with the environmental protection or other constraints as described in 6.10, will occur in 12 days or less.

(b) 1. Commercial and industrial projects to be subdivided for sale, where the initial permittee will not build the entire system, are required to have installed by the initial permittee, as a minimum,

a. the required water quality system for one inch of runoff detention or one half inch of runoff retention in the master system for the total developed site. The individual sites must provide the remainder (2.5" x % impervious - one inch) which may be in exfiltration trench. The master system must be in a legally defined common area. The master system cannot utilize exfiltration trench.

b. a stormwater collection and conveyance system to interconnect the retention/detention system with the outfall, with access points to the system available to each individual lot or tract. The system shall be sized to limit discharge under design conditions to the allowable discharge.

2. Projects permitted in such manner will require deed restrictions which identify to lot or tract purchasers:

a. the amount of additional on-site storm water management system necessary to provide flood protection for specific design events,

b. any additional retention/detention required for water quality purposes, and

c. the assumed per cent impervious, or impervious area used in design calculations.

6.10 Overdrainage and Water Conservation –

Systems shall be designed to:

(a) Maintain existing water table elevations in existing wellfield cones of depression, and

(b) Preserve site environmental values (see Section 4.0), and

(c) Not waste freshwater, and

(d) Not lower water tables which would adversely affect the existing rights of others, and

(e) Preserve site ground water recharge characteristics.

6.11 Detention and Control Elevations –

Detention and control elevations shall be set to accomplish 6.10 and are subject to the following criteria:

(a) Wetland protection elevations,

(b) Consistency with surrounding land and project control elevations and water tables,

(c) Possible restrictions by other agencies to include tree protection and landscape ordinances,

(d) Consistency with water use permits, and

(e) A maximum depth of six feet below natural ground.

6.12 Lake-Wetland Separation –

Lakes which potentially may adversely affect wetland areas shall be separated from the wetland preservation, creation, or restoration areas by a minimum distance as determined by the following criteria:

(a) A separation distance (shortest distance between the wetland jurisdictional line and the edge of water in the proposed water body at the proposed control elevation) producing a gradient less than or equal to 0.005 using the difference in the elevation of the jurisdictional boundary of the wetland and the basin control elevation to calculate the driving head. Staff will consider elevations differing from the jurisdictional boundary of the wetland to calculate the driving head. The applicant will be required to submit monitoring data or other relevant hydrologic data from the site to substantiate the reason for using a different starting elevation. Existing conditions alone will not be considered sufficient reason to use a different elevation if there is evidence that activities on or adjacent to the project site may be responsible for lowering water tables which may be currently having an adverse impact on the subject wetlands. In these cases, preservation of the wetlands cannot be assured by simply maintaining the existing conditions.

(b) If the gradient resulting from any separation distance and the driving head as defined above is between 0.005 and 0.015, then calculations will be required which demonstrate that the drawdown in the adjacent wetland(s) will be of a magnitude which will not result in adverse impacts on the wetland. A drawdown of more than 12 vertical inches in a 90-day period with no recharge shall be presumed to be an adverse impact.

(c) If the gradient is equal to or greater than 0.015, then construction of an impermeable barrier or other equivalent action must be taken to mitigate for the impact of the proposed excavation between the wetland and the excavation.

(d) The District will review modeling results which demonstrate that a gradient equal to or greater than 0.015 will not have an adverse impact on the adjacent wetland. A detailed soil profile constructed from a minimum of three separate sampling locations with permeability testing results on selected samples. Two-dimensional modeling may be necessary to represent the site geometry.

6.13 Water Supply Sources -

An evaluation of the impact of the proposed surface water management system on sources of water supply must be submitted with the surface water management application. Cumulative impacts which may result from the construction and operation of the proposed surface water management system must be evaluated in conjunction with the cumulative withdrawals of existing legal uses of water.

7.0 WATER MANAGEMENT SYSTEM DESIGN AND CONSTRUCTION CRITERIA

7.1 Discharge Structures –

(a) All design discharges shall be made through structural discharge facilities. Earth berms shall be used only to disperse or collect sheet flows from or to ditches, swales, etc., served by discharge structures.

(b) Discharge structures shall be fixed so that discharge cannot be made below the control elevation, except that emergency devices may be installed with secure locking devices. Use of emergency devices must be coordinated with District personnel prior to opening or as soon as possible thereafter. The District's Executive Director is authorized to specify the use of emergency devices pursuant to rule 40E-1.611, F.A.C.

(c) Discharge structures must be non-operable unless approved otherwise.

(d) The District recommends that discharge structures include gratings for safety and maintenance purposes. The use of trash collection screens is desirable.

(e) Discharge structures shall include a baffle system to encourage discharge from the center of the water column rather than the top or bottom. Discharge structures from areas with greater than 50 percent impervious area or from systems with inlets in paved areas shall include a baffle, skimmer, or other mechanism suitable for preventing oil and grease from discharging to or from retention/detention areas.

(f) Direct discharges, such as through culverts, stormdrain, and weir structures, will be allowed to receiving waters which by virtue of their large capacity, or configuration are easily able to absorb concentrated discharges. Such receiving waters include existing storm sewer systems and man-made ditches, canals and lakes.

(g) Indirect discharges, such as overflow and spreader swales, are required where the receiving water or its adjacent supporting ecosystem might be degraded by a direct discharge. The discharge structure would therefore discharge, for example, into the overflow or spreader swale, which in turn would release the water to the actual receiving water. Such receiving waters include, for example, natural streams, lakes, wetlands and land naturally receiving overland sheetflow. Spreader swales shall be of a length sufficient to reduce discharge velocities to the receiving waters to historic rates or rates less than two feet per second.

(h) Pumped systems will only be allowed for single owner or governmental agency operation entities, unless perpetual operation ability can be assured.

7.2 Control Devices/Bleed-down Mechanisms for Detention Systems-

(a) District criteria require that gravity control devices shall be sized based upon a maximum design discharge of one half inch of the detention volume in 24 hours. The devices shall incorporate dimensions no smaller than 6 square inches of cross sectional area, two inches minimum dimension, and 20 degrees for "V" notches. Systems which are limited by a discharge structure with an orifice no larger than the minimum dimensions described herein shall be presumed to meet the discharge quantity criteria except for projects which are required to have zero discharge. Applicants are advised that local drainage districts or local governments may have more stringent gravity control device criteria.

(b) Gravity control devices shall be of a "V" or circular shaped configuration, whenever possible, to increase detention time during minor events.

(c) Pumped control devices, if pump discharge is permitted, shall be sized based on a design discharge of 20 percent of the detention volume in one day.

7.3 Dry Retention/Detention Areas (Not Applicable to Natural or Mitigation Wetland Areas) –

(a) Dry retention/detention areas shall have mechanisms for returning the groundwater level in the area to the control elevation. The bleed-down rate for these systems is the same as in section 7.2.(a), herein.

(b) Mosquito control ditches or other appropriate features for such purpose, shall be incorporated into the design of dry retention/detention areas.

(c) The design of dry retention/detention areas shall incorporate considerations for regular maintenance and vegetation harvesting procedures.

7.4 Wet Retention/Detention Area Dimensional Criteria (As Measured at or from the Control Elevation) –

(a) Area - 0.5 acre minimum

(b) Width - 100 feet minimum for linear areas in excess of 200 feet length. Irregular shaped areas may have narrower reaches but shall average at least 100 feet.

(c) Depth - Shallow, littoral areas are desirable for water quality enhancement purposes. Such areas are defined for purposes of this criteria as the portion of wet retention/detention bodies shallower than 6 feet as measured from below the control elevation. The minimum shallow, littoral area shall be the lesser of 20 percent of the wet retention/detention area or 2.5 percent of the total of the retention/detention area (including side slopes) plus

the basin contributing area. It is recommended that 25 to 50 percent of the wet retention/detention area be deeper than 12 feet.

(d) Side slopes for wet retention/detention and attenuation areas - for purposes of public safety, water quality enhancement and maintenance, all wet retention /detention areas shall be designed with side slopes no steeper than 4:l (horizontal:vertical) from top of bank out to a minimum depth of two feet below the control elevation, or an equivalent substitute. Constructed side slopes steeper than 3.5:1 (horizontal:vertical) shall be considered a substantial deviation during the consideration of operation permit issuance. Side slopes shall be topsoiled, and stabilized through seeding or planting from 2 feet below to 1 foot above the control elevation to promote vegetative growth. Side slope vegetation growth survival shall be a consideration of operation permit issuance. Side slope dimensional criteria for above ground impoundments are set forth in Appendix 6.

(e) Alternative Side Slope Criteria for Golf Course Wet Retention/Detention Areas Adjacent to Tee Areas, Bunkers, and Greens - The design and final constructed side slopes adjacent to tee areas, bunkers, and greens contiguous to golf course wet retention/detention areas shall be no steeper than 2:1 (horizontal:vertical) for the area above the permitted control elevation. For purposes of this rule, the tee area is limited to an area specifically constructed and designated as the location from which a golfer makes his/her first shot toward a designated hole. The green is the area of shortest grass around the hole. Bunkers (sand traps) consist of a prepared area of ground, often a hollow, from which turf or soil has been removed and replaced with sand-like material.

For those portions of the wet retention/detention areas adjacent to tee areas, bunkers, and greens with final constructed side slopes steeper than 3.5:1 (horizontal:vertical), the final constructed side slopes below the control elevation shall not be steeper than 8:1 (horizontal:vertical) to a depth of two feet below the control elevation or equivalent substitute. Side slopes shall be topsoiled and stabilized through seeding or planting from 2 feet below to 1 foot above the control elevation. Side slope vegetation growth survival shall be a consideration of operation permit issuance.

(f) Bulkheads - Bulkheads shall be allowed for no more than 40 percent of the shoreline length, but compensating littoral zone must be provided based on appropriate maximum allowable side slope including local government requirements.

7.5 Maintenance Access and Easements –

Minimum perimeter maintenance and operation easements of 20 feet width at slopes no steeper than 4:l (horizontal:vertical) shall be provided beyond the control elevation water line. These easements shall be legally reserved to the operation entity and for that pur-

pose by dedication on the plat, deed restrictions, easements, or other equivalent documents, so that subsequent owners or others may not remove such areas from their intended use. Water management areas, including 20 foot wide maintenance easements at a minimum, shall be connected to a public road or other location from which operation and maintenance access is legally and physically available.

7.6 Exfiltration Systems –

Exfiltration systems must conform with the following:

(a) Pipe diameter - 12" minimum

(b) Trench width - 3' minimum

(c) Rock in trench must be enclosed in filter material, at least on the top and sides.

(d) Maintenance sumps in inlets.

8.0 REQUIRED DESIGN INFORMATION AND ASSUMPTIONS

8.1 Antecedent Conditions –

Antecedent conditions shall be average wet season elevations for water table or other water surfaces.

8.2 Rainfall –

Distributions and intensities consistent with one or more of these Reference Sources:

(a) SFWMD Technical Memorandum, Frequency Analysis of One and Three Day Rainfall Maxima for central and southern Florida, Paul Trimble, October 1990 and the following distribution table:

Time (hours)	Cumulative Percentage of Peak One Day Rainfall
0	0
24	14.6
48	35.9
58	57.2
59	62.8
59.5	67.8
59.75	82.8
60	101.5
60.5	108.8
61	112.6
62	117.7
72	135.9

100% One Day Rainfall

(b) Actual gage data analyzed by accepted statistical methods,

(c) U.S. Department of Agriculture, Soil Conservation Service, "Rainfall Frequency Atlas of Alabama, Florida, Georgia and South Carolina for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 years" (1973).

(d) Florida Department of Transportation "Drainage Manual" (Second Edition, revised 1978) Revised Rainfall Intensity Curves per Directive No. 0736-01-79.

8.3 Evapotranspiration –

Amounts can be estimated as follows:

(a) Groundwater depth 0 to 1' - 0.3" ET/day

(b) Groundwater depth 1' to 2.5' - 0.2" ET/day

(c) Groundwater depth 2.5' to 4' - 0.1" ET/day

(d) Groundwater depth below 4' - 0" ET/day

8.4 Storage –

8.4.1 Open Surface

If open surface storage is to be considered in the review, the Applicant shall submit stage-storage computations. If open surface storage plus discharge is to be considered, the stage- discharge computations shall also be submitted. Actual rather than allowable discharges shall be used in routing. For the more extreme events, such as 100 year frequency, discharge should be ignored because the high tail water stage in the receiving water effectively prevents any but a negligible discharge. In such cases a mass accounting of on-site water will suffice, if the applicant can demonstrate that no adverse impacts will occur to adjacent areas.

8.4.2 Ground

The Soil Conservation Service has made the following estimate of soil storage capability for the normal sandy soils found within the District in their average natural state:

Depth to Water Table	Cumulative Water Storage
1'	0.6"
2'	2.5"
3'	6.6"
4'	10.9"

(a) For the same sandy soils which have been compacted intentionally or incidental to earthwork operations, the cumulative storage shall be reduced 25 percent. An applicant may submit site-specific soil storage capability data.

(b) Groundwater storage beneath impervious surfaces generally appears impractical to any great degree because of the trapped air which water can-

not displace. It further appears impractical below four feet depths, except in high sandy coastal ridge areas, because of the relationship between infiltration rates and runoff rates in most parts of south Florida.

8.5 Infiltration and Percolation –

8.5.1 Ground Surface

Ground surface infiltration will be reviewed on the basis of commonly accepted procedures such as those of Soil Conservation Service (see U.S. Department of Agriculture, Soil Conservation Service Technical Paper No. 149, "A Method for Estimating Volume and Rate of Runoff in Small Watersheds" (1973), and U.S. Department of Agriculture, Soil Conservation Service Technical Release No. 55, "Urban Hydrology for Small Watersheds" (1975); or Rational Method (see Florida State Department of Transportation, "Drainage Manual" (2nd Edition, rev. 1978)); or standard Civil Engineering textbooks), unless test data are submitted to justify other procedures.

8.5.2 Subsurface

Subsurface exfiltration will be reviewed only on the basis of representative or actual test data submitted by the Applicant. Test parameters such as elevation, location, and soils, shall be consistent with those of the designed system. The Dade County Department of Environmental Resource Management and Florida Department of Transportation are suggested as reference sources to Applicants for test procedures and design and maintenance performance of subsurface exfiltration systems.

8.6 Runoff –

The usual methods of computation are as follows:

(a) Rainfall minus losses and storage.

(b) Soil Conservation Service (see U.S. Department of Agriculture, Soil Conservation Service, "National Engineering Handbook, Section 4, Hydrology" -1972), with extra attention to hydrologic accounting of water table conditions. Peak factors used for natural systems shall not exceed "257" unless project specific site conditions warrant use of a larger peak factor.

(c) Rational method, for water quality retention/detention purposes.

8.7 Receiving Water Stage –

8.7.1 Regulated Systems

Applicants are advised that design and maintained stage elevations are available either from the respective local jurisdiction or the District. Stages for the District's system for frequencies other than the design will be estimated by the District upon request from the Applicant.

8.7.2 Non-regulated Systems

It is recommended that the Applicant compute receiving water stages for such systems from the best available data and submit the results to the District for review and concurrence before utilizing such results in further computations.

8.7.3 Any System

Variable tailwater stages shall be considered if they have a significant influence on the design.

8.8 Discharge –

8.8.1 Allowable Discharges

For the purpose of meeting maximum allowable discharges, peak discharges shall be computed as the maximum average discharge over a time period equal to the time of concentration of the contributory area, unless project specific conditions warrant an alternate methodology.

8.8.2 Non-urban Gravity Systems

Rural gravity systems which are to be connected to District facilities are reviewed on the basis of the discharge culvert operating at a fixed head loss to meet the allowable discharge rate. This basis is justified by the estimate that the upstream headwater generated by rural runoff will be unable to collect at the upstream culvert end appreciably faster than the rate at which the receiving water rises. The fixed head loss amounts are 0.5' except in south Dade County (south of Canal C-2) where the value is 0.2'.

9.0 OPERATING ENTITY REQUIREMENTS

9.1 General Requirements –

(a) The District considers the following entities acceptable to satisfy permit limiting condition 40E-4.381(1)(h):

1. Local governmental units including counties or municipalities, or Municipal Service Taxing Units.

2. Active Chapter 298 Florida Statutes water control districts or drainage districts, or Chapter 190 Florida Statutes Community Development Districts or Chapter 170 Florida Statutes Special Assessment Districts.

3. Non-profit corporations including homeowners associations, property owners associations, condominium owners associations or master associations.

4. The property owner or developer as Permittee is normally not acceptable as a responsible entity if the property is to be sold to various third parties. However, the property owner or developer will be acceptable under one of the following circumstances:

   a. The property is wholly owned by said Permittee and is intended to be so retained. This would apply to a farm, corporate office or single industrial facility for example.

   b. The ownership of the property is retained by the Permittee and is either leased or rented to third parties such as in the case of most shopping centers, apartments or mobile home park lots.

(b) To satisfy permit limiting condition 40E-4.381(1)(h), F.A.C., the Permittee must supply appropriate written proof, such as either by letter or resolution from the governmental entity that the governmental entity will accept the operation and maintenance of all the surface water management system components; or draft corporation/association documents prior to staff report approval. For Class I and II solid waste sites the entity will be responsible for perpetual maintenance of the surface water management system after closure of the facility.

9.2 Association Requirements –

9.2.1 If a Homeowners or Property Owners Association or Master Association is proposed, the Permittee must submit the draft Articles of Incorporation and the Declaration of Protective Covenants or Deed Restrictions, as well as a reference map if referred to in the documents, for review and staff approval of the provisions meeting the requirements

of this section. The Permittee must submit a recorded copy of the Deed Restrictions and associated exhibits, a filed copy of the Articles of Incorporation and a copy of the Certificate of Incorporation prior to or simultaneous with the submittal of the Construction Completion/Construction Certification statement.

9.2.2

(a) If a Condominium Association is proposed, the Permittee must submit the draft Articles of Incorporation and the Declaration of Condominium, as well as a reference map if referred to in the documents, for review and staff approval of the provisions meeting the requirements of this section. The Permittee must submit a recorded copy of the Declaration of Condominium and associated exhibits, a filed copy of the Articles of Incorporation and a copy of the Certificate of Incorporation prior to or simultaneous with the submittal of the Construction Completion/Construction Certification statement.

(b) Compliance with the requirements of this section does not relieve the permittee of its duty to comply with the applicable provisions of Florida laws, specifically Chapters 617 or 718, Florida Statutes.

9.2.3 The Association must have the following general powers and attributes, which shall be reflected in the Articles of Incorporation or other documents of record:

(a) Own and convey property.

(b) Operate and maintain common property, specifically the surface water management system as permitted by the South Florida Water Management District including all lakes, retention areas, culverts and related appurtenances.

(c) Establish rules and regulations.

(d) Assess members and enforce said assessments.

(e) Sue and be sued.

(f) Contract for services (if the Association contemplates employing a maintenance company) to provide the services for operation and maintenance.

(g) The Association must have as members all the homeowners, lot owners, property owners or unit owners.

(h) The Association shall exist in perpetuity; however, if the Association is dissolved, the Articles of Incorporation must provide that the property consisting of the surface water management system and the right of access to the property containing the surface water management system shall be conveyed to an appropriate agency of local government. If it is not accepted,

then the surface water management system must be dedicated to a similar non-profit corporation.

9.2.4 The Association must have the following covenants and restrictions, which shall be set forth in the Declaration of Protective Covenants, Deed Restrictions, Declaration of Condominium, or other recorded document which sets forth the Association's rules and regulations:

(a) That it is the responsibility of the Association to operate and maintain the surface water management system.

(b) The surface water management system is owned by the Association or described therein as common property.

(c) That there be a method of assessing and collecting the assessment for operation and maintenance of the surface water management system.

(d) That any proposed amendment to the association's documents, which would affect the surface water management system (including environmental conservation areas and the water management portions of the common areas) must be submitted to the District for a determination of whether the amendment necessitates a modification of the environmental resource or surface water management permit. If a modification is necessary, the District will so advise the permittee. The amendment affecting the surface water management system may not be finalized until any necessary permit modification is approved.

(e) That the rules and regulations be in effect for at least 25 years with automatic renewal periods thereafter.

(f) If wetland mitigation monitoring will be required and the operational entity will be responsible to carry out this obligation, the rules and regulations shall state that it will be the association's responsibility to complete the task successfully, including meeting including all conditions associated with mitigation maintenance and monitoring.

(g) The environmental resource or surface water management permit and its conditions shall be attached to the rules and regulations as an exhibit. The Registered Agent for the Association shall maintain copies of all further permitting actions for the benefit of the association.

(h) The District has the right to take enforcement action, including a civil action for an injunction and penalties, against the association to compel it to correct any outstanding problems with the surface water management system facilities or in mitigation or conservation areas under the responsibility or control of the association.

9.2.5 Deviation from, or modification to, the association requirements can only be based upon:

(a) Intervening local government requirements of a more stringent nature such as the requirement of a maintenance agreement and posting of bond by the developer.

(b) The uniqueness of the project requiring an alternative entity. Such alternative entity must be evaluated upon an individual basis with any and all necessary agreements or easements in effect before approval will be given.

9.2.6 Phased projects shall be subject to the following additional requirements:

(a) If a master property owner's association is proposed for a project which will be constructed in phases, and subsequent phases will utilize the surface water management system for the initial phase or phases, the association must be created with the ability to accept future phases into the association.

(b) If the development scheme contemplates independent associations for different phases, but proposes an interdependent water management system for the different phases, one of the following alternatives must be chosen by the applicant for setting up the operating entities:

1. A master association must be formed which includes all of the various associations within the project, with the master association having the responsibility and legal ability to operate and maintain the surface water management system for the entire project.

2. If no master association is proposed, each entity which will operate and maintain a portion of an integrated surface water management system must have cross easements for drainage, ingress and egress capabilities, and the ability to enter and maintain the various portions, should any sub association fail to operate and maintain the portion of the surface water management system within their boundaries. A definition of operation and maintenance responsibilities between the entities shall be included in any such document.

(c) If the master association delegates primary responsibility for operating the portion of the surface water management system to a sub association, all association documents shall clearly define that the master association has ultimate authority and responsibility to enter, maintain and operate the surface water management system should any sub association fail to do so.

(d) If the project contains a golf course, the owner/operator must be a member of the association. Association documents must reflect this relationship.

10.0 SURFACE WATER MANAGEMENT SYSTEM CERTIFICATION AND OPERATION

10.1 Construction Completion Certification

(a) Within 30 days of completion of the surface water management system construction, a Florida licensed professional engineer shall certify that the construction was completed and that the system was constructed in substantial conformance with the plans and specifications approved by the District. The above requirement shall be met by submittal of a completed and executed Construction Completion Certification Form #0881A, or equivalent.

(b) The District recognizes that Form #0881A does not apply to all water management systems. If Form #0881A does not apply to a particular system, then a certification confirming the constructed dimensions of that system, such as lengths, diameters and elevations must be provided. The following certification statement must also appear on the certification report:

I HEREBY NOTIFY THE DISTRICT OF THE COMPLETION OF CONSTRUCTION OF ALL THE COMPONENTS OF THE SURFACE WATER MANAGEMENT FACILITIES FOR THE ABOVE REFERENCED PROJECT AND CERTIFY THAT THEY HAVE BEEN CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THE PLANS AND SPECIFICATIONS PERMITTED BY THE DISTRICT. [A COPY OF THE APPROVED PERMIT DRAWINGS IS ATTACHED WITH DEVIATIONS NOTED, IF APPLICABLE.] I HEREBY AFFIX MY SEAL THIS _____ DAY OF _____, _____. (REFERENCE 373.117, 373.419 F.S.)

(c) If no deviations are detected by the certifying engineer, copies of the approved permit drawings need not be submitted.

(d) The District will accept Construction Completion Certification Form #0881B for surface water management systems with wet retention/detention areas for projects permitted prior to October 3, 1995 provided that:

1. Existing side slopes are no steeper than 2:1 (horizontal:vertical) from top of bank out to a minimum depth of two feet below the control elevation, except at headwalls, and/or other structural connections;

2. The surface water management system currently functions as intended, consistent with the permitted surface water management system, including level of water quality treatment, level of flood protection, and storm attenuation;

3. The wet retention/detention area side slopes have been adequately maintained and stabilized to support the operation of the surface water management system;

4. All other components and facilities associated with the permitted surface water management system are certified as being constructed in substantial conformance with the plans and specifications permitted by the District;

5. Form 0881B is signed and sealed by a Florida licensed Professional Engineer.

10.2 Construction Completion Certification for Phased Projects –

In addition to the above, certification of phases within a project will be acceptable if:

(a) The backbone drainage facilities have been constructed and certified; or

(b) The professional engineer or other individual authorized by law has provided documentary evidence that the certified phase can function satisfactorily and permanently independent of the backbone system.

10.3 Operation Phase Becoming Effective –

The operation phase of a project shall not become effective until the construction or provision of the required mitigation/compensation is complete.

APPENDICES

Appendix 2 Allowable Discharges for South Florida Water Management District Canals

Appendix 3 Urban Retention/Detention

Appendix 6 Above Ground Impoundments

NOTE: Appendices 2, 3, and 6, above, were previously adopted and incorporated into the document entitled "Basis of Review for Surface Water Management Permit Applications Within the South Florida Water Management District - March, 1994". Appendices 1, 4, 5, 7 and 8 of that document have been repealed.

APPENDIX 2

ALLOWABLE DISCHARGE FORMULAS

FOR

SOUTH FLORIDA WATER MANAGEMENT

DISTRICT

CANALS

(MAXIMUM AMOUNTS BASED ON PRIMARY SYSTEM CAPACITY FOR NEW PROJECTS; SECONDARY AND OTHER INTERMEDIATE SYSTEM CAPACITIES MAY BE MORE LIMITING.)

SFWMD - ALLOWABLE DISCHARGE FORMULAS

Canal	Allowable Runoff	Design Frequency
C-1	$Q = \left(\frac{112}{\sqrt{A}} + 31\right) A$	10 year
C-2	Essentially unlimited inflow by gravity connections southeast of Sunset Drive: 54 CSM northwest of Sunset Drive	200 year +
C-4	Essentially unlimited inflow by gravity connections east of S.W. 87th Avenue	200 year +
C-6	Essentially unlimited inflow by gravity connections east of FEC Railroad	200 year +
C-7	Essentially unlimited inflow by gravity connection	100 year +
C-8	Essentially unlimited inflow by gravity connection	200 year +
C-9	Essentially unlimited inflow by gravitgy connection east of Red Road; 20 CSM pumped, unlimited gravity with development limitations west of Red Road or Flamingo Blvd.	100 year +
C-10	----------	200 year +
C-11	20 CSM west of 13A;40 CSM east of 13A	----------
C-12	90.6 CSM	25 year
C-13	75.9 CSM	25 year
C-14	69.2 CSM	25 year
C-15	70.0 CSM	25 year
C-16	62.6 CSM	25 year
C-17	62.7 CSM	25 year
C-18	41.6 CSM	25 year
C-19	57.8 CSM	
C-23	31.5 CSM	10 year
C-24	30.25 CSM	10 year
C-25	$Q = \left(\frac{47}{\sqrt{A}} + 28\right) A$ (Under review)	10 year
C-38	31.1 CSM (Subject to restrictions of Basin Rule)	10 year
C-40, 41, 41A	35.4 CSM	10 year
Hillsboro Canal (east of S-39)	35 CSM	25 year
North New River (East of S-34)	70.8 CSM	25 year
Everglades Ag. Area (all canals)	20 CSM	5 year
L-28	11.8 CSM	----------
C-51	35 CSM east of Turnpike; 27 CSM west of Turnpike (Subject to restrictions of Basin Rule)	10 year
C-100, 100A, 100B, 100C, 100D:	$Q = \left(\frac{104}{\sqrt{A}} + 43\right) A$	10 year
C-102	$Q = \left(\frac{119}{\sqrt{A}} + 25\right) A$	10 year
C-103N, C-103S	$Q = \left(\frac{107}{\sqrt{A}} + 39\right) A$	10 year
C-110	$Q = \left(\frac{137}{\sqrt{A}} + 9\right) A$	10 year
C-111	$Q = \left(\frac{117}{\sqrt{A}} + 29\right) A$	10 year
C-113	$Q = \left(\frac{142}{\sqrt{A}} + 3\right) A$	10 year

Definitions:

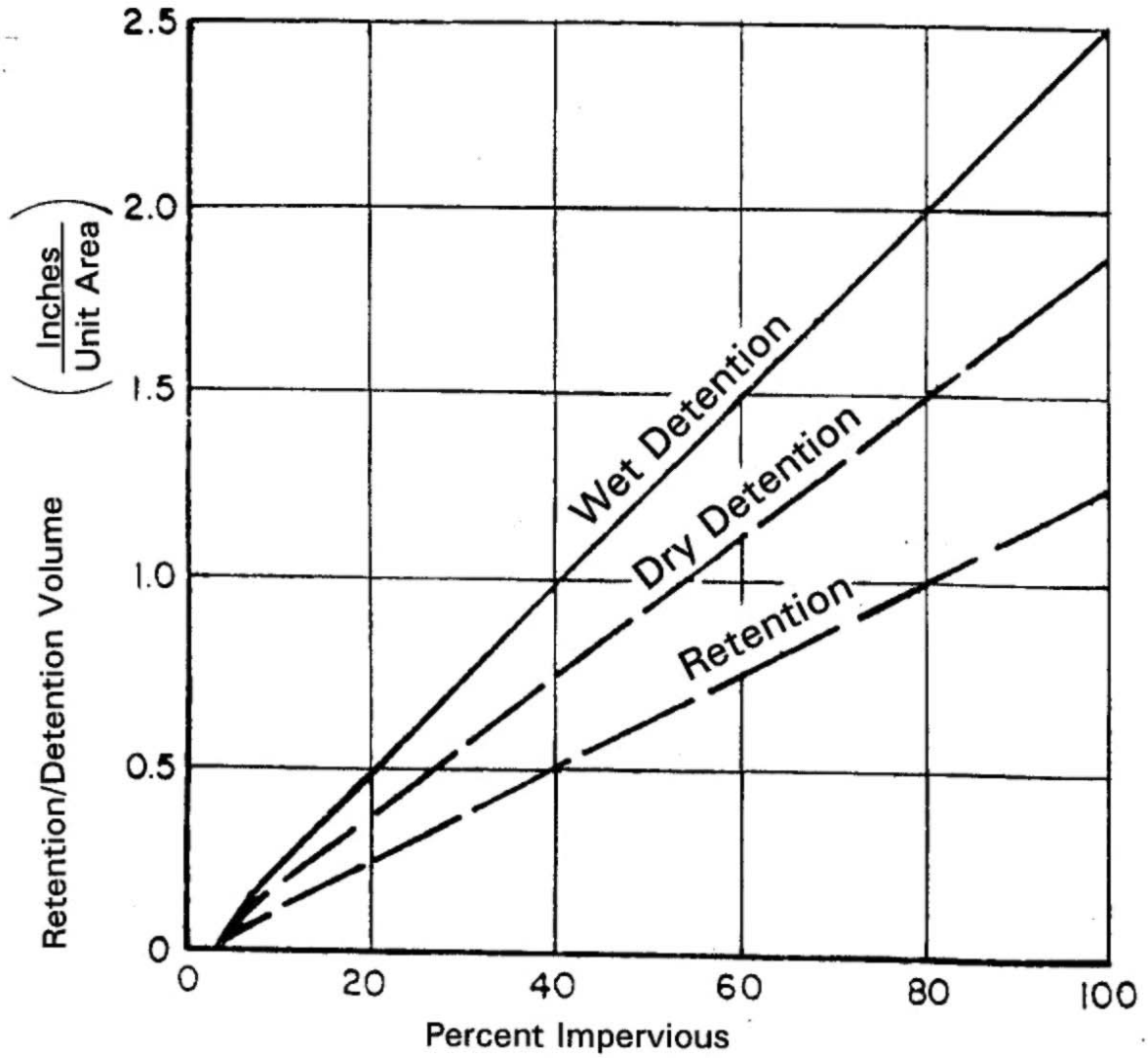
Q = Allowable runoff in cfs (cubic feet per second) A = Drainage area in square miles CSM = cfs per square mile

APPENDIX 3

URBAN RETENTION/DETENTION

Note: Storage Required Is In Addition To Normal Street & Lot Swales Which Have Already Been Accounted For In Preparation Of Curve.

(Reference: 3.2.2.2)



Separate Storage Required For Grass Swale Systems

APPENDIX 6

ABOVE GROUND IMPOUNDMENTS

Effective April 6, 2003

(This page is reserved.)

APPENDIX 6

ABOVE GROUND IMPOUNDMENTS

1.0 INTRODUCTION

1.1 Purpose

This Appendix to the South Florida Water Management District's Basis of Review for Surface Water Management Permit Applications has been prepared to elaborate on the criteria and standards applicable to above ground impoundments in accordance with the definition and requirements for "dams" in Part IV of Chapter 373, Florida Statutes. The content herein is not intended to be all inclusive of all possible situations, but is intended to provide guidelines and basic performance criteria wherever possible on design criteria for the situations commonly encountered for most typical south Florida situations. Because dam performance is a function of construction, operation and maintenance as well as design, information on those subjects is included. The basic responsibility for dam performance remains vested in the owner or permittee through appropriate representation by his engineer in accordance with State laws.

1.2 Classification

Upon request or application receipt District staff will classify impoundments or dams as "Major" or "Minor" for application review purposes in accordance with the following provisions:

1.2.1 Major - Impoundments located where failure would cause significant damage to the property of other than the permittee, could involve loss of human life, would create a public health hazard, or would cause irreversible environmental or water quality damage; maximum water depths above surrounding ground levels would generally exceed four feet.

1.2.2 Minor - Impoundments generally located in rural areas where failure would generally limit significant damage to the property of the permittee, would not involve loss of human life, would not create a public health hazard, and would not cause irreversible environmental or water quality damage; maximum water depths above surrounding ground levels would generally be limited to four feet, except where dam break analysis influence lines (six inch depth and two feet per second velocity) are limited to the land of the permittee and others, including the public, are not involved. It may be necessary that the permittee's land be legally restricted by such means as a unity of title to insure perpetual single ownership.

1.3 Certification responsibility

1.3.1 Major impoundments are considered to be individually engineered structures involving the disciplines of geotechnical, soils, foundation, and/or structural engineering and are therefore required to be certified in accordance with State law by individuals or firms expert in such disciplines.

1.3.2 Minor impoundments are considered to be general site improvements and may therefore be certified in accordance with State law as part of the overall surface water management system by individuals or firms with expertise in disciplines such as general civil and/or agricultural engineering.

1.4 Information submittals

1.4.1 Major impoundments require the submittal of all design, construction, operation and maintenance information necessary for complete review of the impoundment. Information to be submitted in addition to design calculations includes:

a. Proposed construction schedule

b. Safe filling and draining schedules

c. Design of seepage and water level monitoring programs

d. Operation and maintenance manual

e. Influence lines for dam break analysis (6 inch depth and 2 feet per second velocity)

f. Emergency response and evacuation plan (if appropriate)

Review by the District will be done for purposes of confirming that reasonable assurances are offered that the intent of District policies and general engineering principles will be met. The review is not intended to supplant the certifying engineer's initiative, judgement, expertise, experience and/or responsibility. When necessary the District may retain outside expertise to participate in the review.

1.4.2 Minor impoundments require only the submittal of the usual surface water management permit information as enumerated in Appendix 1 (according to any specific standards herein) unless unusual circumstances exist. It is understood that the certifying engineer may perform calculations, tests, etc. for his/her own purposes or to meet State law and which may not be submitted.

2.0 DESIGN GUIDELINES

2.1 Major impoundments

2.1.1 Structural stability - All elements and appurtenant works for impoundments shall be designed for all possible conditions up to and including maximum water depths and in accordance with generally accepted engineering principles for such works, which include

consideration of site preparation, construction materials, geological conditions, storm conditions, settlement, erosion, operation and maintenance and vandalism. More specific guidelines are as follows:

2.1.1.1 Dikes - shall be designed based on field test data of subsurface conditions and actual procedures and materials to be used in construction. Seepage and piping shall be considered and cutoff walls and toe drains included where necessary. Dimensions shall be such as to allow maintenance by normal equipment. Recommended side slopes for vegetated earth should be no steeper than 1/2:1 (horizontal to vertical) for external slopes and 3:1 (horizontal to vertical) for internal slopes. Top widths should be of sufficient width to allow safe vehicular access and no less than twelve feet. Dike toes should be continually accessible by vehicle by relatively level to berms of at least ten feet width. Dikes and toe berms should be widened at strategic points for vehicular turnaround or where necessary to load stockpiled material to be used for dike repair.

2.1.1.2 Structures - Discharge and other structures should be located to be accessible from the top of the dike during storm conditions for emergency operation and maintenance if necessary. They should be of permanent low maintenance materials, preferably reinforced concrete. The location and design should be such that dike integrity is maintained. Trash racks, seepage rings and vandalism protection should be included. A preferable design would consist of an inlet box which does not interfere with normal dike sideslopes and a conduit under the dike to an outfall endwall. Erosion protection, energy dissipators, etc. would be necessary at strategic points including the outfall.

2.1.2 Hydraulics - Unless more stringent criteria should apply because of other jurisdictional standards or unusual risks, the minimum District standards are as follows:

2.1.2.1 Maximum water depth as determined by routing a three day precipitation (distributed according to the Basis of Review, Section 4.2) through the inflow and outflow structures with rainfall on the reservoir. Three day precipitation amounts may vary between thirty six and fifty six inches depending on site specific conditions and risk management considerations. District staff will advise on request.

2.1.2.2 Design water depth - As determined by routing the project allowable discharge design even though the inflow and outflow structures with rainfall on the reservoir. The three day 25 year event should typically be used as a minimum.

2.1.2.3 Minimum freeboard above maximum water depth - Three feet minimum or that required to prevent overtopping or failure due to hurricane force winds as derived from the South Florida Building Code.

2.1.2.4 Discharge structure - Basis of Review allowable discharge for reservoir at maximum water depth with 100 year tailwater flood elevation, or Basis of Review allowable discharge for reservoir at design water depth and non-limiting tailwater, unless more accurate site specific tailwater elevations are applicable and substantiated by the applicant.

2.1.2.5 Return overflow - Impoundments must contain an outflow discharge structure which returns water to the area from which inflow occurs. Therefore a separate structure will be necessary for pump filled impoundments to allow return flow under the conditions of maximum or design water depths in the reservoir with pumps continuing to operate. For gravity filled impoundments this structure will actually be the inflow structure since reservoir and project stages will be the same.

2.1.2.6 Emergency discharge gates - Discharge structures should include emergency gates which can only be opened with District permission. Return overflow structures must include emergency gates to be operated at the discretion of the permittee or at the direction of the District.

2.1.2.7 Pumps-The pumps used to fill impoundment serving multiple owners, when allowed, should be multiple pumps of the same sizes to allow interchange of parts. Electric pumps should have standby fuel operated power systems.

2.1.2.8 Seepage collection systems - A safety factor of three shall be utilized for hydraulic conveyance design purposes.

2.1.3.4 Floodplain encroachment and setbacks - Impoundments shall not be located within floodplains or shall otherwise provide compensation and setbacks as provided in Section 3.2.1.5 in the Basis of Review. Impoundments located in flat areas of diffused flow shall have the toe of dikes set back at least fifty feet from property lines to allow historic sheet flow to move around the impoundments. Greater dimensions or swale construction may be required if steep slopes, very large contributing areas, etc. would cause that dimension to be inadequate. Smaller dimensions may be allowed if the applicant can demonstrate smaller dimensions will suffice.

2.1.4 Environmental and water quality - The provisions of the Basis of Review apply. Since many impoundments are utilized for wetland management and/or mitigation, it may be necessary to set control elevations and emergency gate bottoms above natural ground levels in order to prevent wetland overdrainage.

2.1.5 Emergency repair material - Appropriate amounts of type, quantity and location of emergency repair materials shall be included in design plans.

2.2 Minor impoundments

2.2.1 Structural stability - The same general comments apply as for Major impoundments with specific guidelines as follow:

2.2.1.1 Dikes - Designs shall be in accordance with commonly accepted engineering principles and State laws. Dikes external to the permittee's property shall meet the dimensional and access criteria for Major impoundments to the degree necessary to meet the intent of Section 1.2.1. Internal dikes may be of lesser standards, but sideslopes should be no steeper than 2:1 (horizontal to vertical) and top widths no less than five feet.

2.2.1.2 Structures - Discharge and other structures should be as for Major impoundments.

2.2.2 Hydraulics - The same general comments apply as for Major impoundments with specific standards as follow:

2.2.2.1 Maximum water depth - The maximum water depth equals the design water depth as described for Major impoundments.

2.2.2.2 Minimum freeboard above maximum water depth - Equal to the maximum water depth dimensions but not less than two feet, no more than three feet.

2.2.2.3 Discharge structure - Basis of Review allowable discharge for reservoirs at design water depth and non-limiting tailwater, unless more accurate site specific tailwater elevations are applicable and substantiated by the applicant.

2.2.2.4 Return overflow - Same as for Major impoundments.

2.2.2.5 Emergency discharge gates - Same as for Major impoundments except installation is optional.

2.2.2.6 Pumps - Same as for Major impoundments.

2.2.2.7 Seepage collection systems - Optional.

2.2.3 Floodplain encroachment and setbacks - Same as for Major impoundments.

2.2.4 Environmental and water quality - Same as for Major impoundments.

2.2.5 Emergency repair material - Optional.

3.0 CONSTRUCTION

Construction certification is a requirement of all permits for both Major and Minor impoundments, and it is therefore the responsibility of the certifying engineer to satisfy himself/herself and the State laws as to construction compliance with design. Changes to permitted design would require the need for As-Built plans to satisfy certification.

Major changes, including changes to permit authorization or special or limiting conditions would require a permit modification prior to implementation. The District expects continual construction observation to be the minimum requirement necessary to evidence ability to perform certification on Major impoundments. Certification must indicate that construction has been satisfactorily completed so that routine operation and maintenance may commence.

4.0 OPERATION AND MAINTENANCE

4.1 Reporting

Inspection of impoundment conditions, repairs, etc. will be a continuing process required by permit special condition. Inspection reports are to be retained by the permittee and copies made available to the District upon request. It is the basic responsibility of the permittee to initiate interim reporting and/or more detailed reporting to the District as conditions change, emergencies or problems arise, etc. It is expected that Major impoundments will be reported in accordance with the operation and maintenance manual and emergency response and evacuation plan adopted at the time of permit issuance, with updates as necessary.

4.2 Primary subjects of interest

4.2.1 Major impoundments

4.2.1.1 Dikes and seepage collection system

a. Vegetation conditions

b. Erosion

c. Evidence of boils, piping, unusual seepage

d. Slope stability, surface cracking

e. Settlement

f. Travelway conditions

g. High and low water marks

h. Presence of aquatic vegetation in supposed dry areas

i. Monitoring system condition and monitoring data

j. Adequacy and condition of emergency repair material

k. Short and long term repair and modification recommendations

4.2.1.2 Structures and pumps

a. Materials conditions

b. Operational conditions

c. Evidence of vandalism

d. Settlement and erosion

e. Freedom from trash problems

f. Short and long term repair and modification recommendations

4.2.1.3 Impoundment area

a. Vegetation changes

b. Evidence of encroachment and misuse of land

4.2.1.4 Emergency response plan

a. Land use changes in area of influence

b. Topographic changes causing change in area of influence

c. Changes in participants, addresses, phone numbers, etc. involved in emergency response plan

d. Evidence of contact update with involved emergency management officials

4.2.2 Minor impoundments

4.2.2.1 Dikes

a. Vegetation conditions

b. Erosion, settlement, cracking, stability

c. Short term repair and modification recommendations

4.2.2.2 Structures and pumps

a. Structural conditions

b. Operational conditions

c. Short term repair and modification recommendations

4.2.2.3 Impoundment area

a. Vegetation changes

b. Evidence of encroachment and misuse of land

4.3 Typical special condition

4.3.1 Upon completion of construction, and on an annual basis (in March of each year), the permittee shall have an inspection performed to assess the structural adequacy of all above-ground dikes, control structures, levees and berms behind which water is to be contained and where failure could impact off-site areas. A professional engineer regis-

tered in the State of Florida shall perform each inspection and prepare each report. These reports shall be signed and sealed by the professional engineer performing the inspection, kept on file by the permitee and made available to the South Florida Water Management District (SFWMD) personnel upon request. If deficiencies are found that will affect the performance of the impoundment, a report which is signed sealed by the engineer performing the inspection shall be submitted to the District which includes, but not limited to, the proposed technique and schedule for repair of any deficiencies noted.

5.0 REFERENCES

Agencies with impoundment experience and publications:

a. U.S. Army Corps of Engineers
b. U.S. Department of Interior, Bureau of Reclamation
c. U.S. Department of Agriculture, Soil Conservation Service

The information contained in the remainder of this manual is provided for guidance purposes and does not constitute rule criteria. The information is not to be used in lieu of adopted criteria or in a manner which is inconsistent with adopted rules.

The information contained in the remainder of this manual is provided for guidance purposes and does not constitute rule criteria. The information is not to be used in lieu of adopted criteria or in a manner which is inconsistent with adopted rules.

Permit Application Submittal Aids

PERMIT APPLICATION SUBMITTAL AIDS

Environmental Resource Permit Application Supplement

The document which follows is **not required** as a completeness item for Environmental Resource Permit applications. The Supplement *is* recommended as a very useful item to be submitted as a means of cataloging the documents and design information which apply to most projects. Many of the tables are in formats which are consistent with the automated staff report information system used by District staff.

However, the Supplement is **not** intended as a substitute for Form 0971 "Joint Application for Environmental Resource Permit/Authorization to Use State Owned Submerged Lands/Federal Dredge and Fill Permit." **Form 0971 must be submitted with all application packages for Individual and Standard General permits.**

ENVIRONMENTAL RESOURCE PERMIT APPLICATION SUPPLEMENT

QUICK REFERENCE CHECKLIST !!!

_____ **Proof of Ownership (Warranty Deed, Copy of Property Taxes) -- The name on the application form as owner must be the same as legal document**

_____ **If application form is signed by an agent, notarized letter of Authorization giving agent permission to act in owner's behalf is required**

_____ **Verify that section, township and range on the application is the same as aerial/front of the drawings etc.**

_____ **Public noticing information submitted.**

_____ **Have five sets of information been submitted??(one original and four copies)**

_____ **Is the check made out to SOUTH FLORIDA WATER MANAGEMENT DISTRICT for the correct amount?**

_____ **SIGNED AND SEALED DRAWINGS AND CALCULATIONS BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA**

_____ Location Map on 8 ½" X 11" paper (clearly locate the site on a Florida Plat Directory page, county road map, or street atlas)

_____ For modifications of existing developments, include a location map showing project area within overall development

_____ Aerial Photograph which clearly locates proposed project boundaries. (1"=200' or 1"=400' scale)

_____ Topographic Map (extend 100' beyond perimeter of project, reference to NGVD and locate the BM): identify any existing off-site features such as wetlands, other surface waters, water management ponds, buildings, and drainage structures

_____ Soils Information & Geotechnical Information

_____ Documentation of methodology used to determine WSWT; i.e. soils, topo, water level biological indicators, etc.

_____ Pre-development and post-development drainage Map (include flow arrows showing the direction of flow on-site and any run-off routed around or through the system); connections between wetlands

_____ Boundary Survey; legal description; total contiguous land area owned by the applicant; existing and/or proposed right's of way or easements for the drainage system

_____ Master Paving, Grading and Drainage Plans (signed and sealed as prescribed by Florida State Law)

_____ Land use table which includes acreage for buildings, pavement, open space and water management areas

_____ Drainage Plan Details and cross-sections (signed and sealed as prescribed by Florida State Law)

_____ Water Quality Design Storm Routings including basin run-off characteristics, soil storage, stage-storage computation, and stage-discharge computation (signed and sealed as prescribed by Florida State Law)

_____ Exfiltration Trench Computations and Percolation Data (if applicable)

_____ Construction techniques description; removal of material; temporary and/or permanent erosion and sediment control; excavation or fill in wetlands; installation of pilings or seawalls; shoreline stabilization

_____ Flood plain encroachment and compensating storage if project is in the known floodplain of a stream or watercourse. Identify the 100 year flood elevation, method to determine the elevation, location and volume of

encroachment, and the hydraulic connection between the floodplain and the storage area

_____ For marina facilities, locations of any sewage pumpout facilities, fueling facilities, boat repair and maintenance facilities and fish cleaning stations

_____ Articles of Incorporation for Association, Declaration of Protective Covenants, Deed Restrictions or other legal documentation for protection/maintenance/management of protected areas – See checklist for require content

_____ Letter from receiving body operation entity (i.e. county/state roadside swale, drainage district, etc.)

_____ Letters from utility companies

_____ Wetland boundary survey with SFWMD field verified wetland lines (In order to bind the wetland lines with the permit, the survey must include the meets and bounds)

_____ Soil Borings

_____ Endangered/Threatened/SSC species evaluation (documentation of issues resolved with FGFWFC, USFWS)

_____ Status of project area under land acquisition programs (CREW, CARL, P2000, Save Our Rivers, ONS, Local government program, etc.)

_____ Habitat Communities Map - FLUCCS Map with acreage table

_____ Wetland/Upland Data Table

_____ Wetland Impacts analysis (Evaluation of functions/values to be lost, quality of wetland) and Wetland Impact Map

_____ Alternatives analysis for proposed wetland impacts (Reduction and elimination)

_____ Public Interest Test

_____ Discussion of Secondary and Cumulative Impacts

_____ Hydrologic analysis of preserved and/or created/restored wetlands and upland compensation areas (include 25 year/3 day and 5 year/1 day storm water routing to show peak stage elevation and time to system to recover to control elevation for wetlands incorporated into the water management system)

_____ Construction details of any preservation/restoration/creation areas (buffers, structures with elevations, erosion control mechanisms, grading elevations, berms, planting details of mitigation areas, and other associated works)

_____ Dewatering Plan

_____ Status of permitting and list of contacts for other agencies (FDEP, USACOE, Local government)

_____ Mitigation/Monitoring/Maintenance Plan with work schedule (include planting details for all mitigation areas)

_____ Cost Estimate for completion of mitigation, monitoring, maintenance and management of wetland and upland preservation/ mitigation areas and financial responsibility for mitigation as required in the Basis of Review, Section 4.3.7

_____ Draft Plats /Deed Restrictions/ Management Plan/Other Legal Documentation for protection/ maintenance/management of protected areas. – See checklist for required content

_____ Draft Conservation Easement documents(NOTE: If using an easement other than the District approved form, justification for the changes to the easement must be provided and the easement will be subject to review by legal staff)

PROJECT NAME:_____

OPERATION ENTITY:_____ (BOR Section 9.0)

Provide the immediate and long term entity responsible for operating and maintaining the surface water management system. If not the owner, please provide legal documentation . (Articles of Incorporation for the Association, and Declaration of Protective Covenants or Deed Restrictions, except for General Limited Information Permit)

LAND USE:_____

AGR - Agricultural, COM - Commercial, HWY - Highway, IND - Industrial, INS - Institutional, MIN - Mining, REC - Recreational, RES - Residential

DRAINAGE AREA:_____acres

IMPERVIOUS: _____acres (excluding wetlands)

This is the entire area for which the water management system is being designed. This might include off-site flows going through the project or exclude preserve areas that have been bermed off.

WETLANDS: Yes or No Onsite ___ Adjacent ___ Area of wetland impacts _____ acres

DISTRICT DRAINAGE BASIN:_____

The drainage basin refers to the major or regional District basin in which the project is located. Examples include Imperial River, Estero River, and the Caloosahatchee River (C-43), Shingle Creek, Boggy Creek, Lake Tohopekaliga, the Kissimmee River, C-9, C-18, C-51, EAA, and Lake Okeechobee.

RECEIVING BODY:_____

The receiving body is the actual system into which the project directly discharges. Often, this is an intermediate system such as an un-named canal or ditch. Sometimes the drainage basin and the receiving body are the same. Examples are Shingle Creek via onsite wetlands, or via the Valencia Water Control District's C-11 canal, or existing surface water management systems. It could be the master surface water management system for a phased project.

RECEIVING BODY CLASSIFICATION:_____

All water bodies have been described with a specific classification based on water quality and/or the use to which that water is put (such as aquatic preserve). Areas considered Outstanding Florida Waters, aquatic preserves etc. normally have more stringent discharge and water quality conditions. CHOICES ARE: OFW, Class I, Class II, Class III, Aquatic Preserve (Classification is listed in 17-302 F.A.C.)

SPECIAL DISTRICT:_____

The project may be in a SWIM area, SOR area or other critical basin. If the project is in a special district such as Hendry-Hilliard Water Control District, East County Water Control District, Valencia Water Control District, Reedy Creek Improvement District, or North St. Lucie River Water Control District, there may be special permitting conditions.

POTABLE WATER SUPPLIER:_____

Provide the Consumptive Use Permit No. if possible and the name of the supplier. Examples are O.U.C., Orange County, City of Sunrise, etc. Refer to BOR Section 3.2
Please provide a current letter of commitment or availability from utility company.

WASTE WATER SYSTEM/SUPPLIER:_____

Examples are individual septic tanks, Orange County, Seacoast Utilities, etc. Refer to BOR Section 3.2
Please provide a current letter of commitment or availability from utility company.

IRRIGATION REQUIREMENTS: Refer to BOR Section 3.2

_____ no irrigation of landscaped area is proposed.
_____ potable water will be used to meet irrigation demands.
_____ reclaimed water is being used to meet irrigation demands.
_____ A water use permit is being applied for concurrently with this application.
_____ other

PURPOSE:_____

The purpose section should explain the reason for the application.

THE FOLLOWING ARE SAMPLE CHOICES:

A. (requesting construction and operation of an entire new system)
This application is a request for Authorization for Construction and Operation of a surface water management system to serve a (# of acres) acre (type of project) project discharging to (regional drainage system) via (downstream receiving body).

B. (use for project requesting conceptual approval)
This application is a request for Conceptual Approval for a surface water management system to serve a (# of acres) acre (type of project) project discharging to (regional drainage system) via (downstream receiving body).

If the conceptual approval request includes a phase of construction, use both A and B above with the appropriate acreage break-down.

C. (use for phase modifications to permitted projects which match the conceptual approval)
This application is a request for modification to authorize Construction and Operation of a surface water management system serving Phase (phase #), a (# of acres) acre (type of phase) phase discharging to (regional drainage system) via (internal basins if appropriate and down-stream receiving body).

If this request includes an additional phase of construction add the following:

In addition, Construction and Operation of a surface water management system serving Phase (phase #), a (# of acres) acre (type of phase) phase discharging to (regional drainage system) via (internal basins if appropriate and down-stream receiving body).

BACKGROUND:_____

A background section is typically needed to explain unusual projects or modifications with significant historical information which affects the current application.

Include this section for project:

a. past permit/modifications and dates of issuance
b. enforcement history
c. unusual design methods
d. third party interest and their concerns

EXISTING FACILITIES:_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Please describe briefly the project location and existing site condition. Describe the existing drainage patterns, site elevations, general hydrologic evaluation such as well drained uplands or poorly drained flatwoods, water management facilities; ditches, culvert or borrow pits, off-site drainage flows, area and direction.

PROPOSED FACILITIES:_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Please provide a brief description of the proposed surface water management system which includes the following; describe the type of proposed land use the surface water management system will serve, how and where the SWM system will discharge, including a detailed explanation of how it reaches the receiving body, and the number and location of the primary offsite discharge structures. Please clearly define how the SWM system will operate and how the flood routings were designed to model the SWM system and include all engineering assumptions made. Include method of routing offsite upstream flows around or through project if appropriate.

DESIGN STORM:_____Year-_____Day
DESIGN RAINFALL:_____inches (total rainfall for design duration)

TEXT:_____Are there any unusual discharge limitations or design parameters? Refer to BOR Section 6.3 Please provide stage-discharge, stage-storage and routing documentation.

Are there tailwater conditions? ____ Yes ____ No If yes, please provide a time history and documentation as to how this was determined. (ie. T = 0 hours, stage = 10' NGVD; T = 60 hours, stage = 12' NGVD; T = 120 hours, stage = 10' NGVD) Tailwater conditions should be related to the particular design storm being analyzed.

ROAD DESIGN STORM:_____Year-_____Day
DESIGN RAINFALL:_____inches (total rainfall for design duration)
TEXT:_____

Unusual design criteria used or drainage problems associated with the roads. Refer to BOR Section 6.5

ROAD FLOOD CONTOUR:_____NGVD
ROAD MINIMUM CENTERLINE ELEVATION:_____NGVD

Please provide routing documentation.

PARKING LOT DESIGN STORM:_____Year-_____Day
DESIGN RAINFALL:_____inches (total rainfall for design duration)

TEXT:_____

Unusual design criteria used or drainage problems associated with the parking lots. Are they being used for storage? Refer to BOR Section 6.5

PARKING LOT FLOOD CONTOUR:_____NGVD
PARKING LOT MINIMUM CENTERLINE ELEVATION:_____NGVD

Please provide routing documentation.

MINIMUM FINISH FLOOR DESIGN STORM: 100 YEAR - 3 DAY FLOOD INFORMATION, ZERO DISCHARGE
DESIGN RAINFALL:_____inches (total rainfall for design duration)
TEXT:_____

Unusual design criteria used or drainage problems associated with the finished floor elevations. Refer to BOR Section 6.4

100 YEAR - 3 DAY FLOOD CONTOUR:_____NGVD
MINIMUM FINISH FLOOR ELEVATION:_____NGVD (must be greater than the flood contour)
FEMA ELEVATION:_____NGVD

Please provide calculations.

APPLICABLE LAND USE: Overall
Text: _____
_____
_____

Used for clarification of the land use below.

	TOTAL PROJECT	PREVIOUSLY PERMITTED CONSTRUCTION	THIS PHASE
Total	_____acres	_____acres	_____acres
Water Management (total)	_____acres	_____acres	_____acres
Dry Detention/Retention*	_____acres	_____acres	_____acres
Wet Detention/Retention*	_____acres	_____acres	_____acres
Pavement	_____acres	_____acres	_____acres
Building Coverage	_____acres	_____acres	_____acres
# of units	_____	_____	_____
Preserved	_____acres	_____acres	_____acres
Pervious	_____acres	_____acres	_____acres
Landfill	_____acres	_____acres	_____acres
Grove Area	_____acres	_____acres	_____acres
Farm Area	_____acres	_____acres	_____acres
Nursery	_____acres	_____acres	_____acres
Other	_____acres	_____acres	_____acres

Please explain any acreage listed under the "other" category

FOR LARGE/ MULTI BASIN PROJECTS:
If this phase concerns a basin or basins within a project, the "previously permitted construction" section and "this phase" section should be expanded to show each basin separately.

*NOTE: Dry areas are measured at the top of bank, wet areas are measured at the control elevation.

THE FOLLOWING PAGES ARE TO BE USED WITH A SINGLE BASIN PROJECT. FOR MULTI-BASIN PROJECTS, PLEASE USE TABLES PROVIDED

General Basin Information

Application Number_____
Basin Name/Number_____
(District use only)

WSWT Elevation_____(ft, NGVD)

WSWT refers to the average annual wet season water table and is normally used to set the project control elevation.

WSWT Method of Determination_____

Surrounding projects, Monitoring data, USGS well data, Wet season soil borings, Wet season water table contour map, Adjacent canal control elevation, Wetland indicator elevation, Other (clarify)

CONTROL Elevation_____(ft, NGVD) Dry Season Control Elevation _____(ft, NGVD)

Normally the control elevation should be set at the average annual wet season water table elevation unless environmental concerns require otherwise. Refer to BOR Section 6.11

Allowable Discharge_____(cfs) Area_____ (acres)

Appendix H in Volume IV shows the allowable discharge for the appropriate District basin. Local government and drainage district criteria may also apply (i.e. Cocohatchee River - 0.04 cfs/acre, Caloosahatchee River - 0.047 cfs/acre, Orange and Polk Counties = 25 year-24 hour, Osceola County = 10 year-72 hour design storm, Boggy Creek Basin = 50 CSM, EAA = 20 CSM) Refer to BOR Section 6.2

Method of Determination_____

Pre vs Post, Discharge Formula, SFWMD Curves, Conveyance Limitation, Lock Drainage District Limits

Design Discharge_____(cfs) Design Stage_____(ft,NGVD)

In cases where a project has unusual circumstances which the consultant feels requires the design discharge to exceed the allowable discharge, supply all supporting documentation for deviation from the Q_{all} allowable discharge rate.

Minimum Perimeter Grade_____(ft, NGVD)

The minimum perimeter elevation should be at or above the 25 year/3 day contour for each basin. A typical perimeter cross section is normally required to verify this.

Water Quality Systems Information

WQ System Type_____ Water Mngmt Area_____(acres)
measured at the control elevation

Wet detention, Dry detention, Wet retention, Dry retention, Exfiltration trench, reservoir, swales, wetlands

A baffle/skimmer should be included for each structure unless there is a submerged pipe leading from a wet detention area to the outfall structure. Refer to BOR Section 7.1.e
A benchmark must be provided in close proximity to each structure.

Water Quality Treatment
Volume Required_____(acre-ft)

Water Quality Treatment
Volume Provided_____(acre-ft)

Exfiltration Trench
Length Req_____(ft)

Exfiltration Trench
Length Prov_____(ft)

Trench Depth_____(ft)

Perforated Pipe Diameter_____(ft)

Trench Width_____(ft)

Trench Overflow elevation_____(ft) Discharge Structure #_____

Refer to BOR Section 5.0 for more details and clarification on water quality criteria.

1. Dry pre-treatment is required for all industrial and commercial zone projects. Projects discharging to sensitive receiving bodies with greater than 40% impervious area and any project discharging into wetlands must also provide dry pre-treatment.

2. If exfiltration trench is proposed, use the conservative formula for wet trench or trench which is twice as wide as it is deep. Please provide a cross section of the trench with all dimensions shown. Provide sit specific percolation tests and soil borings in the area of the exfiltration trench.

3. Water quality monitoring will normally be required for industrial projects and for any project discharging to sensitive waters.

4. Lakes should average 100' wide and 0.5 acres in size as a minimum.

   Side slopes should be no steeper than 4:1 except in Lee County which requires slopes no steeper than 6:1 and Orange County which requires slopes no steeper than 5:1 to two feet below the control elevation.

   Lakes require at least a 20' wide perimeter maintenance easement which should be shown on the drainage plans and lake cross section. Refer to BOR Section 7.4 & 7.5 for the entire list of lake design criteria.

5. Dry detention/retention areas require a bottom at least 1' above the control elevation. Refer to BOR Section 2.31.

6. Additional water quality treatment is sometimes required by a local entity.

7. Projects which discharge to an Outstanding Florida Water require 50% additional treatment.

Culvert Information

Type Major or Emergency (Ag)

Discharge Culvert Type _____
RCP,RMP,CMP,BCCMP,ARCH,PVC,ELLIPTICAL,OTHER/MISC.

Diameter_____(ft) Length_____(ft)

Width_____(ft) Height_____(ft)

Invert Elevation - Upstream_____(ft, NGVD)

Invert Elevation - Downstream_____(ft, NGVD)

Discharge Structure #_____ "n" factor _____

Receiving Body _____

Documentation of non-erosive discharge velocities will normally be required. Please provide calculations and details of the mechanism to be used.

Weir Information

Structure Type Major or Emergency (Ag) Weir Type _____

Broad Crested,sharp crested,cipolletti,V-notch, semi-circular, horizontal circular, rectangular orifice

Width_____(ft) Height_____(ft)

Elevation season Normal Crest Elevation_____(ft, NGVD)

Receiving Body _____

Drop Inlet Information

Structure Type Major or Emergency (Ag) Diameter_____(ft)

Length_____(ft) Width_____(ft)

Crest Elevation_____(ft, NGVD)

Discharge Structure #_____

Receiving Body _____

1. **Emergency overflows for agricultural projects must be capable of handling the 100-year 3-day storm with 0.5' or less of head. Refer to BOR Appendix 6.**
2. **A pollutant retardant skimmer should be provided for all control structures. Agricultural project control structures must include a trash baffle.**
3. **When used as emergency overflows in agricultural projects, it is acceptable for the emergency overflow pipe to control discharge since the structure is internal (not the off-site outfall structure).**

Gate Information

Structure Type Major or Emergency (Ag) Gate Type _____

Amil, Radial, Screw Gate, Slide Gate

Width_____(ft) Height_____(ft)

Invert Elevation_____(ft, NGVD) Crest Elevation_____(ft, NGVD)

Receiving Body_____ Discharge Structure #_____

An acceptable (usually governmental) operation and maintenance entity is required for operable structures.

Bleeder Information

Bleeder Type _____ Invert elevation _____(ft, NGVD)

circular orifice ,triangular orifice,V-notch,rectangular notch,rectangular orifice,drawdown pipe,diamond orifice, pentagonal orifice, trapezoidal notch, pentagonal notch, trapezoidal orifice

Width_____(ft) Height_____(ft)

Diameter_____(ft) Invert Angle_____(degrees)

Receiving Body _____

Elevation Season NORMAL Discharge Structure #_____

Refer to BOR Section 7.2 for clarification.

1. The bleeder in a structure is the lowest elevation at which water can discharge from the site. It is used primarily to regulate the volume of discharge from the site for water quality treatment. For sites with small allowable discharges, it may also limit discharge from the site during the design event (ie: a weir is not needed).

2. The bleeder invert elevation defines the proposed control elevation.

3. Bleeder dimensional criteria:
   a. minimum of 20 degrees for V-notches
   b. the minimum dimension is 2 inches
   c. the minimum cross-sectional area is 6 square inches

4. The bleeder discharges shall be no more than 1/2" of the detention volume in 24 hours. Refer to BOR Section 7.2.a

Pump Information

On Elevation_____(ft, NGVD) Off Elevation _____(ft, NGVD)

Total Capacity_____(gpm) Discharge Structure #_____

Receiving Body _____

1. Pumps are normally used in agricultural projects to pump INTO a detention area, which discharges off-site via a gravity operated control structure. Refer to BOR Appendix 6 for design criteria and methodology.

Dike Information

Impoundment Type Major or Minor

	Dike Internal to project	Dike borders off-site
Internal side slope ratio	_____:_____(H:V)	_____:_____(H:V)
External side slope ratio	_____:_____(H:V)	_____:_____(H:V)

Top Width_____**ft** **Top Elevation**_____**ft NGVD**

A minimum 50' setback from the toe of proposed berms to the property lines is required unless it can be demonstrated that a lesser dimension will suffice. The toe of site perimeter berms or dikes must be setback a minimum of 10 feet from the property line where the 50 feet setback does not apply. Refer to BOR Appendix 6

SPECIAL CONCERNS Please provide a detailed explanation including application/permit number(s), date approved, well field description, etc.

Water Use Permit Status _____

DRI _____

Save Our Rivers Program Area _____

SWIM Basin _____

Right of Way Permit Status _____

Enforcement Activity _____

Third Party Interest _____

Well Field Zone of Influence _____

CHECKLIST FOR ASSOCIATION DOCUMENTS – Appl/Permit No: _____

	DEED RESTRICTIONS RECORDED in	ORB:_____		PG:__	BoR	9.2.1
	Document covers entire project per legal description	Y:__	N:__	PG:__	BoR	9.2.4
	If NOT, which Phase: _____	Y:__	N:__	PG:__	BoR	9.2.4
	Legal description Exhibit _____, included	Y:__	N:__	PG:__	BoR	9.2.4
	Legal description by plat, if so, COPY OF PLAT	Y:__	N:__	PG:__	BoR	9.2.1
	Overall plat Y:__ N:__, Phase Name/No. _____					
	Plat recorded: Plat Book: _____, Page: _____					
(a)	Assoc must operate & maintain swm system	Y:__	N:__	PG:__	BoR	9.2.4
(a)	Assoc ultimate responsible for op/maint	Y:__	N:__	PG:__	BoR	9.2.4
(b)	Assoc owns common areas	Y:__	N:__	PG:__	BoR	9.2.4
(b)	Easem'ts for drainage & maint dedicated	Y:__	N:__	PG:__	BoR	9.2.4
(b)	Does Assoc own swm system?	Y:__	N:__	PG:__	BoR	9.2.4
	If not, who does _____					
(c)	Assoc can assess/collect for op/maint	Y:__	N:__	PG:__	BoR	9.2.4
	Regular and SPECIAL assessments	Y:__	N:__	PG:__	BoR	9.2.4
(d)	Amendment section SFWMD approval	Y:__	N:__	PG:__	BoR	9.2.4
(e)	Doc in effect min 25 yrs w/auto renewal	Y:__	N:__	PG:__	BoR	9.2.4
(f)	CONSERVATION easement referenced	Y:__	N:__	PG:__	BoR	9.2.4
(f)	Cons easement dedicated to _____	Y:__	N:__	PG:__	BoR	9.2.4
(f)	Who owns conservation areas _____					
	If different from op entity, do we have cods	Y:__	N:__			
(f)	Conservation use restrictions	Y:__	N:__	PG:__	BoR	9.2.4
(f)	FINANCIAL ASSURANCE required	Y:__	N:__	PG:__	BoR	9.2.4
(f)	Mitigation monitoring required	Y:__	N:__	PG:__	BoR	9.2.4
(f)	Assoc responsible for mitigation monitoring	Y:__	N:__	PG:__	BoR	9.2.4
(f)	WATER QUALITY monitoring required	Y:__	N:__	PG:__	BoR	9.2.4
	AMENDMENT adds add'l property to docs	Y:_	N:__	PG:__	BoR	9.2.4
	Amends article _____ concerning SWMS	Y:__	N:__	PG:__	BoR	9.2.4
	Concerns conservation easement/areas	Y:__	N:__	PG:__	BoR	9.2.4
	Concerns conservation easement/ares	Y:__	N:__	PG:__	BoR	9.2.4
(g)	Reference to permit as exhibit	Y:__	N:__	PG:__	BoR	9.2.4
(b,c)	Non-member, easem'ts & maint. Agrm't reqd	Y:__	N:__	PG:__	BoR	9.2.6
(d)	GOLF COURSE OWNER is member of assoc	Y:__	N__	PG:__	BoR	9.2.6
(d)	Golf course is platted	Y:_	N:__	Plat No. _____		

	ARTICLES OF INCORPORATION (*FILED)	**Y:_**	**N:__**	**PG:__**	**BoR**	**9.2.1**
(a)	Own and convey property	Y:__	N:__	PG:__	BoR	9.2.3
(b)	Operate & maintain common property	Y:__	N:__	PG:__	BoR	9.2.3
(c)	Makes rules & regulations	Y:__	N:__	PG:__	BoR	9.2.3
(d)	Assess money & enforce rules/assessments	Y:__	N:__	PG:__	BoR	9.2.3
(e)	Sue & be sued	Y:__	N:__	PG:__	BoR	9.2.3
(f)	Contract for services	Y:__	N:__	PG:__	BoR	9.2.3
	All powers per Ch 617, F.S. (nonprofit corp's)	Y:__	N:__	PG:__	BoR	9.2.3
	All powers per Ch 718, F.S. (Condo Act)	Y:__	N:__	PG:__	BoR	9.2.3
(g)	All owners are members	Y:__	N:__	PG:__	BoR	9.2.3
	Golf course owner is member (Class C?)	Y:__	N:__	PG:__	BoR	9.2.3

(h) Exists in perpetuity Y:__ N:__ PG:__ BoR 9.2.3
(h) Dissolution language – other entity Y:__ N:__ PG:__ BoR 9.2.3
CERTIFICATE OF INCORPORATION **Y:_ N:__** **BoR 9.2.3**
COMPLETED TRANSFER FOR - **Y:_ N:__**

40E-4.351, FAC

(SIGNED BY AN OFFICER OF THE ASSOCIATION)
SATISFACTION OF PERMIT CONDITIONS Y:_ N:__

40E-4.361, FAC

M.S.T.U. (Municipal Service Taxing Unit) need: **BoR 9.1(a)1 and BoR 9.1(b)**

Copy of Ordinance creating the MSTU; and – if wetlands/conservation areas in project – how are wetlands dedicated for preservation – who owns those areas and who is responsible for them? Handle regarding conservation dedication as if the operating entity is a HOA. Proof of satisfaction of permit conditions, etc.

ANY COGERNMENTAL OR DIFFERENT ENTITY OTHER THAN THE ORIGINAL PERMITTEE in accordance with Rules 40E-4.351 and 40E.361, FAC: BoR 9.1(b)

Letter affirming acceptance of responsibility for operation and maintenance of drainage facilities; ownership documentation; proof of satisfaction of permit conditions, completed transfer for; etc.

!!!PLEASE IDENTIFYY AND NOTE IF THE PROJECT IS RENTAL OR LEASED!!!

40E-4.091(1)(a) – Publications incorporated by reference
40E-4.301(1)(j) – Conditions for issuance of permits
40E-4.381(1)(j) – General conditions
Section 9, "Basis of Review" – Operating entity requirements

WETLAND/OTHER SURFACE WATER DATA									
ID	WL OSW	FLUCCS CODE	EXISTING ACREAGE	QUALITY	PRESERVED ACREAGE	UNDISTURBED ACREAGE	IMPACTED ACREAGE	IMPACT TYPE	DURATION
01	WL	621	5.0	Good	5.0	0.0	0.0	N/A	N/A
		621E2	1.2	Fair	.7	0.0	.5	Fill	Perm.
		424	3.0	Poor	0.0	0.0	3.0	Fill	Perm.
02	WL	643	4.2	Good/Fair	4.2	0.0	0.0	N/A	N/A
03	OSW	510	2.1	N/A		1.9	.2	Fill	Perm.

EXAMPLE

Submit an environmental assessment of the project site which includes information on wetlands and other surface waters and indicate the proposed status of each area. In addition to the table, a habitat communities map should be submitted which utilizes the Florida Land Use and Cover Classification System (FLUCCS). Impact types include clearing, filling, excavation, habitat fragmintation, drainage, and flooding. Utilizing E1 – E4 suffix for percent exotic coverage aids in applying the mitigation ratios of BOR Section 4.3.2.4; typically E1 = 1% to 24%, E2 = 25% to 49%, E3 = 50% to 74%, E4 = 75% to 90% and 424/422 for 91% to 100% exotic coverage.

UPLAND DATA			
ID	FLUCCS CODE	EXISTING ACREAGE	QUALITY
EXAMPLE			
03	411	25.3	Good
	321	8.0	Good
04	211	50.0	Poor

Submit an environmental assessment of the project site which includes information on upland communities including rare or unique uplands.

ENDANGERED OR THREATENED SPECIES / SPECIES OF SPECIAL CONCERN		
	FGFWFC	USFWS
LISTED SPECIES		
USE TYPE (ie. nesting, foraging)		
CONTACT PERSON		
ISSUES/RESOLUTION		

Provide information on any endangered or threatened species or species of special concern status on the project site. Include particular uses of the site by listed species (e.g. roosting, nesting, feeding). Document relevant communications with the Florida Game & Fresh Water Fish Commission (FGFWFC) or U.S. Fish & Wildlife Service (USFWS) regarding E/T/SSC species use of the site and how the issues have been resolved

OVER WATER STRUCTURES						
TYPE OF STRUCTURE	EXISTING OR PROPOSED	LENGTH	WIDTH	HEIGHT	NUMBER OF SLIPS	TOTAL SQUARE FEET OVER WATER

WETLAND INVENTORY							ONSITE/OFFSITE
Pre-development		Post-development					
Community Types	Total Existing	Impacted	Undist.	Preserved	Enhanced	Restored/ Created	
Forested Wetland							
Herbaceous/Shrub Wetland							
Other Surface Water							
Totals							
Upland Compensation Acreage:		Mitigation Bank Name: Credits Used			Regional Offsite Mitigation: Area: Amount $		

Have any of these areas been included in any previous authorizations from the SFWMD? If so, please indicate application/ permit numbers:

A separate table should be filled out for onsite areas and offsite areas. Categories are defined as follows:

PRESERVED - no fill or excavation proposed; no clearing of desirable wetland species; no dewatering or other lowering of the water table. Adequate buffer provided and pre-development hydrology maintained.

IMPACTED - altered as part of this proposal by fill, excavation, clearing, dewatering or other lowing of the water table (including temporary impacts).

UNDISTURBED – All wetlands not in the mitigation plan.

ENHANCED - re-establishment of hydroperiod, replanting, and/or exotic plant removal to enhance an existing wetland (this number is included in the preserved category).

RESTORED/CREATED - establishment of a wetland in an area which was previously upland or land use category other than wetlands. Restoration areas are historic wetlands which no longer exhibit wetland characteristics. Techniques include excavation and planting, vertical relocation, mulching, etc.

STATUS OF PROJECT UNDER ESL (ENVIRONMENTALLY SENSITIVE LANDS) PROGRAM(S)	
CREW	
CARL	
P2000	
SOR	
LOCAL GOVT	
ONS*	

*Outstanding Natural System from Lower West Coast Water Supply Planning Program.

MONITORING/MAINTENANCE PLAN

The following elements should be included in the monitoring plan:

1) **Map indicating mitigation location within project boundaries.**

2) **Map indicating locations of staff gauges(set at NGVD), rain gauges, panoramic photo station, vegetation sampling transects.**

3) **A cross-section of the wetlands showing ground elevation relative to control elevation.**

4) **Provisions for weekly water level readings from staff gauge with total monthly rainfall reported in annual report.**

5) **Qualitative observations of wildlife/fish/macroinvertebrate utilization.**

6) **Measurements of percent survival and/or percent coverage of desirable wetland species and any exotic/nuisance plant species which may become established in the protected areas.**

7) **Maintenance plan for removal/control of exotic and/or nuisance plant species and replanting with dates for maintenance. Total coverage of exotic and nuisance plant species should constitute no more than 5% of the total preserve/mitigation area between maintenance activities.**

8) **Provisions for monitoring for a period of five years with annual reports submitted to the SFWMD, See Environmental Monitoring Report Guidelines.**

9) **Monitoring/Maintenance work schedule.**

10) **Provisions for recommendations for corrective action if necessary to accomplish the goals of the mitigation.**

11) **Cost estimate for the completion of the mitigation, monitoring, maintenance and management of the protected areas in accordance with Section 4.3.7 of the Basis of Review.**

12) **Financial Responsibility for Mitigation as required in the Basis of Review, Section 4.3.7.**

TIME SCHEDULE FOR COMPLETION OF MITIGATION/MONITORING ACTIVITIES	
ACTIVITY	**COMPLETION DATE**
Submit baseline monitoring report for Preservation/ Restoration Areas(Due prior to initial mitigation activities)	
Excavation of Lake	
Installation of Structures	
Grading of mitigation area	
Planting of Mitigation area	
Complete initial exotic removal	
Construction of fence/structural buffer	
Submit time zero monitoring report	
Submit conservation easement documents	
Submit recorded legal document(s)	
Exotic removal	
Submit first monitoring report	
Exotic removal	
Submit second monitoring report	
Exotic removal	
Submit third monitoring report	
Exotic removal	
Submit fourth monitoring report	
Exotic removal	
Submit fifth monitoring report	

A separate time schedule for completion of mitigation and monitoring activities should be submitted for each mitigation plan. The following schedule contains typical activities for most mitigation plans. Additions and/or deletions to this schedule should be noted as appropriate. As a guideline, Baseline reports should be submitted prior to construction, Time Zero reports should be submitted within 30 days from completion of mitigation activities (ie. initial exotic removal, planting, etc.), and the First Monitoring report should be submitted one year from completion of time zero report.

Regulatory Topics

REGULATORY TOPICS

DELEGATION AGREEMENT
AMONG
THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION,
THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT,
AND
BROWARD COUNTY

TABLE OF CONTENTS

PART I
ADMINISTRATION OF THE AGREEMENT

SECTION 1 - INTRODUCTION, PARTIES, AND PURPOSE
SECTION 2 - DEFINITIONS
SECTION 3 - EFFECTIVE DATE
SECTION 4 - DURATION OF AGREEMENT
SECTION 5 - AMENDMENT OF AGREEMENT
SECTION 6 - CONFLICT BETWEEN AGREEMENTS
SECTION 7 - REVIEW OF AGREEMENT
SECTION 8 - SEVERABILITY
SECTION 9 - TERMINATION OF AGREEMENT

PART II
PROGRAM RESPONSIBILITIES

SECTION 10 - SCOPE OF DELEGATION
SECTION 11 - TECHNICAL CRITERIA AND STANDARDS
SECTION 12 - PERMIT APPLICATION PROCESSING
SECTION 13 - COMPLIANCE AND ENFORCEMENT ACTIVITIES
SECTION 14- SPECIAL CASE AGREEMENTS
SECTION 15 - NOTICES

PART III
PROGRAM MANAGEMENT

SECTION 16 - BUDGET
SECTION 17 - PERSONNEL
SECTION 18 - COMPUTER, SOFTWARE, DATA ENTRY SYSTEMS AND OTHER EQUIPMENT
SECTION 19 - STAFF TRAINING
SECTION 20 - RECORDS MANAGEMENT
SECTION 21 - PUBLICATION OF PRECEDENTIAL ORDERS
SECTION 22 - REPORTING REQUIREMENTS TO THE DEPARTMENT AND THE DISTRICT
SECTION 23 - PROGRAM OVERSIGHT AND COORDINATION

PART IV
MISCELLANEOUS PROVISIONS

SECTION 24 - RIGHTS OF OTHERS

EXHIBITS

EXHIBIT A - GEOGRAPHICAL BOUNDARY OF THE DPEP DELEGATED AUTHORITY

EXHIBIT B - OPERATING AGREEMENT BETWEEN THE U.S. ARMY CORPS OF ENGINEERS, THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, THE SOUTH FLORIDA WATER MANANAGEMENT DISTRICT, THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT, AND THE SUWANNEE RIVER WATER MANAGEMENT DISTRICT CONCERNING REGULATORY PROGRAMS FOR ACTIVITIES IN WETLANDS AND OTHER SURFACE WATERS

PART I ADMINISTRATION OF AGREEMENT

SECTION 1 - INTRODUCTION, PARTIES AND PURPOSE

A. This is an Agreement among the FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (hereinafter referred to as DEPARTMENT), a state agency created under section 20.255 of the Florida Statutes, the SOUTH FLORIDA WATER MANAGEMENT DISTRICT (hereinafter referred to as DISTRICT), a multipurpose water management agency existing by virtue of chapter 25270, Laws of Florida, 1949 and operating pursuant to chapter 373 of the Florida Statutes, and BROWARD COUNTY, FLORIDA (COUNTY), a political subdivision of the State of Florida, operating under the Broward County Charter. Article 1 of the Charter grants the COUNTY the authority to adopt ordinances and criteria necessary to exercise the powers delegated by this Agreement, and further grants the Department of Planning and Environmental Protection (DPEP), through Chapter 15 of the Broward County Administrative Code, the authority to implement ordinances and regulations adopted by the COUNTY. DPEP is a department of the Administrative Branch of Government of the COUNTY, operating under the authority of the Broward County Code, Chapter 27.

B. The Secretary of the DEPARTMENT, the Governing Board of the DISTRICT, and the COUNTY are empowered to execute this Agreement and carry out the responsibilities discussed herein.

C. The delegation will be implemented by the DPEP.

D. The purpose of this Agreement is to delegate to DPEP under authority contained in sections 373.103(8) and 373.441 of the Florida Statutes, certain permitting, compliance, and enforcement responsibilities, within the geographical area of Broward County, associated with implementation of the Environmental Resource Permit (ERP) program under part IV of chapter 373 of the Florida Statutes. This delegation also includes responsibilities for the Wetland Resource Management permit (WRM) and the Management and Storage of Surface Waters (MSSW) permit programs under subsections 373.414(11)-(16) of the Florida Statutes. This Agreement also describes the guidance and oversight responsibilities of the DEPARTMENT and the DISTRICT as they relate to the delegated programs. Further, the Agreement establishes the responsibilities of the COUNTY regarding maintaining adequate levels of administrative, technical and financial capabilities to implement and enforce the ERP, WRM, and MSSW[1] programs, and responsibilities for reporting to, and maintaining communication with the DEPARTMENT and the DISTRICT.

[1] Hereinafter to be referred to as Surface Water Management (SWM) permits—see Section 2.

SECTION 2 - DEFINITIONS

For purposes of implementing the delegated program, the definitions to be used are those in sections 373.019, 373.403, 403.031, 403.803 of the Florida Statutes, chapters 62-160, 62-4.244, 62-302, 62-312, 62-330, 62-340, 62-341, 62-343, 62-344, 40E-1, 40E-4, 40E-40, and 40E-400 of the Florida Administrative Code, the South Florida Water Management District Basis of Review for ERPs, the Broward County Charter, Chapter 15 of the Broward County Administrative Code, and Chapter 27 of the Broward County Code. Further, for purposes of this agreement, the term "Surface Water Management" (SWM) Permit shall include MSSW permits and the term "permitting" shall include the actions of acknowledging qualification for exemptions, no-notice general permits, and noticed general permits. Should a conflict exist under this Agreement between the definitions in the COUNTY code and the definitions in any of the above statutes or rules of the DEPARTMENT or DISTRICT when the COUNTY is acting under the authority of this Agreement, the definitions in the above noted statutes and rules of the DEPARTMENT and the DISTRICT shall govern.

SECTION 3 - EFFECTIVE DATE

This Agreement shall become effective after the Agreement is fully executed by all parties and on the effective date of the rules that adopt it by reference by both the DEPARTMENT and DISTRICT.

SECTION 4 - DURATION OF AGREEMENT

This Agreement shall remain in effect until terminated by any party in accordance with Section 9 of this Agreement.

SECTION 5 - AMENDMENT OF AGREEMENT

This Agreement, including its referenced Exhibits, may be modified in writing at any time as necessary by mutual consent of all parties. Any amendment may be made in whole, by part, or by section, and upon execution by the parties and adoption by the DEPARTMENT and DISTRICT by rule, shall supersede the corresponding provisions of previous versions of this Agreement.

SECTION 6 - CONFLICT BETWEEN AGREEMENTS

This Agreement shall supersede any prior understanding, agreement, memorandum, letter, rule, ordinance, or other written or oral arrangement between the DEPARTMENT or the DISTRICT and the COUNTY regarding the delegation of authority to issue, the processing of, or the enforcement of, requirements relating to MSSW

permits, ERP, or WRM permits under part IV of chapter 373 or sections 403.91-403.929, 1984 Supplement to the Florida Statutes 1983, as amended.

SECTION 7 - REVIEW OF AGREEMENT

This Agreement shall be jointly reviewed quarterly by the parties the first year following the effective date of this Agreement and every two years thereafter. The purpose of the review is to determine the effectiveness and efficiency of this Agreement and to identify and implement any needed modifications. Additional reviews shall be conducted periodically as necessary.

SECTION 8 - SEVERABILITY

If any part of this Agreement is judicially, administratively or otherwise determined to be invalid or unenforceable, the other provisions of this Agreement shall remain in full force and effect, provided that all parties agree in writing that the material purposes of this Agreement can be implemented.

SECTION 9 - TERMINATION OF AGREEMENT

A. Any party may terminate this Agreement without cause upon 90 days prior written notice to the other parties. Within 30 days of a notice of intent to terminate this Agreement, all parties shall make good faith efforts to preserve the Agreement through a negotiated resolution. If after such negotiations, one or more of the parties still wish to terminate this Agreement, DPEP shall not accept any further applications under this Agreement, but, except as otherwise agreed upon by the parties, the DPEP shall complete processing of any pending applications submitted to the COUNTY in accordance with this Agreement. Notwithstanding the other provisions of this paragraph, upon the issuance of notice of intent to terminate the Agreement, the DEPARTMENT or the DISTRICT may require transfer to the DEPARTMENT or DISTRICT any one or more pending ERP, WRM, or SWM permit applications or enforcement cases, and copies of the files (or the original files at the discretion of the DPEP) on prior applications reviewed by the DPEP under this Agreement.

B. In the event of termination of this Agreement, the DPEP will transfer all files or copies thereof relating to permits issued, applications under review, or activities for which enforcement action has been taken under this Agreement to the DEPARTMENT or DISTRICT (in accordance with the "Operating Agreement Concerning Regulation Under Part IV, Chapter 373, F.S. Between South Florida Water Management District and Department of Environmental Protection") within 30 days of the termination.

C. Any notice of termination shall be delivered by certified mail.

PART II PROGRAM RESPONSIBILITIES

SECTION 10 - SCOPE OF DELEGATION

A. Geographical Extent of this Agreement

This Agreement shall cover Broward County outside the geographic areas that are subject to the jurisdiction of the special taxing districts, independent drainage districts, water control districts or community development districts, the Everglades Buffer Strip, the Seminole Tribe of Florida Reservation and Tribal Trust Lands subject to the Water Rights Compact between the State of Florida, the South Florida Water Management District and the Seminole Tribe of Florida, and the Water Conservation Areas listed below (and shown in Exhibit A). These areas are commonly known as:

(1) The Central Broward Water Control District;
(2) The Coral Bay Community Development District;
(3) The Coral Springs Improvement District;
(4) The Indian Trace Development District;
(5) The North Lauderdale Water Control District;
(6) The North Springs Improvement District;
(7) The Old Plantation Water Control District;
(8) The Pine Tree Water Control District;
(9) The Plantation Acres Improvement District;
(10) The South Broward Drainage District;
(11) The Sunshine Water Control District;
(12) The Tindall Hammock Irrigation & Soil Conservation District;
(13) The Turtle Run Community Development District;
(14) The West Lauderdale Water Control District;
(15) The Everglades Buffer Strip;
(16) Water Conservation Areas; and
(17) Seminole Tribe of Florida Reservation and Tribal Trust Lands subject to the Water Rights Compact between the State of Florida, the South Florida Water Management District and the Seminole Tribe of Florida and other Tribe owned or controlled lands.

Activities requiring an ERP, WRM, or SWM permit within the geographical territories described in (1) through (17) above will continue to be regulated by the DEPARTMENT, DISTRICT, and the COUNTY under their respective authorities.

B. Program Activities over which Authority is Retained by the DEPARTMENT or the DISTRICT.

The DEPARTMENT or DISTRICT, as determined in accordance with the "Operating Agreement Concerning Regulation Under Part IV, Chapter 373, F.S., and Aquaculture General Permits Under Section 403.814, F.S., Between South Florida Water Management District and Department of Environmental Protection," dated

October 27, 1998, and effective December 3, 1998, as adopted by reference in paragraph 62-113.100(3)(e) of the Florida Administrative Code, and 40E-4.091(1)(c) of the Florida Administrative Code shall retain authority for permitting, compliance, and enforcement for:

(1) Activities that require a Joint Coastal Permit under section 161.041 and part IV of chapter 373 of the Florida Statutes;

(2) Applications for activities located in whole or in part in, on, or over sovereign submerged lands that require an authorization from the Board of Trustees of the Internal Improvement Trust Fund, other than a consent by rule under rule 18-21.005(1)(a) of the Florida Administrative Code. This shall include activities on lands that are riparian to sovereign submerged lands and facilities that are accessory to the activities or uses on sovereign submerged lands. For the purposes of this agreement, the term "accessory to" shall refer to development and works that would not otherwise occur but for the proposed activity or use of sovereign submerged lands. This is intended to cover activities such as:

(a) development that requires a shore protection structure at or waterward of mean or ordinary high water with or without associated filling to enable the proposed upland development to exist; and

(b) parking areas, dry storage facilities, boat sale and supply facilities, maintenance and repair facilities, seafood loading and processing facilities, ports, restaurants, harbor master and marina administration facilities, residential units, commercial development, or industrial development that are proposed to have as part of the application docks, piers, boat ramp or launch facilities, channel dredging, or other uses or activities on sovereignty submerged lands.

However, the provisions of (2)(a) and (2)(b) shall not prevent the DPEP from reviewing and taking agency action on applications for single family, multifamily, commercial, industrial, public, or other development on lands that are riparian to sovereign submerged lands where no activities are proposed on sovereign submerged lands as part of the application, but which may include future, non-accessory uses or activities on sovereign submerged lands, provided that the DPEP advises the applicant of the need to apply to the DEPARTMENT or DISTRICT for any subsequent uses or activities on sovereign submerged lands. Applicants and the DPEP are advised that the future authorization to use sovereign submerged lands may require the DEPARTMENT or DISTRICT to be provided with specific details of the upland development so that the proper form and extent of authorization to use sovereign submerged lands may be determined.

Additional provisions for processing applications in whole or in part in, on, or over sovereign submerged lands are contained in Section 12.C. of this Agreement.

(3) Projects owned, operated, or controlled by the COUNTY such that, if the DPEP did the permitting, compliance, or enforcement, there would be an appearance of a conflict of interest;

(4) Hazardous waste facilities required to obtain a permit pursuant to Chapter 62-730 of the Florida Administrative Code;

(5) Industrial wastewater treatment facilities, including those involving aquaculture, required to obtain a permit pursuant to Chapters 62-660 or 62-670 of the Florida Administrative Code;

(6) Mining projects that include on site grading or sorting facilities;

(7) Activities located in part outside the geographical area covered by this Agreement;

(8) Mitigation banks;

(9) Activities proposed by the Florida Department of Transportation;

(10) Activities proposed by the U.S. Coast Guard or the Department of Defense;

(11) Electrical distribution and transmission lines and other facilities related to the distribution of electricity which do not require certification under Sections 403.52 through section 403.5365 of the Florida Statutes;

(12) Natural gas or petroleum exploration, production, transmission or distribution activities including pipelines, associated facilities and product pipelines;

(13) Except as provided in Section 10.C(4), below, petitions to process waivers and variances under sections 120.542 or 403.201 of the Florida Statutes, and petitions for declaratory statements under section 120.565 of the Florida Statutes, except such declaratory statements shall not address the applicability of stricter local standards;

(14) Permitting, compliance, and enforcement under part IV of chapter 373 of the Florida Statutes for domestic wastewater treatment facilities and solid waste management facilities, except when other permitting responsibility for such facilities has been delegated to the DPEP in separate delegation agreements between the COUNTY and the DEPARTMENT;

(15) Projects owned and operated by the DISTRICT or the DEPARTMENT;

(16) Aquaculture and activities directly associated with aquaculture that are not the responsibility of the Florida Department of Agriculture and Consumer Services.

(17) All other permitting, compliance, and enforcement responsibilities associated with implementation of the regulatory and proprietary programs under part IV of chapter 373 of the Florida Statutes, and chapters 253 and 258 of the Florida Statutes, not specifically delegated to the DPEP in Section 10.C of this Agreement, including responsibilities for rulemaking, establishing state water quality standards, and granting exceptions or variances thereto.

C. Activities over which Authority is Delegated to the DPEP

Except for those activities over which authority is retained by the DEPARTMENT or the DISTRICT in Section 10. B. of this Agreement, the COUNTY, through DPEP, shall be responsible for:

(1) Permitting, compliance and enforcement for all applications including permit modifications, reviewed during the term of this Agreement for ERPs under part IV of chapter 373 of the Florida Statutes, including permit applications reviewed during the term of this Agreement for WRM Permits and Management and Storage of Surface Waters Permits under section 373.414(11)-(16) of the Florida Statutes;

(2) Compliance and enforcement for all unpermitted activities for which DPEP has received delegated authority under this subsection 10.C.;

(3) Processing and issuance or denial of petitions for formal determinations of the landward extent of wetlands and other surface waters under sections 373.421(1) and 373.421(2) of the Florida Statutes within the geographical boundaries for which authority is delegated to the DPEP;

(4) Processing and issuance or denial of requests for project specific variances under sections 373.414(17) of the Florida Statutes for mixing zones, turbidity, and dissolved oxygen associated with ERP, WRM, or SWM permits for which authority is delegated to DPEP. The DPEP shall publish, or shall require a petitioner for a variance to publish notice, in the Florida Administrative Weekly and in a newspaper of general circulation in the area affected, of proposed agency action; and the DPEP shall afford interested persons an opportunity for a hearing on each application for a variance. If no request for hearing is filed with the DPEP within 14 days of published notice, the DPEP may proceed to final agency action without a hearing;

(5) Compliance and enforcement for ERP, WRM, or SWM permits issued by the DEPARTMENT or the DISTRICT prior to the effective date of the Agreement that are specifically agreed upon by the parties;

(6) Issuing, waiving or denying state water quality certification for those activities over which the DPEP has permitting responsibility under this Agreement in accordance with the Operating Agreement between the U.S. Army Corps of Engineers (USACE), the DEPARTMENT, the DISTRICT, and three other water management

districts concerning regulatory programs for activities in wetlands and other surface waters (Exhibit B).

(7) Performing the duties and obligations of the DEPARTMENT or DISTRICT in accordance with the procedures established by the Florida Department of Community Affairs, the DEPARTMENT and the DISTRICT for:

(a) the determination of consistency or inconsistency of a proposed activity with the federal and Florida Coastal Zone Management Acts;

(b) distributing copies of received ERP, WRM, and SWM applications to the USACE, the Fish and Wildlife Conservation Commission, the Department of State, the Department of Community Affairs, and other persons who have specifically requested a copy of the application in accordance with sections 62-343.090 and 40E-1.6058, of the Florida Administrative Code; and

(8) following the terms and provisions of the USACE's State Programmatic General Permit to the extent the DEPARTMENT is given authority by the USACE to allow DPEP to implement its provisions.

D. Additional Conformance with the Broward County Code, Chapter 27

Applications for projects or activities identified under Sections 10. B. and 10. C. of this Agreement shall continue to be submitted to DPEP for any COUNTY authorization required under the Broward County Code, Chapter 27. For activities reviewed under Section 10.B. of this Agreement, the application to the DPEP under the Broward County Code, Chapter 27, shall be in addition to, and not in lieu of, any permits or authorizations required from the DEPARTMENT or DISTRICT.

SECTION 11 - TECHNICAL CRITERIA AND STANDARDS

A. When acting under this Agreement, the DPEP shall apply the provisions of parts I and IV of chapter 373 of the Florida Statutes and the applicable rules of the DEPARTMENT or DISTRICT that are adopted thereunder, as amended from time to time. These rules include: rules 62-4.242; 62-4.244; 62-330.200(4), and the rules incorporated by reference therein; sections 62-343.020-.060, 62-343.090-.140, and 62-343.900; chapters 62-302, 62-312, 62-340, 62-341, 40E-4, 40E-40, and 40E-400 of the Florida Administrative Code; the District's "Basis of Review," effective 1995, as adopted by reference in section 62-330.200(4)(b) of the Florida Administrative Code, and the District's "Basis of Review," effective August 2000, as adopted by reference in section and 40E-4.091(1)(a) of the Florida Administrative Code. Broward County shall amend Sections 27-52 of the Broward County Code of Ordinances to codify a "general incorporation by reference" of these specified statutes and rules so that future amendments to these statutes and rules will be automatically incorporated.

B. When acting under this Agreement DPEP shall also apply any stricter standards -- within the meaning of section 62-344.200(9) of the Florida Administrative Code -- relating to water quality, water quantity and water resource related environmental criteria adopted in the Broward County Code, Chapter 27, as amended.

C. In addition to Chapter 27 of the Broward County Code, final action taken by DPEP regarding the issuance or denial of ERP, WRM, or SWM permits, or compliance and enforcement of activities regulated under the authorities delegated in this Agreement, shall be governed by the provisions of sections 120.569, 120.57(1)-(2), 120.573, 120.574, 120.595, 120.60, 120.62, 120.66, 120.665, 120.68, and 120.69 of the Florida Statutes.

D. No permit shall be issued by DPEP until the proposed activity has been determined to be consistent with the future land use element of the COUNTY's comprehensive plan.

E. Permits issued by DPEP under this Agreement shall consolidate in a single document the permit under part IV of chapter 373 of the Florida Statutes and any required Environmental Resource License or Surface Water Management License. However, except for activities that are exempt under Sections 373.406 or 403.813(2) of the Florida Statutes, or section 40E-4.051 of the Florida Administrative Code when DPEP otherwise may have required a license for an activity that does not require a permit under part IV of chapter 373 of the Florida Statutes, or that only requires a noticed general permit or a no-notice general permit under part IV of chapter 373 of the Florida Statutes, the DPEP may require an individual permit for that activity under their combined authority under this Agreement and Chapter 27 of the Broward County Code. Provided, however, that this Agreement in no way affects the authority of DPEP to require licenses under their separate authority under chapter 27 of the Broward County Code for an activity that is exempt under section 373.406 or subsection 403.813(2) of the Florida Statutes, or section 40E-4.051 of the Florida Administrative Code.

SECTION 12 - PERMIT APPLICATION PROCESSING

A. Those applications for activities under part IV of chapter 373 of the Florida Statutes submitted to the DEPARTMENT or DISTRICT prior to the effective date of this Agreement and which fall within the scope of delegation described herein shall continue to be reviewed and processed by DEPARTMENT or DISTRICT staff until issued, denied or withdrawn. Compliance and enforcement responsibilities for these permitted activities also shall remain with the DEPARTMENT or DISTRICT, unless such responsibilities are specifically delegated to the DPEP under Section 10.C of this Agreement.

B. Permit applications, petitions for variances or waivers, and petitions for formal determinations submitted to the incorrect agency pursuant to the terms of this Agreement shall be returned to the applicant or, with the applicant's concurrence, be forwarded to the correct agency. This shall include situations where DPEP receives or

begins processing an application for an activity that is later determined to be located in whole or in part in, on, or over sovereign submerged lands, in which case the DPEP shall, within three business days of being notified that such wetlands or other surface waters are sovereign submerged lands, return the application to the applicant, or with the applicant's concurrence, forward the application to the DEPARTMENT or DISTRICT (in accordance with the Operating Agreement Concerning Regulation under Part IV, chapter 373 of the Florida Statutes between the South Florida Water Management District and the Department). The application shall not be considered received for purposes of sections 120.60 and 373.4141 of the Florida Statutes, until it is received by the correct agency. A refund of any submitted fee shall be made to the applicant. Prior to transferring the application, the incorrect receiving agency shall coordinate with the proper reviewing agency and the applicant in order to inform all parties that the application has been submitted incorrectly and is being either returned or forwarded. The correct agency receiving the application will be responsible for sending copies of the application to the USACE, in accordance with the Operating Agreement between the USACE, the DEPARTMENT, and the Water Management Districts Concerning Regulatory Programs for Activities in Wetlands and Other Surface Waters.

C. The following provisions shall be followed to ensure that the DEPARTMENT or DISTRICT retains the responsibility for processing and taking agency action on applications for activities on sovereign submerged lands:

(1) Applications received by the DPEP for activities that are located in whole or in part on sovereign submerged lands shall be forwarded to the DEPARTMENT or DISTRICT, in accordance with the division of responsibilities in the "Operating Agreement Concerning Regulation under Part IV, Chapter 373, F.S., and Aquaculture General Permits Under Section 403.814, F.S., Between South Florida Water Management District and Department of Environmental Protection," and the provisions below, within three calendar days;

(2) Because determining the boundaries and locations of sovereign submerged lands may be difficult, the DEPARTMENT and DISTRICT shall retain responsibility for all activities under this agreement located waterward of the approximate mean or ordinary high water line of the following waters, as well as activities located within the wetlands that form the landward extent of such waters above the line of mean or ordinary high water. While the listing of such waters does not constitute an actual determination that such waters are sovereign submerged lands, these waters have a high likelihood of containing, in whole or in part, sovereign submerged lands. Therefore, this list is intended solely to streamline which agency shall retain responsibilities under this Agreement. These waters are:

(a) the Intracoastal Waterway; and

(b) all navigable or tidally influenced natural surface waters[2], including:

[2] Note: It is recognized that navigable, non-tidal waters, such as the Everglades, also may contain sovereign submerged lands. However, within Broward County, such waters largely are outside of the geographical areas where Broward County otherwise will be delegated responsibilities under this

1. Coral Waterway;
2. Cypress Creek and the Cypress Creek Canal;
3. Lake Placid;
4. Lake Sylvan;
5. Middle River, including the North and South Forks of the Middle River;
6. Mayan Lake;
7. New River, including the North and South Forks of the New River;
8. Osceola Creek;
9. Pond Apple Slough;
10. Stranahan River;
11. Tarpon River;
12. Three Islands; and
13. the canal system within Las Olas Isles.

Additional waters will be added or deleted as title determinations identify these or other waters, or portions thereof, to be or not to be sovereign submerged lands.

(3) The responsibility for reviewing and taking agency action on activities that involve isolated (not connected to other surface waters) wetlands or other surface waters, and artificial wetlands and other surface waters, shall remain with the DPEP (because it is presumed, solely for this agreement, such isolated and artificial wetlands and other surface waters are not sovereign submerged lands), except where DPEP has been advised by the DEPARTMENT or DISTRICT that such isolated or artificial wetlands or other surface waters, or portions thereof, are sovereign submerged lands;

(4) In those cases where the DEPARTMENT or DISTRICT begin or complete processing of an application under circumstances where it is believed the submerged lands are sovereign, but are later determined not to be, the DEPARTMENT or DISTRICT shall retain the full authority for the review and agency action on the application, and for any subsequent compliance and enforcement of the application or activity, regardless of other provisions of this Agreement;

(5) DPEP shall, within five business days of receiving an application under this agreement, request a title check from the DEPARTMENT'S Division of State Lands for all applications on artificial wetlands and other waters that are connected to other natural waters, and on any isolated wetland or other surface water, which it believes may historically have been sovereign submerged lands. Except, however, that such title check requests can be suspended where the Division of State Lands has determined that the particular wetland or other surface water is not sovereign submerged lands.

(6) Where the Division of State Lands has determined an artificial or isolated wetland or other surface water is on sovereign submerged lands, and an activity

---

agreement. In all cases where ANY waterbody is determined to be sovereign submerged lands, Broward County DPEP is expressly not delegated responsibilities under this Agreement.

proposed on such wetland or other surface water qualifies for an automatic consent of use under paragraph 18-21.005(1)(a) of the Florida Administrative Code or section 253.77(4) of the Florida Statutes, DPEP shall be authorized to acknowledge qualification for such consent of use, but not any kind of sovereign submerged lands easement. DPEP also shall have subsequent compliance and enforcement responsibilities under this Agreement for such activities other than enforcement of the authority of the Board of Trustees, unless such authority has been delegated by the Board of Trustees. For all other activities on artificial or isolated wetlands or other surface waters that have been determined to be sovereign submerged lands, DPEP shall comply with the provisions of Section 12.B. of this Agreement. This includes situations where DPEP has begun processing an application under circumstances where it is initially believed the wetland or other surface water is not sovereign submerged lands, but is later determined to be sovereign submerged lands. In such cases, the DEPARTMENT or DISTRICT shall retain the full authority for the review and agency action on the application, and for any subsequent compliance and enforcement of the application or activity, regardless of other provisions of this agreement.

(7) Each permit issued by DPEP shall contain provisions that allow the DEPARTMENT or DISTRICT to enforce compliance with permit conditions and the underlying provisions of Part IV of Chapter 373 of the Florida Statutes, and the rules adopted thereunder.

D. Pursuant to subsection 373.109(1) of the Florida Statutes, permit application fees received by DPEP under this Agreement shall be allocated for the use of DPEP.

SECTION 13 - COMPLIANCE AND ENFORCEMENT ACTIVITIES

A. DPEP shall be responsible for conducting compliance inspections on all permits issued by the DPEP pursuant to this Agreement. At a minimum, each project shall be inspected upon completion of construction. DPEP also shall be responsible for inspections on complaints and sites of potential unauthorized activities and for referrals to the DEPARTMENT or the DISTRICT as appropriate.

B. DPEP shall be responsible for implementation of this Agreement and any ordinance, rule, or order adopted by the COUNTY in order to fulfill its responsibilities under this Agreement, as described herein. Under sections 373.103(8), 373.129, and 373.441 of the Florida Statutes, DPEP has all rights, power and authority to enforce the provisions of chapter 373 of the Florida Statutes, and any rules and regulations adopted thereunder which are delegated under this Agreement. The DEPARTMENT or DISTRICT shall not file a separate enforcement action when the DPEP has resolved a violation under its delegated authority through a final order or judgement. The DEPARTMENT or DISTRICT may initiate an enforcement action when requested by the DPEP or when the DPEP is not resolving the violations in a timely or appropriate manner.

C. Where appropriate, the DEPARTMENT or DISTRICT and the DPEP shall coordinate their enforcement activities in order to maximize the staff resources available to each.

D. The COUNTY has established a local Pollution Recovery Trust Fund in which all moneys recovered in any enforcement action will be deposited. Moneys in the COUNTY's Pollution Recovery Trust Fund shall be used exclusively to restore polluted areas in the COUNTY's geographical jurisdiction to the conditions which existed before pollution occurred or to otherwise enhance pollution control activities or the environment, pursuant to the Broward County Code, Chapter 27.

E. Except as provided herein, nothing in this Agreement shall limit the authority of any party.

SECTION 14 - SPECIAL CASE AGREEMENTS

By written Agreement between the Director of DPEP and the Secretary of the DEPARTMENT or the Executive Director of the DISTRICT, as appropriate, or their designees, the responsibility of the parties to review and act on applications or enforcement cases for specific projects may deviate from the responsibilities outlined in this Agreement. Instances where this may occur include:

A. An extensive permitting or enforcement history by the DEPARTMENT, the DISTRICT, or DPEP exists with a particular project such that a deviation would result in more efficient and effective permitting;

B. A conflict of interest, or the appearance thereof, exists which could be resolved by deviating from this Agreement;

C. The incorrect agency has begun processing an application or petition and transfer of the application or petition would be inefficient, and the activity is one that otherwise could be delegated under section 373.441 of the Florida Statutes and rule 62-344 of the Florida Administrative Code; or

D. In cases of emergencies, such as natural disasters, where processing by any of the agencies would expedite work required to abate the emergency.

SECTION 15 - NOTICES

All notices, reports or permits required to be given under the terms and provisions of this Agreement amongst the parties shall be in writing and addressed as follows:

To the DISTRICT:

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
C/O Director, Environmental Resource Regulation Division
PO Box 24680
West Palm Beach, Florida 33416-4680

To the DEPARTMENT:

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Chief, Bureau of Submerged Lands & Environmental Resources, MS 2500
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
- and -
Director, DEP Southeast District Office
PO Box 15425
West Palm Beach, FL 33416-5425

To the COUNTY:

Chair, Broward County Board of County Commissioners
115 South Andrews Avenue, Room 421
Ft. Lauderdale, Florida 33301-1872

AND

Director of DPEP
Department of Planning and Environmental Protection
218 SW 1st Avenue
Ft. Lauderdale, Florida 33301

or to such other address as may hereafter be provided by the parties in writing.

PART III PROGRAM MANAGEMENT

SECTION 16 - BUDGET

DPEP shall not later than 30 days after budget adoption of each year provide a summary to the DEPARTMENT and DISTRICT of its approved budget outlining funding and staffing relevant to the delegated program. DPEP shall maintain adequate program funding, staffing, and equipment to comply with all statutes, rules, and policies pertaining to the delegated programs.

SECTION 17 - PERSONNEL

The COUNTY shall hire and maintain a staff capable of performing the duties specified in this Agreement. A Table of Organization and descriptions of positions provided as part of the petition shall be updated at least annually or more frequently as appropriate and be provided to the DEPARTMENT and DISTRICT within thirty days of any modifications.

SECTION 18 - COMPUTER, SOFTWARE, DATA ENTRY SYSTEMS, AND OTHER EQUIPMENT

The COUNTY agrees to maintain all computer hardware and software necessary to enter data into the DEPARTMENT'S permit tracking systems, including Permit Application (PA), Water Assurance Compliance System (WACS), and Compliance and Enforcement Tracking (COMET), as those systems currently exist or are modified in the future. The DEPARTMENT agrees to provide the necessary access and training in the use of those systems.

SECTION 19 - STAFF TRAINING

The DEPARTMENT or DISTRICT will timely invite DPEP representatives to attend appropriate training sessions or workshops held by the DEPARTMENT or DISTRICT. DPEP's staff responsible for implementing the terms of this Agreement shall regularly attend training sessions and workshops related to the ERP program, including wetland delineation training, at the expense of the COUNTY to maintain and improve their knowledge and competence in implementing the programs delegated by this Agreement. The DEPARTMENT, DISTRICT and the DPEP also agree to conduct periodic meetings to ensure program implementation consistency and resolve issues of mutual interest to the parties, with particular emphasis during the initial implementation of this Agreement. The DEPARTMENT shall provide the DPEP with guidance and instructional information as they become available. The DPEP will be responsible for distributing copies of these manuals and their subsequent updates to staff.

SECTION 20 - RECORDS MANAGEMENT

The COUNTY shall maintain organized files of all public records and materials prepared or received in connection with any official business taken pursuant to this Agreement which is intended to perpetuate, communicate or formalize knowledge. Retention and availability of public records shall be in accordance with chapter 119 of the Florida Statutes.

SECTION 21 - PUBLICATION OF PRECEDENTIAL ORDERS

Orders entered by the DPEP pursuant to administrative hearings shall be published in the Florida Administrative Law Reporter, or on the Broward County internet site in a manner that is searchable in conformance with section 120.53(1)(a)2.b, if they have precedential significance.

SECTION 22 - REPORTING REQUIREMENTS TO THE DEPARTMENT AND DISTRICT

A. The DPEP shall submit an annual report to the DEPARTMENT and the DISTRICT which describes the DPEP's permitting and enforcement activities for the previous year for its responsibilities outlined in this Agreement. The report shall include:

(1) Application activity by the DPEP, consisting of information such as number of applications received, time frames, actions taken, acknowlegements of consents of use, and hearings conducted.

(2) A listing of all DPEP enforcement and compliance activities.

(3) A summary of any variances granted under paragraph 10.C.4 of this Agreement and determinations of *de minimis* impacts under subsection 373.406(6) of the Florida Statutes.

(4) A summary of all formal determinations performed.

B. DPEP shall provide a copy of determinations of *de minimis* exemptions under subsection 373.406(6) of the Florida Statutes, formal wetland determinations under sections 373.421(1) and 373.421(2) of the Florida Statutes, and all notices and agency actions taken on variances under paragraph 10.C.4 of this Agreement to the DEPARTMENT or the DISTRICT, as applicable, in accordance with the Operating Agreement between the DEPARTMENT and the DISTRICT, within 5 business days of issuance.

C. DPEP shall provide electronic data to the DEPARTMENT and the DISTRICT as described in below. However, DPEP may ultimately implement a compatible database system to accomplish the transferring of the requested electronic data to the DEPARTMENT and the DISTRICT when agreeable to the DEPARTMENT and DISTRICT.

(1) For activities delegated by the DEPARTMENT and the DISTRICT, the DPEP shall enter permit application data into the DEPARTMENT's Permit Application tracking system.

(2) For activities delegated by the DEPARTMENT, the DPEP shall enter permit compliance and enforcement data into the DEPARTMENT's COMET system or its successor.

(3) For activities delegated by the DEPARTMENT and the DISTRICT, DPEP shall utilize the "wetland inventory table" that is utilized by the DEPARTMENT and the DISTRICT for tracking of wetland impacts associated with the ERP Delegation.

SECTION 23 - PROGRAM OVERSIGHT AND COORDINATION

A. In order to promote consistency, the DEPARTMENT or DISTRICT, as appropriate, may review, upon reasonable notice to the DPEP, any delegated ERP application that the DPEP is reviewing pursuant to this Agreement. The DEPARTMENT or DISTRICT may also randomly inspect project sites for which an application is being processed by the DPEP, in cooperation with the DPEP and (as necessary) with the applicant.

B. The DEPARTMENT or DISTRICT, as appropriate, will periodically conduct programmatic performance evaluations of DPEP's implementation of the delegated program. The purpose of the performance evaluations is to determine if permit applications, monitoring programs, compliance efforts, and enforcement actions are being managed in accordance with applicable rules and statutes, and that appropriate files are being maintained for all delegated permitting actions taken, monitoring programs, enforcement actions, and other responsibilities delegated to the DPEP. The files shall be maintained for the period required under chapter 119 of the Florida Statutes. DPEP will be given adequate time to complete pre-audit surveys and to comment on draft audit findings.

C. In the event that an informal delineation or jurisdictional determination performed by the COUNTY is disputed by the property owner, the COUNTY shall advise the land owner that he or she may request that the Wetland Evaluation and Delineation Section of the DEPARTMENT resolve the dispute. The COUNTY may at anytime request assistance or advice from the DEPARTMENT in resolving a dispute.

D. The parties shall conduct regular quarterly meetings to ensure program implementation consistency and resolve issues of mutual interest to the parties for the first year following the effective date of this Agreement and every two years thereafter.

PART IV MISCELLANEOUS PROVISIONS

SECTION 24 - RIGHTS OF OTHERS

Nothing in this Agreement express or implied is intended to confer upon any person other than the parties hereto any rights or remedies under or by reason of this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representative(s) on the latest day and year noted below:

BROWARD COUNTY, through its BOARD OF COUNTY COMMISSIONERS

ATTEST:

County Administrator and Ex-Officio Clerk of the Board of County Commissioners of Broward County, Florida

BROWARD COUNTY, through its BOARD OF COUNTY COMMISSIONERS

By _____
Chair

8th day of May, 2001.

COUNTY COMMISSIONERS CREATED OCT. 1ST 1915 BROWARD COUNTY FLORIDA

Approved as to form by
Office of County Attorney
Broward County, Florida
Government Center, Suite 423
115 South Andrews Avenue
Fort Lauderdale, Florida 33301
Telephone: (954) 357-7600
Telecopier: (954) 357-7641

By _____
Assistant County Attorney

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

David B. Struhs
Secretary
DEPARTMENT of Environmental Protection
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

22 day of May, 2001.
Approved as to form by
Office of General Counsel

By Robert Gough 5/18/01
Assistant General Counsel

22nd day of May, 2001.

ATTEST:

By Cynthia L. Kinsey
Deputy Clerk

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

ATTEST:

By _____
~~Deputy Clerk~~
Asst. Secretary

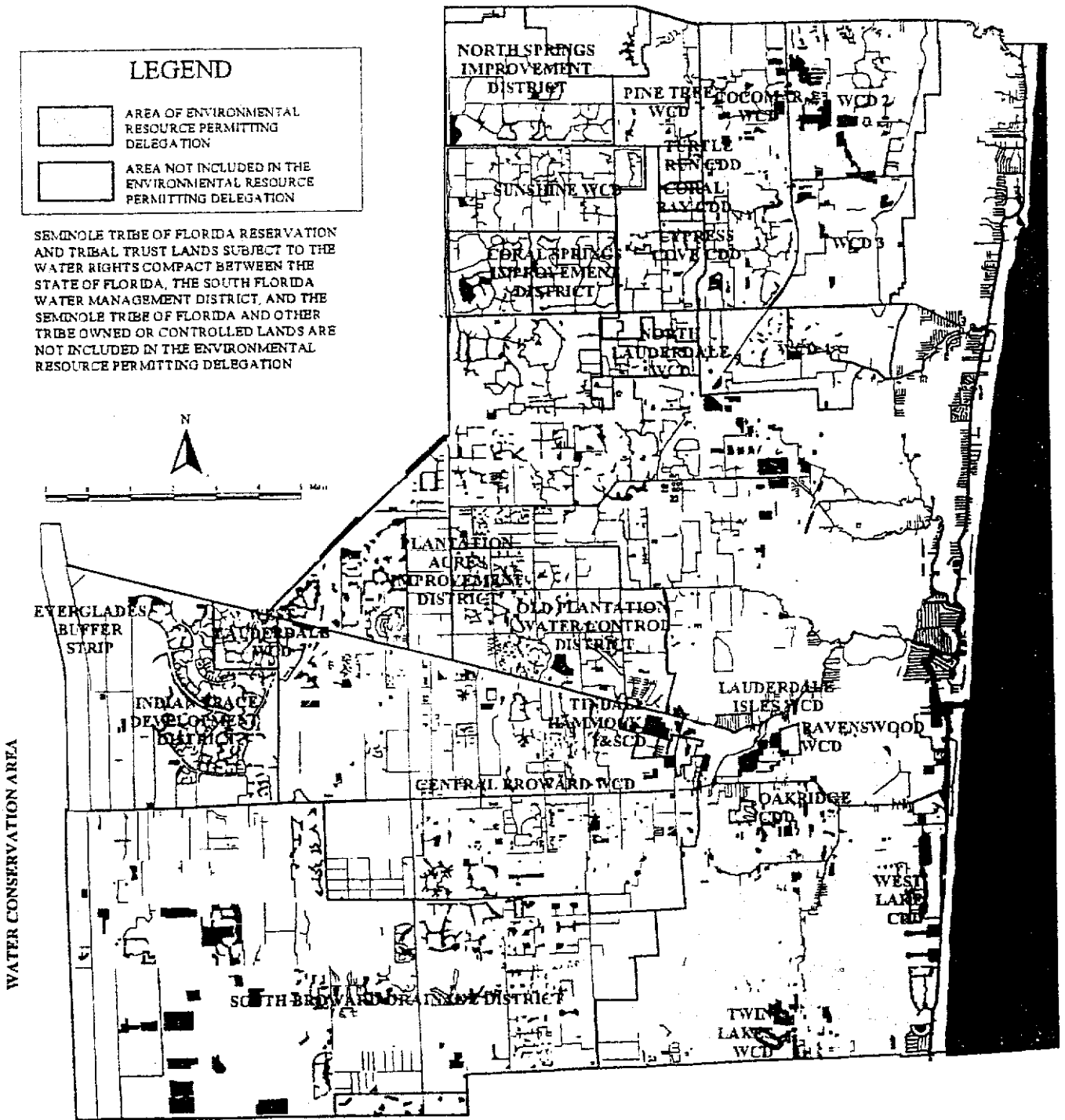
By _____
Chairman, Governing Board

10th day of May 2001.

Legal Form Approved

By Susan Martin

EXHIBIT A
GEOGRAPHICAL AREA OF THE ENVIRONMENTAL RESOURCE PERMITTING DELEGATION TO BROWARD COUNTY



Broward County
Department of Planning and Environmental Protection
January 2001

Editor's note:

for *Volume IV*: Page T1-24 is a blank sheet inserted into the previously-adopted Agreement.

OPERATING AGREEMENT BETWEEN THE U.S. ARMY CORPS OF ENGINEERS, THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT, THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT, THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT, AND THE SUWANNEE RIVER WATER MANAGEMENT DISTRICT CONCERNING REGULATORY PROGRAMS FOR ACTIVITIES IN WETLANDS AND OTHER SURFACE WATERS

I. PARTIES, PURPOSE AND GOALS

A. The Parties

The parties to this agreement are the United States Army Corps of Engineers (Corps), the Florida Department of Environmental Protection (Department), the South Florida Water Management District (SFWMD), the St. Johns River Water Management District (SJRWMD), the Southwest Florida Water Management District (SWFWMD), and the Suwannee River Water Management District (SRWMD) (collectively referred to as "Districts").

B. Purpose

The purpose of this agreement is to coordinate the permitting, compliance and enforcement programs of the parties concerning regulation of activities which affect wetlands and other surface waters within the state of Florida. This agreement shall apply to federal dredge and fill permits issued by the Corps pursuant to Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899 or Section 103 of the Marine Protection, Research and Sanctuaries Act and to permits issued by the Districts or the Department pursuant to part IV of chapter 373, F.S.

This agreement supersedes the December 2, 1982, amended agreement entitled: "Memorandum of Understanding Between U.S. Army Corps of Engineers, Florida Department of Natural Resources and Florida Department of Environmental Regulation on Permit Processing in the Waters of the State." This agreement shall also supersede the agreement entered into by the Florida Department of Environmental Regulation and the Jacksonville District, United States Army Corps of Engineers on January 20, 1983. This agreement spells out the interaction between the parties and does not change any of the existing regulatory requirements adopted by the parties.

C. Goals

It is a goal of the parties to this agreement to effectuate efficient, streamlined regulatory programs to govern activities which affect wetlands and other surface waters. Towards this goal, the parties have established joint application forms and agree to coordinate the distribution and review of information received during the permit application review process. Other streamlining measures to be explored and further developed by the parties include joint field inspections and pre-application meetings, coordinated, complementary enforcement efforts, and Corps' state programmatic and regional general permits. Additionally, in order to further streamline the permitting process, the agencies agree to continue to jointly review the wetland delineation methodologies of the state and the Corps to identify any differences and explore ways to further resolve or overcome these differences. Further, the parties will explore methods to integrate the principles of ecosystem management within their existing legal authority in order to achieve more effective environmental protection.

II. WATER QUALITY CERTIFICATION

By letter dated January 15, 1998, to the Secretary of the Department of Environmental Protection, the Governor of the State of Florida, under the authority in 33 U.S.C., Sections 1341 and 1362 (the Clean Water Act), and 40 C.F.R. 121.1(e), designated the Department as the agency responsible for certifying compliance with applicable state water quality standards for federal licenses or permits issued by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act, 33 U.S.C. 1344. That letter granted the Department the authority to issue, deny, or waive certification of compliance with water quality standards, the authority to identify categories of activities for which water quality certification is waived, and the authority to establish categories of permits or other authorizations for which the issuance (or denial) of the permit or authorization constitutes a certification (or denial of certification) that the permitted or authorized activity complies with (or fails to comply with) applicable state water quality standards. By letter dated February 2, 1998, to the Administrator of the Environmental Protection Agency, the Secretary of the Department of Environmental Protection, as delegated by the Governor of the State of Florida, designated certain permits under part IV of chapter 373, F.S., and other authorizations as constituting state certification of compliance with state water quality standards unless the permit or other authorization specifically states otherwise, established categories of activities for which water quality certification is waived, and delegated concurrent authority to issue, deny or waive water quality certifications to a District created under section 373.069, F.S., or to the head of a county, municipality or local government local pollution control program where such county, municipality, or local government pollution control program has received delegation of the permitting authority from the Department or a District under section 373.441, F.S. In accordance with these letters, the parties agree to the following regarding water quality certification.

A. Grants or Waivers of Water Quality Certification

1. The following will constitute the granting of water quality certification by the Department or Districts, unless a permit is issued pursuant to the net improvement provisions for water quality provided by paragraph 373.414(1)(b), F.S., or unless otherwise specifically stated in the permit or authorization:

(a) noticed general environmental resource permits and wetland resource general permits issued under part IV of chapter 373, F.S.;

(b) standard general, individual, or conceptual approval environmental resource permits, and individual wetland resource permits issued under part IV of chapter 373, F.S.;

(c) management and storage of surface waters permits for agricultural activities or agricultural water management systems issued under part IV of chapter 373, F.S.;

(d) joint coastal permits issued under section 161.055 and part IV of chapter 373, F.S.; and

(e) individual and conceptual mitigation bank permits issued under part IV of chapter 373, F.S.;

(f) a written final order granting "certification" under one of the following siting acts by the Governor and Cabinet as the Siting Board, the Florida Land and Water Adjudicatory Commission, or by the Department of Environmental Protection, as appropriate:

(1) The Florida High-Speed Rail Transportation Act, sections 341.3201-.386, F.S. (1997), as amended (if the certification exempts the activity from the requirement to obtain a permit under part IV of chapter 373, F.S.--see 341.363(5), F.S.);

(2) The Florida Electric Power Plant Siting Act, sections 403.501-.539, F.S. (1997), as amended;

(3) The Transmission Line Siting Act, sections 403.52-.5365, F.S. (1997), as amended;

(4) The Statewide Multipurpose Hazardous Waste Facility Siting Act, sections 403.78-.7895, F.S. (1997), as amended;

(5) The Natural Gas Transmission Pipeline Siting Act, sections 403.9401-.9425, F.S. (1997), as amended; or

(6) The Florida Jobs Siting Act, sections 403.952-.973, F.S. (1997), as amended;

(g) consent decrees, orders, or agreements issued by the Department, a water management district created under section 373.069, F.S., or their delegatees under section 373.441, F.S., where such consent decree, order, or agreement authorizes activities which would otherwise require a permit under part IV of chapter 373, F.S.

2. Water quality certification will be considered waived for the following:

(a) activities, other than agricultural activities or agricultural water management systems, exempt by rule or statute from the requirement to obtain an environmental resource permit and a wetland resource permit under part IV of chapter 373, F.S., including activities that fall below permitting thresholds;

(b) agricultural activities or agricultural water management systems exempt by rule or statute from the requirement to obtain an environmental resource permit and a management and storage of surface waters permit under part IV of chapter 373, F.S., including activities that fall below permitting thresholds;

(c) activities permitted or authorized as described in Sections II. A. 1(a) through (g) when the permit or authorization is issued pursuant to the net improvement provisions for water quality provided by paragraph 373.414(1)(b), F.S.; and

(d) activities permitted or authorized in Sections II. A. 1(a) through (g) when the permit or authorization expressly waives water quality certification.

B. Denial of Water Quality Certification

Unless otherwise stated in the denial, the denial of the permit or authorization listed in Section II.A.1. of this agreement shall constitute denial of the state water quality certification. Where a final agency action on an application for a permit listed in Section II.A.1. of this agreement cannot be made within the time frames specified in Section II.C. of this agreement and the application otherwise does not meet the criteria for issuance of a permit, the Department or Districts may deny water quality certification for the activity described in the permit application in order to meet the federal time clock requirements discussed in Section II.C.

C. Time Frames

Once the Department or the District determines that an application for a permit listed under Section II.A.1. of this agreement is complete, it shall have 180 days to act on the certification, or the certification shall be considered waived.

D. Corps Nationwide General Permits

For nationwide permits which have received water quality certification by Florida, or where water quality certification has been waived, no individual water quality certification is necessary. For those Corps nationwide permits which were conditioned upon individual review of the water quality certification by the state of Florida, or which have been denied by Florida, state water quality certification for an individual proposed activity shall be dealt with in accordance with Section II. A-C.

III. COASTAL ZONE CONSISTENCY CONCURRENCE (CZCC)

In accordance with section 373.428, F.S., final agency action on a permit application submitted under part IV of chapter 373, F.S., that is subject to a consistency review under section 380.23, F.S., shall constitute the state's determination as to whether the activity is consistent with the federally approved Coastal Management Program. The agencies agree to the following procedures regarding coastal zone consistency determinations:

A. Determination of Concurrence

1. The following will constitute a finding of concurrence with the state's coastal zone management program for the activity authorized thereby:

(a) noticed general environmental resource permits and wetland resource general permits;

(b) standard general, individual, or conceptual approval environmental resource permits and individual wetland resource permits;

(c) joint coastal permits;

(d) individual and conceptual mitigation bank permits; and

(e) general, individual, or conceptual approval management and storage of surface waters permits.

B. Determination of Inconsistency

The denial of a permit listed in Section III. A. of this agreement shall constitute a finding that the activity is inconsistent with the state's coastal zone management program.

C. Time Frames

The time frame for a coastal zone concurrence begins upon a determination by the Department or the District that an application for a permit listed in Section III.A. of this agreement is complete. The coastal zone consistency decision must be made within 180 days after the application is considered complete by the Department or District and in accordance with

the procedures in 15 CFR 930.63. At the end of 180 days, if a determination of coastal zone consistency has not been made, concurrence will be conclusively presumed.

D. Corps Nationwide General Permits

For nationwide permits which have been determined to be consistent with the state's coastal zone management program, no individual coastal zone consistency concurrence determination is necessary. For those Corps nationwide permits where consistency with the state coastal zone management program is conditioned upon individual review of the coastal zone management consistency by the state of Florida, or has been denied by Florida, the final consistency concurrence determination for a proposed activity shall be made in accordance with Section III. A-C.

IV. PERMIT APPLICATION COORDINATION

A. Joint Application Forms

The parties have developed comprehensive, integrated joint permit application forms to initiate processing of permit applications required by each of the parties. For activities which require a federal dredge and fill permit and an environmental resource permit under part IV of chapter 373, F.S., that are not grandfathered under sections 373.414(11)-(16), F.S., and that are not within the Northwest Florida Water Management District, the "Joint Application for Environmental Resource Permit/Authorization to Use State Lands/Federal Dredge and Fill Permit or the Application for a Joint Coastal Permit will be used, as applicable. For activities which require a federal dredge and fill permit and a wetland resource permit under the grandfathering provisions of sections 373.414(11)-(16), F.S., or that are within the Northwest Florida Water Management District, the "Joint Application For Works in the Waters of Florida" and the "Notice of Intent to Construct Works Pursuant to a Wetland Resource General Permit" will be used.

B. Processing of Applications

Once a joint application, a request for permit modification, or a request for verification of exempt status is submitted by an applicant to the Department or District in accordance with the division of responsibilities in the operating agreement in effect between these entities, the responsible agency will, within five-working days of receipt, for activities in, on, or over wetlands and other surface waters, forward a copy of the application or request, including any Notice of Receipt of the Application, all application drawings, and any other information accompanying the application or request, to the Corps office with responsibility for processing the corresponding federal dredge and fill permit application. An application or request for permit modification sent to the Corps shall include an application processing number. In those cases where the Corps receives a copy of the joint application directly from an applicant, the Corps shall retain one copy of the application and all accompanying materials and send all other copies and materials to the appropriate office of the Department or District with the Corps processing number.

C. Distribution of Final Actions

The Department and Districts shall forward to the Corps copies of all final permitting actions for activities in, on or over wetlands and other surface waters, including copies of permits, permit modifications, notices of denial, application withdrawals, and exemption verification letters. The Corps shall forward to the Department or Districts, as appropriate, copies of notices of intent to issue standard permits, and final actions on standard permits.

V. MITIGATION BANKS

A. Joint Review Teams

Joint review of mitigation bank applications can serve to facilitate more efficient and effective review of such applications. At the request of one or more of the parties which has permitting responsibilities for a proposed mitigation bank, an interagency review team (Team) shall be formed, comprised, at a minimum, of representatives from the Corps, the Department, and the appropriate District.

B. Team Coordination

The Team shall coordinate the following:

1. Pre-application meetings involving the planning of mitigation banks;

2. Reviewing mitigation bank permit applications;

3. Sharing of relevant application information, including letters and staff reports;

4. Assigning the number and use of available mitigation credits, establishing mitigation service areas, and developing compatible mitigation bank permit conditions, to the extent possible under the applicable rule criteria of the parties;

5. Tracking the withdrawal of mitigation credits;

6. Conducting inspections of the bank; and

7. Determining success of the bank.

VI. COMPLIANCE AND ENFORCEMENT

A. Discovery of Potential Violations

The parties shall coordinate their enforcement activities in order to maximize limited agency resources. Upon discovery of an unauthorized activity in wetlands or other surface waters, the party discovering the activity will forward to the appropriate parties all correspondence and supporting materials concerning the unauthorized activity, including warning letters, notices of violation, cease and desist orders, consent orders and emergency orders. If the nature and magnitude of the violation warrants, the initial information provided should also include a case number, a map identifying the location of the site and a sketch of the project area.

B. Development of Settlement Proposals

For those settlement proposals that involve activities which may require authorization from other parties to this agreement, the parties agree to coordinate the development of settlement proposals to the extent possible.

C. Advisory Note

All consent orders and notices requiring corrective action shall advise the alleged violator that implementation of required corrective action does not relieve the alleged violator of the need to comply with applicable Federal, state or local laws, rules or ordinances.

VII. INTERAGENCY MEETINGS

A. Permitting Meetings

Each party agrees to host interagency permitting meetings on a rotating basis. The time and place of all the meetings will be addressed at the beginning of each calendar year. Because interagency meetings between the parties and other agencies can serve as a good forum to aid communication, exchange information, conduct pre-application meetings, or to resolve outstanding permitting issues, each party will endeavor to have a representative present at all interagency meetings.

B. Enforcement Meetings

Representatives of the parties' enforcement staff shall meet at least annually. If possible, the meeting should take place at the Department's Annual Enforcement Workshop. The meeting should address:

1. priorities for enforcement actions;

2. enforcement procedures;

3. status of particular enforcement cases identified by any party;

4. measures for increasing the public awareness of state and federal regulations; and

5. updated organizational structures, contacts, and related office information.

C. Cross Training

The parties agree to provide opportunities for cross training. This may take the form of: providing spaces in formally scheduled training courses; providing training sessions at each others' training events; providing personnel and opportunities for cross-training through developmental assignments; sharing interpretations of agency rules and procedures; and performing joint formal and informal training on other subjects of mutual interest.

VIII. COMPUTER LINK AND GIS

All parties agree that it is mutually beneficial to share GIS information and to be linked electronically for the purpose of exchanging information. Each party will participate in any future group whose purpose is to establish electronic connections between the parties. A list of Internet addresses will be developed and shared for each party's Environmental Resource Permit/Section 10 and Section 404 staff.

IX. DELEGATED PROGRAMS

Where the Department or Districts delegate to a local government all or a portion of the permitting or enforcement authority under part IV of chapter 373, F.S., the delegation agreement shall include a provision that the local government shall be subject to all the terms and conditions of this Agreement, although the Corps, with the concurrence of the delegating agency, may allow deviations from these terms and conditions.

X. EFFECTIVE DATE

This agreement shall take effect upon execution by all the parties.

XI. TERMINATION

Any party who wishes to terminate this agreement with or without cause shall provide 60 days prior written notice to the other parties. The notice submitted by the Corps shall be signed by the District Engineer of the Jacksonville or Mobile District. The notice submitted by a Water Management District shall be signed by the Chair of the Governing Board. The notice submitted by the Department shall be signed by the Secretary. By mutual agreement of all parties, the 60 day notice period may be reduced. Within 30 days of a notice of intent to terminate this agreement, all parties shall make good faith efforts to preserve the agreement by attempting to resolve any basis for the termination. This agreement also may be terminated by future agreements between the parties which expressly provide for supersedure of this agreement.

Virginia B. Wetherell
Secretary
Department of Environmental Protection

30 November 1998
Date

Joe R. Miller
Col., U.S. Army, District Engineer
U.S. Army Corps of Engineers

20 NOVEMBER 1998
Date

Lynetta Usher Griner
Chair, Governing Board
Suwannee River Water Management District

Date

J. Daniel Roach
Chair, Governing Board
St. Johns River Water Management District

Date

James L. Allen
Chair, Governing Board
Southwest Florida Water

Date 8/25/98

Frank Williamson, Jr.
Chair, Governing Board
South Florida Water Management District
Management District

Date

FINANCIAL RESPONSIBILITY MECHANISMS

Pursuant to Section 4.3.7, B.O.R., when an applicant proposes mitigation, the applicant shall provide proof of financial responsibility to conduct the mitigation activities; conduct any necessary management of the mitigation site; conduct monitoring of the mitigation and conduct any necessary corrective action indicated by the monitoring.

Mitigation may be established by the methods set forth in 4.3.7.6, B.O.R. Two of the methods include submission of a performance bond or irrevocable letter of credit. Attached are forms that will meet B.O.R. requirements.

06/02
Form 1105

STATE OF FLORIDA

PERFORMANCE BOND
TO DEMONSTRATE FINANCIAL ASSURANCE

Date Bond executed:_____

Effective date:_____

Principal:

_____
Legal Name and Business Address of Principal

_____

Type of Organization:
_____ Individual
_____ Joint Venture
_____ Partnership
_____ Corporation

State of Incorporation:_____

License and Registration: The Surety is licensed and registered in the State of Florida.

Surety(ies): _____
Name(s) and Business Address(es)

_____

_____

_____

Scope of coverage: Mitigation, maintenance and monitoring pursuant to the requirements of permit number _____ issued by the South Florida Water Management District ("District") including the plans approved by said permit.

Total penal sum of Bond:_____

Surety's Bond number:_____

Period of Coverage: This Bond shall continue to be effective until notification of final release by the District. The District shall provide this notification of final release within 30 days of determining the mitigation is successful in accordance with subsection 4.3.6, B.O.R., incorporated by reference into Rule 40E-4.091, Florida Administrative Code.

KNOW ALL PERSONS BY THESE PRESENTS, that we, the Principal and Surety(ies) hereto are firmly bound to the District in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

NOW, THEREFORE, the conditions of the obligation are such that if the Principal shall successfully complete mitigation, maintenance and monitoring to the satisfaction of the District which this Performance Bond ("Bond") guarantees, as required by District permit number _____ and the plans approved by such permit, as such permit and plans may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended,

Or, if the Principal shall provide alternate financial assurance, as specified in the administrative rules of the District, and obtain the District's written approval of such assurance, within 90 days after the date notice of cancellation is received by both the Principal and the District from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this Bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by the Director of the Natural Resource Management Department of the District that the Principal has been found in violation of the requirements of permit number _____ by failing to perform the mitigation, maintenance and monitoring activities for which this Bond guarantees performance, the Surety(ies) shall, within 60 days of receiving such notice, either perform such construction and implementation in accordance with the permit and other permit requirements and pursuant to the written directions of the District, or place the Bond amount guaranteed for the _____ mitigation, maintenance and monitoring (the total penal sum of this Bond) into a standby trust fund as directed by the District.

Upon notification by the Director of the Department of Resource Management of the District that the Principal has failed to provide alternate financial assurance and obtain written approval of such assurance from the District during the 90 days following receipt by both the Principal and the District of a notice of cancellation of the Bond, the Surety(ies) shall place funds in the amount guaranteed for the mitigation, maintenance and monitoring (the total penal sum of this Bond) into a standby trust fund as directed by the District.

The Surety(ies) hereby waive(s) notification of amendments to the _____ mitigation plans, permits, applicable laws, statutes, rules, and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this Bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum shown on the face of the Bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Principal may terminate this Bond by sending written notice to the Surety(ies); provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the Bond by the District.

Principal and Surety(ies) hereby agree to adjust the penal sum of the Bond every two years so that it guarantees increased or decreased mitigation, maintenance and monitoring cost provided that no decrease in the penal sum takes place without the written permission of the District.

IN WITNESS WHEREOF, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this Bond on behalf of the Principal and Surety(ies).

PRINCIPAL

_____
Signature

_____
Type Name and Title

CORPORATE SURETY(IES)
For each co-surety provide the following:

_____
Name and Address

_____
State of Incorporation

Liability Limit $_____

_____
Signature

_____
Type Name and Title

Corporate Seal

Corporate Seal

06/02
Form 1106

STATE OF FLORIDA

IRREVOCABLE LETTER OF CREDIT
TO DEMONSTRATE FINANCIAL ASSURANCE

South Florida Water Management District (District)
P.O. Box 24680
West Palm Beach, FL 33416-4680

_____
Address of Issuing Institution

Dear Sir or Madam:

We hereby establish our Irrevocable Letter of Credit No._____ ("Letter of Credit") in the District's favor, at the request and for the account of

_____ ("permittee")
Permittee's Name and Address

_____

up to the aggregate amount of_____
In Words
U.S. dollars $_____ , available upon presentation of:

1) your sight draft, bearing reference to this Letter of Credit No._____, and either:

   (a) a Certificate issued by the South Florida Water Management District in the form of Certificate I attached hereto and made a part hereof; or

   (b) a Certificate issued by the South Florida Water Management District in the form of Certificate II attached hereto and made a part hereof.

The issuer of this Letter of Credit has authority to issue letters of credit and the issuer's letter of credit operations are regulated and examined by a federal or Florida state agency. This letter of credit is established with a financial institution licensed in Florida.

The District is the sole beneficiary of this Letter of Credit. The original Letter of Credit shall be retained by the District.

This Letter of Credit may be drawn on to cover the following mitigation activities of the _____ as authorized and required by District Environmental Resource Permit number _____ (the "permit") as such permit may be amended and include all plans approved by such permit: _____.

06/02
Form 1106

This Letter of Credit is effective as of _____. This date is prior to the date the activity authorized by the permit commences. This Letter of Credit shall continue to be effective through _____ but such expiration date shall be automatically extended without amendment for additional periods of one year from the present or future expiration date until notification of final release by the District.

This Letter of Credit cannot be revoked, terminated or cancelled unless, at least 90 days before the cancellation date, the issuer notifies the District of its intent to revoke, terminate or cancel the Letter of Credit. In the event the District is so notified, any unused portion of the Letter of Credit shall be available to the District, upon the District's written request, for 90 days after the date of receipt of such notice by the District. If the District notifies _____ (permittee) that it does not intend to draw upon the Letter of Credit, then within 90 days of receipt by the _____ (permittee) of actual or constructive notice of revocation, termination or cancellation of this Letter of Credit or other actual or constructive notice of cancellation, the _____(permittee) shall provide an alternate financial responsibility mechanism which meets the requirements of subsections 4.3.7-4.3.7.9, of the Basis of Review for Environmental Resource Permit Applications.

Whenever this letter of credit is drawn on under and in compliance with the terms of this Letter of Credit, we shall duly honor such draft upon presentation to us, and we shall tender the draft directly to the District in accordance with your instructions.

We hereby waive notification of amendments to the _____ mitigation plans, permit, applicable laws, statutes, rules and regulations and agree that no such amendment shall in any way alleviate us of our obligation under this Letter of Credit.

_____

Signature(s), Title(s) of Official(s) of Issuing Institution Date

_____

_____

This Letter of Credit is subject to_____

_____

Insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce, " or " the Uniform Commercial Code".

06/02
Form 1106

CERTIFICATE I
TO
_____ BANK OF _____
IRREVOCABLE LETTER OF CREDIT NO._____

_____ Date:_____, 19__
Issuing Bank's Name and Address
_____
_____

_____
Permittee's Name and Address
_____

Ladies and Gentlemen:

The undersigned _____, the Director of the Natural Resource Management Division of the South Florida Water Management District (the "District"), or _____, the Director's designee, hereby certifies to _____ (the Permittee's Name "permittee") and _____, with reference to Irrevocable Letter of Credit No. Issuing Bank's Name _____, dated _____, (the "Letter of Credit"), issued by the Bank in favor of the District as follows:

1. The District has heretofore provided written notice by placing in the U.S. Mail to _____ of the District's present right to
Permittee's Name
draw upon the Letter of Credit in accordance with the provisions of that certain Environmental Resource Permit #_____, dated _____, issued by the District in favor of _____.
Permittee's Name

2. _____ has failed to comply with the terms and conditions of the Permit.
Permittee's Name

06/02
Form 1106

IN WITNESS WHEREOF, this Certificate has been duly executed and delivered on behalf of the District as of this _____ day of _____, _____.

SOUTH FLORIDA WATER
MANAGEMENT DISTRICT

By:_____
Name
Director, Natural Resource Management
Division or Designee

06/02
Form 1106

CERTIFICATE II
TO

_____
Issuing Bank's Name
IRREVOCABLE NONTRANSFERABLE
LETTER OF CREDIT NO._____

_____ Date:_____, ____
Issuing Bank's Name and Address
_____
_____

_____
Permittee's Name and Address
_____

Ladies and Gentlemen:

The undersigned _____, the Director of the Natural Resource Management Division of the South Florida Water Management District ("the District"), or _____ the Director's designee, hereby notifies _____ (the "Bank") of its
Issuing Bank's Name
intent to draw upon Irrevocable Letter of Credit No. _____, dated _____, (the "Letter of Credit"), issued by the Bank in favor of the District and certifies to the Bank and _____, as follows:
(Permittee's name)

1. The Bank has heretofore provided written notice to the District and _____
Permittee's Name
of the Bank's intent not to renew the Letter of Credit following the expiration date thereof.

2. The District has provided prior written notice by placing in the U.S. Mail to _____ that it intends to draw upon the Letter of Credit.
(Permittee's Name)

3. _____ has failed to provide the District with substitute Financial
Permittee's Name
Assurance.

06/02
Form 1106

IN WITNESS WHEREOF, this Certificate has been duly executed and delivered on behalf of the District as of this _____ day of _____, ____.

SOUTH FLORIDAWATER MANAGEMENT DISTRICT

By:_____
Name
Director, Natural Resource Management Division or Designee

OVERVIEW OF CONSERVATION EASEMENTS

I. What is a Conservation Easement?

A conservation easement is a document recorded in the public records by a property owner to restrict the type of activity which may be conducted in the conservation easement area. The purpose of a conservation easement is to retain certain property in its natural or mitigated condition. Section 704.06, F.S., which governs conservation easements, provides that a conservation easement "runs with the land." This means that the activity restrictions are automatically binding upon subsequent owners of an interest in the easement area once the easement is recorded.

A conservation easement may be granted to a governmental agency, charitable organization or trust whose purpose is to protect properties of environmental or historical significance. The easement allows the grantee the ability to enforce the activity restrictions on the property by injunction or other civil action and to enter the land at reasonable times to make inspections.

II. How Conservation Easements are used in the Regulatory Program

In the environmental permitting programs, the granting of conservation easements provides "reasonable assurances" that a mitigation or preservation area will be maintained in its natural state in perpetuity. Protection is accomplished by prohibiting certain activities within the easement area including, but not limited to, construction of buildings and roads, removal or destruction of vegetation, and activities detrimental to fish and wildlife habitat preservation.

Conservation easements are utilized in a variety of situations. They may be placed over: (1) wetland, upland buffer or upland compensation areas required to be protected and/or mitigated which (1) will be held in common ownership by a property owners association or (2) will be located within individual waterfront lots.

A conservation easement may be tailored to address particular issues unique to a project. For example, the easement may allow limited vegetation removal in the easement area to construct such "passive" recreational facilities as docks or boardwalks within waterfront lots, so as to allow a property owner to utilize riparian rights. Other passive uses which may be allowed are the construction of mulched walking or hiking trails. In cases of passive use, construction activities are still subject to any federal, state or local government requirements. Additionally, design plans must be submitted to the District for approval prior to construction.

SFWMD staff have developed four standard conservation easement forms which may be utilized by the regulated community in permit or enforcement proceedings. Copies of the four forms, "standard", "riparian right", "passive recreation" and "enforcement" are attached for your information.

Also attached is the "Joint Amended Deed of Conservation Easement and Agreement," which may be used with certain projects in only Broward County. You should confirm with either Broward County or SFWMD permitting staffs that your project qualifies for use of this form, before you submit it.

Before SFWMD accepts an easement on a conservation area of 100 acres or more, staff will require and examine boundary and title information.

It is important that any other person with interests in the property (*e.g.* a lien-holder, other easement-holders, etc.) subordinate their interests to the conservation easement. The easement form is attached to the permit, and the permit conditions require that an easement be submitted in substantial conformance with the form.

Standard form – June, 2000

DEED OF CONSERVATION EASEMENT

THIS DEED OF CONSERVATION EASEMENT is given this _____ day of_____, 20___, by _____
_____,
(address)_____
_____
("Grantor") to the South Florida Water Management District ("Grantee"). As used herein, the term Grantor shall include any and all heirs, successors or assigns of the Grantor, and all subsequent owners of the "Property" (as hereinafter defined) and the term Grantee shall include any successor or assignee of Grantee.

WITNESSETH

WHEREAS, the Grantor is the owner of certain lands situated in _____ County, Florida, and more specifically described in Exhibit A attached hereto and incorporated herein ("Property"); and

WHEREAS, the Grantor desires to construct (name of project)_____
_____("Project") at a site in _____ County, which is subject to the regulatory jurisdiction of South Florida Water Management District ("District"); and

WHEREAS, District Permit No. _____ ("Permit") authorizes certain activities which affect waters in or of the State of Florida; and

WHEREAS, this Permit requires that the Grantor preserve, enhance, restore and/or mitigate wetlands and/or uplands under the District's jurisdiction; and

WHEREAS, the Grantor, in consideration of the consent granted by the Permit, is agreeable to granting and securing to the Grantee a perpetual conservation easement as defined in Section 704.06, Florida Statutes, over the Property.

NOW, THEREFORE, in consideration of the issuance of the Permit to construct and operate the permitted activity, and as an inducement to Grantee in issuing the Permit, together with other good and valuable consideration, the adequacy and receipt of which is hereby acknowledged, Grantor hereby grants, creates, and establishes a perpetual conservation easement for and in favor of the Grantee upon the Property which shall run with the land and be binding upon the Grantor, and shall remain in full force and effect forever.

The scope, nature, and character of this conservation easement shall be as follows:

1. It is the purpose of this conservation easement to retain land or water areas in their natural, vegetative, hydrologic, scenic, open, agricultural or wooded condition and to retain such areas as suitable habitat for fish, plants or wildlife. Those wetland and/or upland areas included in the conservation easement which are to be enhanced or created pursuant to the Permit shall be retained and maintained in the enhanced or created conditions required by the Permit.

To carry out this purpose, the following rights are conveyed to Grantee by this easement:

a. To enter upon the Property at reasonable times with any necessary equipment or vehicles to enforce the rights herein granted in a manner that will not unreasonably interfere with the use and quiet enjoyment of the Property by Grantor at the time of such entry; and

b. To enjoin any activity on or use of the Property that is inconsistent with this conservation easement and to enforce the restoration of such areas or features of the Property that may be damaged by any inconsistent activity or use.

2. Except for restoration, creation, enhancement, maintenance and monitoring activities, or surface water management improvements, which are permitted or required by the Permit, the following activities are prohibited in or on the Property:

a. Construction or placing of buildings, roads, signs, billboards or other advertising, utilities, or other structures on or above the ground;

b. Dumping or placing of soil or other substance or material as landfill, or dumping or placing of trash, waste, or unsightly or offensive materials;

c. Removal or destruction of trees, shrubs, or other vegetation, except for the removal of exotic or nuisance vegetation in accordance with a District approved maintenance plan;

d. Excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance in such manner as to affect the surface;

e. Surface use except for purposes that permit the land or water area to remain in its natural condition;

f. Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation including, but not limited to, ditching, diking and fencing;

g. Acts or uses detrimental to such aforementioned retention of land or water areas;

h. Acts or uses which are detrimental to the preservation of any features or aspects of the Property having historical or archaeological significance.

3. Grantor reserves all rights as owner of the Property, including the right to engage in uses of the Property that are not prohibited herein and which are not inconsistent with any District rule, criteria, permit and the intent and purposes of this Conservation Easement.

4. No right of access by the general public to any portion of the Property is conveyed by this conservation easement.

5. Grantee shall not be responsible for any costs or liabilities related to the operation, upkeep or maintenance of the Property.

6. Grantor shall pay any and all real property taxes and assessments levied by competent authority on the Property.

7. Any costs incurred in enforcing, judicially or otherwise, the terms, provisions and restrictions of this conservation easement shall be borne by and recoverable against the nonprevailing party in such proceedings.

8. Enforcement of the terms, provisions and restrictions of this conservation easement shall be at the reasonable discretion of Grantee, and any forbearance on behalf of Grantee to exercise its rights hereunder in the event of any breach hereof by Grantor, shall not be deemed or construed to be a waiver of Grantee's rights hereunder.

9. Grantee will hold this conservation easement exclusively for conservation purposes. Grantee will not assign its rights and obligations under this conservation easement except to another organization qualified to hold such interests under the applicable state laws.

10. If any provision of this conservation easement or the application thereof to any person or circumstances is found to be invalid, the remainder of the provisions of this conservation easement shall not be affected thereby, as long as the purpose of the conservation easement is preserved.

11. Grantor shall insert the terms and restrictions of this conservation easement in any subsequent deed or other legal instrument by which Grantor divests itself of any interest in the Property.

12. All notices, consents, approvals or other communications hereunder shall be in writing and shall be deemed properly given if sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor-in-interest.

13. This conservation easement may be amended, altered, released or revoked only by written agreement between the parties hereto or their heirs, assigns or successors-in-interest, which shall be filed in the public records in _____ County.

TO HAVE AND TO HOLD unto Grantee forever. The covenants, terms, conditions, restrictions and purpose imposed with this conservation easement shall be binding upon Grantor, and shall continue as a servitude running in perpetuity with the Property.

Grantor hereby covenants with said Grantee that Grantor is lawfully seized of said Property in fee simple; that the Property is free and clear of all encumbrances that are inconsistent with the terms of this conservation easement and all mortgages have been joined or subordinated; that Grantor has good right and lawful authority to convey this conservation easement; and that it hereby fully warrants and defends the title to the conservation easement hereby conveyed against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, _____has hereunto set its authorized hand this_____day of_____ 20___.

Signed, sealed and delivered in our presence as witnesses:

_____,
A Florida corporation

_____
Print Name:

By: _____
Print Name: _____
Title: _____

_____
Print Name:

STATE OF FLORIDA

) ss:

COUNTY OF_____

On this _____ day of_____, 20___ before me, the undersigned notary public, personally appeared _____, personally known to me to be the person who subscribed to the foregoing instrument and did not take an oath, as the (position) _____, of (corporation) _____, a Florida corporation, and acknowledged that he executed the same on behalf of said corporation and that he was duly authorized to do so.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

NOTARY PUBLIC, STATE OF FLORIDA

_____
Print Name:

My Commission Expires:

DEED OF CONSERVATION EASEMENT

THIS DEED OF CONSERVATION EASEMENT is given this _____ day of_____,20___,by _____,
(address)_____
_____
("Grantor") to the South Florida Water Management District ("Grantee"). As used herein, the term Grantor shall include any and all heirs, successors or assigns of the Grantor, and all subsequent owners of the "Property" (as hereinafter defined) and the term Grantee shall include any successor or assignee of Grantee.

WITNESSETH

WHEREAS, the Grantor is the owner of certain lands situated in _____ County, Florida, and more specifically described in Exhibit A attached hereto and incorporated herein ("Property"); and

WHEREAS, the Grantor desires to construct (name of project)_____
_____("Project") at a site in _____ County, which is subject to the regulatory jurisdiction of South Florida Water Management District ("District"); and

WHEREAS, District Permit No. _____ ("Permit") authorizes certain activities which affect surface waters in or of the State of Florida; and

WHEREAS, this Permit requires that the Grantor preserve and/or mitigate wetlands under the District's jurisdiction; and

WHEREAS, the Grantor has developed and proposed as part of the permit conditions a conservation tract and maintenance buffer involving preservation of certain wetland and/or upland systems on the Property; and

WHEREAS, the Grantor, in consideration of the consent granted by the Permit, is agreeable to granting and securing to the Grantee a perpetual conservation easement as defined in Section 704.06, Florida Statutes, over the Property.

NOW, THEREFORE, in consideration of the issuance of the Permit to construct and operate the permitted activity, and as an inducement to Grantee in issuing the Permit, together with other good and valuable consideration, the adequacy and receipt of which is hereby acknowledged, Grantor hereby grants, creates, and establishes a perpetual conservation easement for and in favor of the Grantee upon the Property which shall run with the land and be binding upon the Grantor, and shall remain in full force and effect forever.

The scope, nature, and character of this conservation easement shall be as follows:

1. It is the purpose of this conservation easement to retain land or water areas in their natural, vegetative, hydrologic, scenic, open, agricultural or wooded condition and to retain such areas as suitable habitat for fish, plants or wildlife. Those wetland and/or upland areas included in the conservation easement which are to be enhanced or created pursuant to the Permit shall be retained and maintained in the enhanced or created conditions required by the Permit.

To carry out this purpose, the following rights are conveyed to Grantee by this easement:

a. To enter upon the Property at reasonable times with any necessary equipment or vehicles to enforce the rights herein granted in a manner that will not unreasonably interfere with the use and quiet enjoyment of the Property by Grantor at the time of such entry; and

b. To enjoin any activity on or use of the Property that is inconsistent with this conservation easement and to enforce the restoration of such areas or features of the Property that may be damaged by any inconsistent activity or use.

2. Except for restoration, creation, enhancement, maintenance and monitoring activities, or surface water management improvements, which are permitted or required by the permit, the following activities are prohibited in or on the Property:

a. Construction or placing of buildings, roads, signs, billboards or other advertising, utilities, or other structures on or above the ground;

b. Dumping or placing of soil or other substance or material as landfill, or dumping or placing of trash, waste, or unsightly or offensive materials;

c. Removal or destruction of trees, shrubs, or other vegetation, except for the removal of exotic vegetation in accordance with a District approved maintenance plan;

d. Excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance in such manner as to affect the surface;

e. Surface use except for purposes that permit the land or water area to remain in its natural condition;

f. Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation including, but not limited to, ditching, diking and fencing;

g. Acts or uses detrimental to such aforementioned retention of land or water areas;

h. Acts or uses which are detrimental to the preservation of any features or aspects of the Property having historical or archaeological significance.

3. Grantor reserves all rights as owner of the Property, including the right to engage in uses of the Property that are not prohibited herein and which are not inconsistent with any District rule, criteria, permit and the intent and purposes of this Conservation Easement.

4. Reservation of Riparian Rights. The following rights are specifically reserved to the Grantor, its heirs, successors and assigns:

a. To the extent provided by law, Grantor reserves all riparian rights which are consistent with the purpose of this statutory conservation easement. Notwithstanding, the Grantor specifically reserves the right to conduct limiting vegetation removal and clearing for the purpose of constructing boat docks and adjoining boardwalks. Grantor shall minimize and avoid, to the fullest extent possible, impact to any wetland or buffer areas within the Conservation Easement Area. This reservation does not release the Grantor from the duty of obtaining any necessary federal, state or local government permit authorizations or sovereign land approvals for construction of the docks or boardwalks.

b. Plans for the construction of boardwalks to a boat dock shall be reviewed and approved by the Grantee prior to any construction.

c. Since there are navigable waters immediately adjacent to the conservation area, boats and other similar surface uses are permissible within the navigable areas of the conservation area.

5. No right of access by the general public to any portion of the Property is conveyed by this conservation easement.

6. Grantee shall not be responsible for any costs or liabilities related to the operation, upkeep or maintenance of the Property.

7. Grantor shall pay any and all real property taxes and assessments levied by competent authority on the Property.

8. Any costs incurred in enforcing, judicially or otherwise, the terms, provisions and restrictions of this conservation easement shall be borne by and recoverable against the nonprevailing party in such proceedings.

9. Enforcement of the terms, provisions and restrictions of this conservation easement shall be at the reasonable discretion of Grantee, and any forbearance on behalf of Grantee to exercise its rights hereunder in the event of any breach hereof by Grantor, shall not be deemed or construed to be a waiver of Grantee's rights hereunder.

10. Grantee will hold this conservation easement exclusively for conservation purposes. Grantee will not assign its rights and obligations under this conservation easement except to another organization qualified to hold such interests under the applicable state laws.

11. If any provision of this conservation easement or the application thereof to any person or circumstances is found to be invalid, the remainder of the provisions of this conservation easement shall not be affected thereby, as long as the purpose of the conservation easement is preserved.

12. All notices, consents, approvals or other communications hereunder shall be in writing and shall be deemed properly given if sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor-in-interest.

13. This conservation easement may be amended, altered, released or revoked only by written agreement between the parties hereto or their heirs, assigns or successors-in-interest, which shall be filed in the public records in _____ County.

TO HAVE AND TO HOLD unto Grantee forever. The covenants, terms, conditions, restrictions and purpose imposed with this conservation easement shall be binding upon Grantor, and shall continue as a servitude running in perpetuity with the Property.

Grantor hereby covenants with said Grantee that Grantor is lawfully seized of said Property in fee simple; that the Property is free and clear of all encumbrances that are inconsistent with the terms of this conservation easement; that Grantor has good right and lawful authority to convey this conservation easement; and that it hereby fully warrants and defends the title to the conservation easement hereby conveyed against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, _____has hereunto set its authorized hand this_____day of_____ 20___.

Signed, sealed and delivered in our presence as witnesses:

_____,
A Florida corporation

_____
Print Name:

By: _____
Print Name: _____
Title: _____

_____
Print Name:

STATE OF FLORIDA

) ss:

COUNTY OF_____

On this _____ day of_____, 20___ before me, the undersigned notary public, personally appeared _____ , personally known to me to be the person who subscribed to the foregoing instrument and did not take an oath, as the (position) _____ , of (corporation) _____, a Florida corporation, and acknowledged that he executed the same on behalf of said corporation and that he was duly authorized to do so.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

NOTARY PUBLIC, STATE OF FLORIDA

_____

Print Name:

My Commission Expires:

South Florida Water Management District
Legal Form Approved: SFWMD – June, 2000

(This page reserved.)

DEED OF CONSERVATION EASEMENT

THIS DEED OF CONSERVATION EASEMENT is given this _____ day of_____, 20___, by_____
_____,
(address)_____
_____
("Grantor") to the South Florida Water Management District ("Grantee"). As used herein, the term Grantor shall include any and all heirs, successors or assigns of the Grantor, and all subsequent owners of the "Property" (as hereinafter defined) and the term Grantee shall include any successor or assignee of Grantee.

WITNESSETH

WHEREAS, the Grantor is the owner of certain lands situated in _____ County, Florida, and more specifically described in Exhibit A attached hereto and incorporated herein ("Property"); and

WHEREAS, the Grantor desires to construct (name of project)_____
_____("Project") at a site in _____ County, which is subject to the regulatory jurisdiction of South Florida Water Management District ("District"); and

WHEREAS, District Permit No. _____ ("Permit") authorizes certain activities which affect surface waters in or of the State of Florida; and

WHEREAS, this Permit requires that the Grantor preserve and/or mitigate wetlands under the District's jurisdiction; and

WHEREAS, the Grantor has developed and proposed as part of the permit conditions a conservation tract and maintenance buffer involving preservation of certain wetland and/or upland systems on the Property; and

WHEREAS, the Grantor, in consideration of the consent granted by the Permit, is agreeable to granting and securing to the Grantee a perpetual conservation easement as defined in Section 704.06, Florida Statutes, over the Property.

NOW, THEREFORE, in consideration of the issuance of the Permit to construct and operate the permitted activity, and as an inducement to Grantee in issuing the Permit, together with other good and valuable consideration, the adequacy and receipt of which is hereby acknowledged, Grantor hereby grants, creates, and establishes a perpetual conservation easement for and in favor of the Grantee upon the Property which shall run with the land and be binding upon the Grantor, and shall remain in full force and effect forever.

The scope, nature, and character of this conservation easement shall be as follows:

1. It is the purpose of this conservation easement to retain land or water areas in their natural, vegetative, hydrologic, scenic, open, agricultural or wooded condition and to retain such areas as suitable habitat for fish, plants or wildlife. Those wetland and/or upland areas included in the conservation easement which are to be enhanced or created pursuant to the Permit shall be retained and maintained in the enhanced or created conditions required by the Permit.

To carry out this purpose, the following rights are conveyed to Grantee by this easement:

a. To enter upon the Property at reasonable times with any necessary equipment or vehicles to enforce the rights herein granted in a manner that will not unreasonably interfere with the use and quiet enjoyment of the Property by Grantor at the time of such entry; and

b. To enjoin any activity on or use of the Property that is inconsistent with this conservation easement and to enforce the restoration of such areas or features of the Property that may be damaged by any inconsistent activity or use.

2. Except for restoration, creation, enhancement, maintenance and monitoring activities, or surface water management improvements, which are permitted or required by the Permit, the following activities are prohibited in or on the Property:

a. Construction or placing of buildings, roads, signs, billboards or other advertising, utilities, or other structures on or above the ground;

b. Dumping or placing of soil or other substance or material as landfill, or dumping or placing of trash, waste, or unsightly or offensive materials;

c. Removal or destruction of trees, shrubs, or other vegetation, except for the removal of exotic or nuisance vegetation in accordance with a District approved maintenance plan;

d. Excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance in such manner as to affect the surface;

e. Surface use except for purposes that permit the land or water area to remain in its natural condition;

f. Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation including, but not limited to, ditching, diking and fencing;

g. Acts or uses detrimental to such aforementioned retention of land or water areas;

h. Acts or uses which are detrimental to the preservation of any features or aspects of the Property having historical or archaeological significance.

3. Passive Recreational Facilities. Grantor reserves all rights as owner of the Property, including the right to engage in uses of the Property that are not prohibited herein and that are not inconsistent with any District rule, criteria, the Permit and the intent and purposes of this Conservation Easement. Passive recreational uses that are not contrary to the purpose of this conservation easement may be permitted upon written approval by the District.

a. The Grantor may conduct limited land clearing for the purpose of constructing such pervious facilities as docks, boardwalks or mulched walking trails. Grantor shall submit plans for the construction of the proposed facilities to the District for review and written approval prior to construction.

b. The construction and use of the approved passive recreational facilities shall be subject to the following conditions:

i. Grantor shall minimize and avoid, to the fullest extent possible, impact to any wetland or upland buffer areas within the Conservation Easement Area and shall avoid materially diverting the direction of the natural surface water flow in such area;

ii. Such facilities and improvements shall be constructed and maintained utilizing Best Management Practices;

iiiii. Adequate containers for litter disposal shall be situated adjacent to such facilities and improvements and periodic inspections shall be instituted by the maintenance entity, to clean any litter from the area surrounding the facilities and improvements;

iv. This conservation easement shall not constitute permit authorization for the construction and operation of the passive recreational facilities. Any such work shall be subject to all applicable federal, state, District or local permitting requirements.

4. No right of access by the general public to any portion of the Property is conveyed by this conservation easement.

5. Grantee shall not be responsible for any costs or liabilities related to the operation, upkeep or maintenance of the Property.

6. Grantor shall pay any and all real property taxes and assessments levied by competent authority on the Property.

7. Any costs incurred in enforcing, judicially or otherwise, the terms, provisions and restrictions of this conservation easement shall be borne by and recoverable against the nonprevailing party in such proceedings.

8. Enforcement of the terms, provisions and restrictions of this conservation easement shall be at the reasonable discretion of Grantee, and any forbearance on behalf of Grantee to exercise its rights hereunder in the event of any breach hereof by Grantor, shall not be deemed or construed to be a waiver of Grantee's rights hereunder.

9. Grantee will hold this conservation easement exclusively for conservation purposes. Grantee will not assign its rights and obligations under this conservation easement except to another organization qualified to hold such interests under the applicable state laws.

10. If any provision of this conservation easement or the application thereof to any person or circumstances is found to be invalid, the remainder of the provisions of this conservation easement shall not be affected thereby, as long as the purpose of the conservation easement is preserved.

11. All notices, consents, approvals or other communications hereunder shall be in writing and shall be deemed properly given if sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor-in-interest.

12. This conservation easement may be amended, altered, released or revoked only by written agreement between the parties hereto or their heirs, assigns or successors-in-interest, which shall be filed in the public records in _____ County.

TO HAVE AND TO HOLD unto Grantee forever. The covenants, terms, conditions, restrictions and purpose imposed with this conservation easement shall be binding upon Grantor, and shall continue as a servitude running in perpetuity with the Property.

Grantor hereby covenants with said Grantee that Grantor is lawfully seized of said Property in fee simple; that the Property is free and clear of all encumbrances that are inconsistent with the terms of his conservation easement and all mortgages have been joined or subordinated; that Grantor has good right and lawful authority to convey this conservation easement; and that it hereby fully warrants and defends the title to the conservation easement hereby conveyed against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, _____ has hereunto set its authorized hand this_____day of_____ 20___.

Signed, sealed and delivered
in our presence as witnesses:

_____,
A Florida corporation

_____
Print Name:

By: _____
Print Name: _____
Title: _____

_____
Print Name:

STATE OF FLORIDA

) ss:

COUNTY OF_____

On this _____ day of_____, 20___ before me, the undersigned notary public, personally appeared _____ , personally known to me to be the person who subscribed to the foregoing instrument and did not take an oath, as the (position) _____ , of (corporation) _____, a Florida corporation, and acknowledged that he executed the same on behalf of said corporation and that he was duly authorized to do so.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

NOTARY PUBLIC, STATE OF FLORIDA

_____
Print Name:

My Commission Expires:

South Florida Water Management District
Legal Form Approved: SFWMD – June, 2000

(This page reserved.)

DEED OF CONSERVATION EASEMENT

THIS DEED OF CONSERVATION EASEMENT is given this _____ day of _____ , 20___, by _____ , (address) _____

_____

("Grantor") to the South Florida Water Management District ("Grantee"). As used herein, the term Grantor shall include any and all heirs, successors or assigns of the Grantor, and all subsequent owners of the "Property" (as hereinafter defined) and the term Grantee shall include any successor or assignee of Grantee.

WITNESSETH

WHEREAS, the Grantor is the owner of certain lands situated in _____ County, Florida, and more specifically described in Exhibit A attached hereto and incorporated herein by reference ("Property"); and

WHEREAS, the Grantor has conducted activities at a site in _____ County, which are subject to the regulatory jurisdiction of South Florida Water Management District ("District"); and

WHEREAS, under the District's regulatory authority, Grantor is required to preserve and/or mitigate wetlands and/or upland systems within the Property; and

WHEREAS, the Grantor is agreeable to granting and securing to the Grantee a perpetual conservation easement as defined in Section 704.06, Florida Statutes, over the Property, in consideration of the District's regulatory consent;

NOW, THEREFORE, Grantor hereby grants, creates, and establishes a perpetual conservation easement for the Grantee upon the Property which shall run with the land and be binding upon the Grantor, its heirs, successors and assigns ("hereinafter Grantor"), and shall remain in full force and effect forever.

The scope, nature, and character of this conservation easement shall be as follows:

1. It is the purpose of this conservation easement to retain land or water areas in their natural, vegetative, hydrologic, scenic, open, agricultural or wooded condition and to retain such areas as suitable habitat for fish, plants or wildlife.

To carry out this purpose, the following rights are conveyed to Grantee by this easement:

a. To enter upon the Property at reasonable times with any necessary equipment or vehicles to enforce the rights herein granted in a manner that will not unreasonably interfere with the use and quiet enjoyment of the Property by Grantor at the time of such entry; and

b. To enjoin any activity on or use of the Property that is inconsistent with this conservation easement and to enforce the restoration of such areas or features of the Property that may be damaged by any inconsistent activity or use.

2. The following activities are prohibited in or on the Property:

a. Construction or placing of buildings, roads, signs, billboards or other advertising, utilities, or other structures on or above the ground;

b. Dumping or placing of soil or other substance or material as landfill, or dumping or placing of trash, waste, or unsightly or offensive materials;

c. Removal or destruction of trees, shrubs, or other vegetation, except for the removal of exotic vegetation in accordance with a District approved maintenance plan;

d. Excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance in such manner as to affect the surface;

e. Surface use except for purposes that permit the land or water area to remain in its natural condition;

f. Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation including, but not limited to, ditching, diking and fencing;

g. Acts or uses detrimental to such aforementioned retention of land or water areas;

h. Acts or uses within Grantor's regulatory jurisdiction which are detrimental to the preservation of any features or aspects of the Property having historical or archaeological significance.

3. Grantor reserves all rights as owner of the Property, including the right to engage in uses of the Property that are not prohibited herein and which are not inconsistent with any District rule, criteria, permit and the intent and purposes of this Conservation Easement.

4. No right of access by the general public to any portion of the Property is conveyed by this conservation easement.

5. Grantee shall not be responsible for any costs or liabilities related to the operation, upkeep or maintenance of the Property.

6. Grantor shall pay any and all real property taxes and assessments levied by competent authority on the Property.

7. Any costs incurred in enforcing, judicially or otherwise, the terms, provisions and restrictions of this conservation easement shall be borne by and recoverable against the non-prevailing party in such proceedings.

8. Enforcement of the terms, provisions and restrictions of this conservation easement shall be at the reasonable discretion of Grantee, and any forbearance on behalf of Grantee to exercise its rights hereunder in the event of any breach hereof by Grantor, shall not be deemed or construed to be a waiver of Grantee's rights hereunder.

9. Grantee will hold this conservation easement exclusively for conservation purposes. Grantee will not assign its rights and obligations under this conservation easement except to another organization qualified to hold such interests under the applicable state laws.

10. If any provision of this conservation easement or the application thereof to any person or circumstances is found to be invalid, the remainder of the provisions of this conservation easement shall not be affected thereby, as long as the purpose of the conservation easement is preserved.

11. All notices, consents, approvals or other communications hereunder shall be in writing and shall be deemed properly given if sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor-in-interest.

12. The terms, conditions, restrictions and purpose of this conservation easement shall be inserted by Grantor in any subsequent deed or other legal instrument by which Grantor divests itself of any interest in the Property. Any future holder of the Grantor's interest in the Property shall be notified in writing by Grantor of this conservation easement.

13. This conservation easement may be amended, altered, released or revoked only by written agreement between the parties hereto or their heirs, assigns or successors-in-interest, which shall be filed in the public records in _____ County.

TO HAVE AND TO HOLD unto Grantee forever. The covenants, terms, conditions, restrictions and purpose imposed with this conservation easement shall be binding upon Grantor, and shall continue as a servitude running in perpetuity with the Property.

Grantor hereby covenants with said Grantee that Grantor is lawfully seized of said Property in fee simple; that the Property is free and clear of all encumbrances; that Grantor has good right and lawful authority to convey this conservation easement; and that it hereby fully warrants and defends the title to the conservation easement hereby conveyed against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, _____ has hereunto set its authorized hand this _____ day of _____ 20____.

Signed, sealed and delivered
in our presence as witnesses:

_____
A Florida corporation

_____
Print Name:

By: _____
Print Name: _____
Title: _____

_____
Print Name:

STATE OF FLORIDA

) SS:

COUNTY OF _____

On this _____ day of _____, 20____ before me, the undersigned notary public, personally appeared _____, personally known to me to be the person who subscribed to the foregoing instrument and did not take an oath, as the (position) _____, of (corporation) _____, a Florida corporation, and acknowledged that he executed the same on behalf of said corporation and that he was duly authorized to do so.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

NOTARY PUBLIC, STATE OF FLORIDA

_____
Print Name:

My Commission Expires:

South Florida Water Management District
Legal Form Approved: SFWMD – June, 2000

Document prepared by:

Return recorded document to:
Department of Planning & Environmental Protection
Biological Resources
218 S.W. 1 Avenue
Fort Lauderdale, FL 33301

JOINT AMENDED DEED OF CONSERVATION EASEMENT AND AGREEMENT

THIS AMENDED DEED OF CONSERVATION EASEMENT ("Amended Conservation Easement") is given this _____ day of _____, 20____, by _____, (address)_____ _____("Grantor") to the South Florida Water Management District, 3301 Gun Club Road, West Palm Beach, Florida 33406, and Broward County, a political subdivision of the state of Florida, their successors and assigns (collectively referred to as "Grantees"), whose post office is 115 South Andrews Avenue, Suite 423, Fort Lauderdale, Florida 33301.

W I T N E S S E T H

WHEREAS, the Grantor is the owner of certain lands situated in Broward County, Florida, and more specifically described in Exhibit A, attached hereto and incorporated herein by reference and referred to herein as the "Property"; and

WHEREAS, the Grantor has constructed (name of project)_____ _____ ("Project") on the Property, which Project is subject to regulatory jurisdiction of the South Florida Water Management District ("District") and the Broward County Department of Planning and Environmental Protection ("DPEP"); and

WHEREAS, DPEP License No. _____ ("DPEP License") as may be modified or reissued and District Permit No. _____ ("District Permit") as may be modified authorizes certain activities that may impact wetlands or may require the preservation of wetlands on the Project site; and

WHEREAS, the Grantor has developed and proposed as part of the license and permit conditions a conservation tract, and buffers, as described in Exhibit B attached hereto and incorporated by reference, involving creation, restoration, enhancement and/or preservation of the wetland and/or uplands systems ("Conservation Area"); and

WHEREAS, the Grantor, in consideration of the consent granted by the DPEP License and District Permit, is agreeable to granting and securing to the Grantees a perpetual conservation easement as defined in Section 704.06, Florida Statutes (2000), as amended, over the Conservation Area; and

WHEREAS Broward County previously accepted a conservation easement from Grantor which was recorded in Official Record Book _____, Page_____, of the Official Records of Broward County, Florida ("Conservation Easement"); and

WHEREAS, Grantor and Grantees desire to repeal the Conservation Easement and enter into this Amended Conservation Easement.

NOW, THEREFORE, in consideration of the issuance of the DPEP License and District Permit to construct and operate the permitted activity, Grantor hereby grants, creates, and establishes a perpetual Amended Conservation Easement for the Grantees upon the Conservation Area which shall run with the property as described in Exhibits A and B, and be binding upon the Grantor, its heirs, successors or assigns (hereinafter "Grantor"), and shall remain in full force and effect forever.

The scope, nature, and character of this Amended Conservation Easement shall be as follows:

1. It is the purpose of the Amended Conservation Easement to retain land and/or water of the Conservation Area in their natural, vegetative, hydrologic, scenic, open, agricultural or wooded condition and to retain such areas as suitable habitat for fish, plants or wildlife. It is the purpose and intent of this Amended Conservation Easement to assure that the Conservation Area will be retained and maintained forever predominantly in the vegetative and hydrologic condition as specified in the DPEP License and District Permit. The Conservation Area shall be maintained forever by the Grantor, its heirs, successors, or assigns, in the enhanced, restored, preserved and/or created conditions required by the DPEP License and District Permit. To carry out this purpose, the following rights are conveyed to Grantees by this easement:

   (a) To enter upon the Conservation Area (Exhibit B) in a reasonable manner and at reasonable times with any necessary equipment or vehicles to ensure compliance and to enforce the rights herein granted, and to cross such portions of the Property (Exhibit A) as reasonably necessary to exercise such right.

   (b) To enjoin any activity on or use of the Conservation Area that is inconsistent with this Amended Conservation Easement and to enforce the restoration of such areas or features of the Conservation Area that may be damaged by any inconsistent activity and/or use. Grantees shall be entitled to recover the cost

of restoring the land to the natural vegetative, hydrologic, scenic, open, agricultural or wooded condition existing at the time of execution of this Amended Conservation Easement or to the vegetative and hydrologic condition required by the aforementioned DPEP License and District Permit, whichever enhancement is the most environmentally desirable to Grantees. These remedies are in addition to any other remedy, fine, or penalty which may be applicable under the most recent versions of Chapter 27, Broward County Code of Ordinances, Chapter 40E-4, F.A.C., et. seq., Chapter 373, Florida Statutes, or otherwise which may be available by law.

2. Except for the restoration, creation, enhancement, maintenance, and monitoring activities and other activities and improvements related to the Conservation Area that are permitted or required by the DPEP License and the District Permit, the following activities are prohibited in or on the Conservation Area, to wit:

   (a) Construction or placing of buildings, roads, signs, billboards or other advertising, utilities, or other structures on or above the ground;

   (b) Dumping or placing of soil or other substance or material as landfill, or dumping or placing of trash, waste, or unsightly or offensive materials;

   (c) Removal or destruction of trees, shrubs, or other vegetation, except for the removal of nuisance and exotic vegetation as approved by DPEP and District;

   (d) Excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substance in such manner as to affect the surface;

   (e) Surface use except for purposes that permit the land or water area to remain in its vegetative and hydrologic condition as specified in the DPEP License and District Permit;

   (f) Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation; including but not limited to ditching, diking, and fencing;

   (g) Acts or uses detrimental to said aforementioned retention and maintenance of land or water areas; and

   (h) Acts or uses detrimental to the preservation of any features or aspects of the Conservation Area having historical, archeological or cultural significance.

3. Grantor reserves all rights as owner of the Conservation Area, including the right to engage in uses of the Conservation Area that are not prohibited

herein and which are not inconsistent with the intent and purpose of this Conservation Easement.

4. No right of access by the general public to any portion of the Conservation Area is conveyed by this Amended Conservation Easement.

5. Grantees shall not be responsible for any costs or liabilities related to the operation, upkeep, and maintenance of the Conservation Area and Grantor does hereby indemnify and hold harmless the Grantees from the same.

6. Grantor shall pay any and all real property taxes and assessments levied by competent authority on the Conservation Area.

7. The terms and conditions of this Amended Conservation Easement may be enforced by the Grantees by injunctive relief and other available remedies. In any action in which the Grantees prevail, the Grantees shall be entitled to recover the cost of restoring the Conservation Area to the natural vegetative, hydrologic, scenic, open, agricultural or wooded condition existing at the time of execution of this Amended Conservation Easement or to the vegetative and hydrologic condition required by the aforementioned DPEP License and District Permit. Venue for said actions shall be exclusively in the Seventeenth Judicial Circuit, in and for Broward County, Florida. These remedies are in addition to any other remedy, fine or penalty which may be applicable under the most recent versions of Chapter 27 of the Broward County Code of Ordinances, Chapter 40E-4, F.A.C., et. seq., Chapter 373, Florida Statutes, or as otherwise provided by law.

8. Enforcement of the terms and provisions of the Amended Conservation Easement shall be at the reasonable discretion of Grantees, and any forbearance on behalf of Grantees to exercise their rights hereunder in the event of any breach hereof by Grantor, shall not be deemed or construed to be a waiver of Grantees' rights hereunder.

9. Grantees will hold this Amended Conservation Easement exclusively for conservation purposes. Grantees will not assign their rights and obligations under this Amended Conservation Easement except to another organization qualified to hold such interests under the applicable state laws.

10. Grantor's obligation to retain and maintain the Conservation Area forever predominantly in the vegetative and hydrologic condition as herein specified shall run with the property described in Exhibits A and B, and shall be binding upon the Grantor, its heirs, successors or assigns and shall inure to the benefit of the Grantees, and their successors and assigns as more particularly set forth herein. The intent of this Amended Conservation Easement is that the responsibilities and liabilities associated with the Amended Conservation Easement shall run with the

property described in Exhibits A and B, and be binding upon the fee simple title holder of the property as required hereunder.

11. If any provision of this Amended Conservation Easement or the application thereof to any person or circumstances is found to be invalid, the remainder of the provisions of this Amended Conservation Easement shall not be affected thereby, as long as the purpose of the Amended Conservation Easement is preserved.

12. All notices, consents, approvals or other communications hereunder shall be in writing and shall be deemed properly given if sent by United States certified mail, return receipt requested, addressed to the appropriate party or successor-in-interest.

13. The terms, conditions, restrictions and purpose of this Amended Conservation Easement shall be inserted by Grantor in any subsequent deed or other legal instrument by which Grantor divests itself of any interest in the property described in Exhibit A or B. Any future holder of the Grantor's interest in the property described in Exhibit A or B shall be notified in writing by Grantor of this Amended Conservation Easement.

14. This Amended Conservation Easement may be amended, altered, released, or revoked only by written agreement between the parties hereto or their heirs, assigns and successors-in-interest, which shall be filed in the Public Records of Broward County.

TO HAVE AND TO HOLD unto Grantees, their successors and assigns forever. This Amended Conservation Easement shall be recorded in the Public Records of Broward County and the covenants, terms, conditions, restrictions and purpose imposed with this Amended Conservation Easement shall not only be binding upon Grantor, but also its agents, heirs, successors and assigns, and shall continue as a servitude running in perpetuity with the property described in Exhibits A and B.

Grantor hereby covenants with said Grantees that Grantor is lawfully seized of said Conservation Area in fee simple; that the Conservation Area is free and clear of all encumbrances that are inconsistent with the terms of this Amended Conservation Easement and all mortgages have been joined or subordinated; that Grantor has good right and lawful authority to convey this Amended Conservation Easement; and that it hereby fully warrants and defends the title to this Amended Conservation Easement hereby conveyed against the lawful claims of all persons whomsoever.

(Intentionally left blank)

IN WITNESS WHEREOF, _____ has hereunto set its authorized hand this ___ day of _____, 20_____.

Signed, sealed and delivered

in our presence as witnesses:

By _____

Print Name_____

_____

Grantor

By_____

Print Name_____

Title_____

By_____
Print Name_____

ACKNOWLEDGMENT - CORPORATION

STATE OF _____
COUNTY OF_____

On this ____ day of _____, 20_____ before me, the undersigned Notary Public, personally appeared _____, personally known to me or who has produced _____ as identification and is the person who subscribed to the foregoing instrument and who did/did not take an oath, as the (position) _____, of (corporation) ____ _____, a Florida corporation, and acknowledged that he/she executed the same on behalf of said corporation and that he/she was duly authorized to do so.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

NOTARY PUBLIC

_____
Signature of Notary Public

_____
Print, type, or stamp Commissioned Name
Affix Seal Below

Mortgage Subordination

By signing below mortgage holder agrees the lien of any mortgage on the real property described in Exhibit "A" and Exhibit "B" shall be subordinate to the subject conservation easement.

MORTGAGEE

_____
A _____ Banking Corporation

Signed, sealed and delivered
in our presence as witnesses:

By_____ By:_____
Print name:_____ Print Name:_____
Title: _____
By_____ Address:_____
Print name:_____

(CORPORATE SEAL) _____ day of _____, 20_____

ACKNOWLEDGMENT - CORPORATION

STATE OF _____
COUNTY OF_____

On this ____ day of _____, 20_____ before me, the undersigned Notary Public, personally appeared _____, personally known to me or who has produced _____ as identification and is the person who subscribed to the foregoing instrument and who did/did not take an oath, as the (position) _____, of (corporation) ____ _____, a Florida corporation, and acknowledged that he/she executed the same on behalf of said corporation and that he/she was duly authorized to do so.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

NOTARY PUBLIC

_____
Signature of Notary Public

_____
Print, type, or stamp Commissioned Name
Affix Seal Below

ACCEPTANCE BY BROWARD COUNTY

The Broward County Board of County Commissioners hereby accepts this Conservation Easement for DPEP License No. _____.

ATTEST:

BROWARD COUNTY, through its
BOARD OF COUNTY COMMISSIONERS

_____
County Administrator and
Ex-Officio Clerk of the
Board of County Commissioners of
Broward County, Florida

By_____

____ day of _____, 20____

Approved as to form by
Office of County Attorney
Broward County, Florida
EDWARD A. DION, County Attorney
Governmental Center, Suite 423
115 South Andrews Avenue
Fort Lauderdale, Florida 33301
Telephone: (954) 357-7600
Telecopier: (954) 357-6968

By_____
Assistant County Attorney

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Legal Form approved _____

Print Name _____

Date _____

GRANDFATHERING DETERMINATIONS PURSUANT TO SECTIONS 373.414(11)-(14), FLORIDA STATUTES

I. WHAT IS GRANDFATHERING?

On October 3, 1995, rules were promulgated to implement the legislative changes to Chapter 373 of Florida Statutes (F.S.) required by the Environmental Reorganization Act of 1993 (the Act). When the legislature implemented the Act, it decided that in certain cases a permittee or applicant should be able to choose to be reviewed under the old rules. This is commonly referred to as grandfathering. Provisions pertaining to grandfathering are set forth in §§373.414(11)-(14), F.S.

The Act provides a statutory definition of wetlands to be used statewide. This definition was used to develop a delineation methodology by which agency staff demarcate the limit of surface waters and wetlands subject to regulation under the ERP program. Wetland delineation is covered in §373.4211, F.S. However, if a project already has an identified and approved wetland delineation, a valid jurisdictional declaratory statement or determination, it may, in certain cases, be appropriate to exempt the project from the delineation methodology set forth in §373.4211, F.S.

Grandfathering provisions may apply to projects which have been previously permitted, projects which were exempt from the need for a certain permit, projects with identified and approved wetland delineations, projects with a valid jurisdictional declaratory statement or determination, or projects with an application pending or complete before a certain date.

The information set forth below will assist you in determining if the application of one of the grandfathering provisions is appropriate for a specific project.

II. PROJECTS WITH A WETLAND RESOURCE (WR) PERMIT OR EXEMPT FROM THE NEED FOR A WR PERMIT (§373.414(11), F.S.)

The following questions should be asked to determine the applicability of §373.414(11)(a), F.S.:

		Yes	No
1.	Was a wetland resource permit issued pursuant to §§403.91-403.929, F.S.?	☐	☐
	or		
	Were the activities exempt from the need for a wetland resource permit?	☐	☐
	and		
2.	Would the activities have required a surface water management permit prior to October 3, 1995?	☐	☐

The answer to question 1 must be yes and the answer to question 2 must be no for the grandfathering provisions of §373.414(11)(a), F.S., to apply.

WHAT DOES THIS MEAN?
If this section applies, then the activities are exempt from the rules adopted pursuant to subsection (9) of §373.414, F.S. Rules adopted pursuant to subsection (9) are limited to: Rules 40E-1.607(3)(g); 40E-1.607(3)(h); 40E-4.031; 40E-4.302; and 40E-40.031, F.A.C.

HOW LONG IS THE EXEMPTION VALID?
Activities approved in a wetland resource permit are valid for the term of the permit. If the activity was exempt from the need for a wetland resource permit, activities commenced prior to October 3, 1995, qualify for this exemption until those activities are complete or until October 3, 2000, whichever occurs sooner.

MODIFICATIONS
The following question should be asked to determine the applicability of §373.414(11)(b), F.S., to modifications of a wetland resource permit:

	Yes	No
Is the modification substantial? (For the purposes of this section, substantial means a modification which is reasonably expected to lead to substantially different environmental impacts. However, if the modification would lessen the impact to the environment, the exemption will still apply to the project.)	☐	☐

The answer to the question must be no for the exemption to apply to a modification.

WHAT DOES THIS EXEMPTION MEAN?
The exemption also applies to a modification of the wetland resource permit which does not constitute a substantial modification. The exemption also applies to any modification which lessens the environmental impact. Modifications qualifying for this exemption shall be reviewed under the wetland resource rules in effect prior to October 3, 1995 (rules adopted pursuant to § 403.91 - 403.929, F.S.).

III. PROJECTS WITH CONCEPTUAL, GENERAL OR INDIVIDUAL SWM PERMITS AND WETLAND RESOURCE PERMITS OR EXEMPT FROM THE NEED FOR A WETLAND RESOURCE PERMIT (§373.414(12)(a), F. S.)

The following questions should be asked to determine the applicability of §373.414(12)(a), F.S.:

		Yes	No
1.	Was a conceptual, general, or individual SWM permit issued?	☐	☐
	and		
2.	Was a wetland resource permit issued pursuant to §§403.91-403.929, F.S.?	☐	☐

or

Were the activities exempt from the need for a wetland resource permit? ☐ ☐

and

1. Were the above permits or exemptions issued prior to October 3,1995? ☐ ☐

All the answers to questions 1, 2, and 3 must be yes for the grandfathering provisions of §373.414(12)(a), F.S., to apply.

MODIFICATIONS

The following questions should be asked to determine the applicability of the grandfathering provisions of §373.414(12)(a), F.S., to modifications of plans, terms, and conditions of a surface water management permit as described above:

		Yes	No
1.	If the modification pertains to new activities not addressed by the existing surface water management permit, were the activities in the same geographical area to which the permit described above was issued?	☐	☐
2.	Does the modification not lead to substantially different water resource impacts?	☐	☐
3.	Would a modification not extend the permitted time period beyond two additional years?	☐	☐

All the answers to questions 1, 2, and 3 must be yes for the grandfathering provisions of §373.414(12)(a), F.S., to apply.

WHAT DOES THIS EXEMPTION MEAN?

Modifications shall be reviewed under the surface water management and wetland resource permitting rules in existence prior to October 3, 1995 (§§403.91 - 403.929, 1984 Supplement to Florida Statutes 1983, as amended; or Part IV of Chapter 373, F.S., in effect prior to October 3, 1995). The exemption applies to the plans, terms, and conditions approved in the permit.

The exemption also applies to a modification of plans, terms and conditions of the surface water management permit, including new activities encompassed by the proposed modification within the same geographical area to which the permit applies. However, the exemption does **not** apply to a modification that would extend the permitted time limit for construction beyond two additional years, or to any modification which is reasonably expected to lead to substantially different water resource impacts. The exemption also applies to a modification which lessens the impact to water resources.

WHAT IS THE LENGTH OF THE EXEMPTION?

The exemption is valid for the term of the permit.

IV. PROJECTS WITH IDENTIFIED AND APPROVED SURFACE WATER AND WETLAND DELINEATIONS (§373.414(12)(b), F.S.)

The following questions should be asked to determine the applicability of the grandfathering provisions of Section 373.414(12)(b), F.S.:

	Yes	No
1. Were surface water and wetland delineations "identified and approved" in a Surface Water Management permit?	☐	☐

"Identified and approved" means:

a. The identification was field-verified by the permitting agency and such verification was surveyed as part of the application review process for the permit[1];

or

b. The delineation was field-verified by the permitting agency and approved by the permit. Mere reference or inclusion in an exhibit is insufficient. There must be express language in the permit.

2. Was the surface water management permit issued prior to October 3, 1995?	☐	☐

The answers to both questions 1 and 2 must be yes for the grandfathering provisions of §373.414(12)(b), F.S., to apply.

WHAT DOES THIS MEAN?

If §373.414(12)(b), F.S., is applicable, then surface water and wetland delineations identified and approved by the surface water management permit are valid for the term of the surface water management permit.

Where surface water and wetland delineations were not identified and approved by the surface water management permit, delineations within the geographical area to which such permit applies shall be determined pursuant to the rules applicable at the time the permit was issued, notwithstanding the statewide wetland delineation methodology implemented in 1994. This grandfathering provision shall also apply to any modification of the surface water management permit within the geographical area to which the permit applies.

HOW LONG ARE THEY VALID?

Surface water and wetland delineations approved in the permit are valid until the expiration of the permit.

---

[1] A survey must have lines which are mathematically reproducible in the field.

V. PROJECTS WITH WETLAND DELINEATIONS WITHIN THE BOUNDARIES OF A JURISDICTIONAL DECLARATORY STATEMENT (JDS) (§373.414(12)(c), F.S.)

The following questions should be asked to determine the applicability of §373.414(12)(c), F.S.:

		Yes	No
1.	Was a JDS issued by the DER/DEP?	☐	☐
2.	Is the wetland delineation within the boundaries of the JDS?	☐	☐
3.	Was a conceptual, general, or individual SWM permit issued?	☐	☐
4.	Was a wetland resource permit issued pursuant to §§403.91-403.929, F.S.?	☐	☐
	or		
	Were the activities exempt from the need for a wetland resource permit?	☐	☐
5.	Were the permits issued prior to October 3, 1995?	☐	☐

All the answers to questions 1 through 5 must be yes for the grandfathering provisions of §373.414(12)(c), F.S., to apply. The above wetland delineation sets forth the landward extent of waters of the state for purposes of regulation under §§403.91-403.929 F.S., as these rules existed prior to October 3, 1995.

WHAT DOES THIS MEAN?
If §373.414(12)(c), F.S., is applicable, then wetland delineations contained within the boundaries of the jurisdictional declaratory statement are valid and shall be used in the review of any modification of the permit.

HOW LONG IS THE JURISDICTIONAL DECLARATORY STATEMENT VALID?
It is valid for the duration of the permit.

VI. PROJECTS WITH A JDS ISSUED BETWEEN OCTOBER 1, 1984, AND OCTOBER 3, 1995 (§373.414(13), F.S.)

The following questions should be asked to determine the applicability of the grandfathering provisions of §373.414(13), F.S., to a JDS issued after the effective date of the Henderson Act on October 1, 1984:

		Yes	No
1.	Prior to October 3, 1995, was a §403.914, F.S., JDS issued by DER/DEP or a §373.421, F.S., JDS issued by the District?	☐	☐

2. Was the petition for the JDS filed on or before June 1, 1994? ☐ ☐

The answers to both questions 1 and 2 must be yes for the grandfathering provisions of §373.414(13), F.S. to apply to the JDS.

WHAT DOES THIS MEAN?
If the answers to both questions 1 and 2 are yes, then the JDS shall continue to be valid.

HOW LONG IS THE JDS VALID?
The JDS is valid for the duration of the JDS.

VII. PETITIONS FOR A JDS PENDING ON JUNE 1, 1994 (§373.414(13), F.S.)

	Yes	No
Was the petition pending on June 1, 1994?	☐	☐

WHAT DOES THIS MEAN?
If the answer to the question is yes, then a petition pending on June 1, 1994, shall be exempt from the statewide wetland delineation methodology ratified in §373.4211, F.S. Instead, the rules in effect prior to October 3, 1995, shall apply.

VIII. PROJECTS WITH A JDS ISSUED PRIOR TO OCTOBER 1, 1984, WHICH ARE PART OF A MASTER DEVELOPMENT ORDER (MDO)(§373.414(13), F.S.)

The following questions should be asked to determine the applicability of the grandfathering provisions of §373.414(13), F.S., to a JDS issued prior to the effective date of the Henderson Act on October 1, 1984, for projects which are part of an MDO:

		Yes	No
1.	Was the JDS issued prior to October 1, 1984?	☐	☐
2.	Was the JDS valid prior to October 3, 1995?	☐	☐
3.	Does the project pertain to lands which are part of an MDO issued pursuant to §380.06(21), F.S.?	☐	☐

All the answers to questions 1, 2, and 3 must be yes for the grandfathering provisions of §373.414(13), F.S., to apply to a pre-Henderson Act JDS for lands which are part of an MDO.

WHAT DOES THIS MEAN?
If all the answers to questions 1, 2, and 3 are yes, then the activities proposed within the boundaries of the JDS should be reviewed under wetland resource and SWM rules in effect prior to October 3, 1995, unless the applicant elects to have the activities reviewed under §373.414(9), F.S.

HOW LONG IS THE JDS VALID?
The JDS is valid for the duration of the buildout period of the project.

IX. VALIDATED JURISDICTIONAL DETERMINATION (JD) ORIGINALLY ISSUED PRIOR TO OCTOBER 1, 1984 (§373.414(13), F.S.)

The following questions should be asked to determine the applicability of the grandfathering provisions of §373.414(13), F.S., to a JD issued prior to the effective date of the Henderson Act in 1984, which was later validated:

		Yes	No
1.	Was the JD validated by DER/DEP pursuant to Rule 17-301.400(8), F.A.C. (as it existed in Rule 17-4.022, F.A.C., on April 1, 1985)?	☐	☐
2.	Was proof of the validation submitted to DER/DEP prior to January 1, 1995?	☐	☐

The answers to both questions 1 and 2, must be yes for the grandfathering provisions of §373.414(13), F.S., to apply to a pre-Henderson Act validated JDS.

WHAT DOES THIS MEAN?
If the answers to both questions 1 and 2, are yes, then activities proposed within the boundaries of the JD should be reviewed under wetland resource and surface water management rules in effect prior to October 3, 1995.

HOW LONG IS THE JD VALID?
The JD is valid until July 1, 1998.

X. REVALIDATED JD FOR PROJECTS WITH A MASTER DEVELOPMENT ORDER (MDO), FINAL DEVELOPMENT ORDER, OR VESTED RIGHTS DETERMINATION (§373.414(13), F.S.)

The following questions should be asked to determine the applicability of §373.414(13), F.S., to a revalidated JD issued prior to the effective date of the Henderson Act in 1984 for projects for which an MDO, a final development order, or a vested rights determination has been issued:

		Yes	No
1.	Was a JD revalidated by the DER/DEP?	☐	☐
2.	Were the affected lands part of a project for which an MDO was issued pursuant to §380.06(15), F.S.?	☐	☐

or

		Yes	No
	Was a final development order issued pursuant to §163.167(8), F.S.?	☐	☐
	or		
	Was a vested rights determination issued pursuant to §380.06(20), F.S.?	☐	☐
3.	Was proof of the validation submitted to DEP prior to January 1,1995?	☐	☐
4.	Was the documentation satisfactory to establish that the project meets the requirements of questions 1, 2, and 3 submitted to DEP prior to Jan. 1, 1995?	☐	☐

All the answers to questions 1 through 4 must be yes for the grandfathering provisions of §373.414(13), F.S., to apply to any pre-Henderson Act revalidated JD for projects with an MDO, a final development order, or vested rights determination.

WHAT DOES THIS MEAN?
If all the answers to questions 1 through 4 are yes, then the activities within the boundaries of the JD should be reviewed under the wetland resource and surface water management rules in effect prior to October 3, 1995 (§§403.91-403.929, 1984 Supplement to the Florida Statutes 1983, as amended; or Part IV of Chapter 373, F.S., in effect prior to October 3, 1995). The applicant may alternatively elect to have the activities reviewed under the amended rules (§373.414(9), F.S.).

HOW LONG IS THE JD VALID?
The JD is valid until the completion of the project.

XI. APPLICATIONS PENDING ON JUNE 15, 1994, OR COMPLETE BEFORE OCTOBER 3, 1995 (§373.414(14), F.S.)

The following question should be asked to determine the applicability of the grandfathering provisions of §373.414(14), F.S.:

		Yes	No
1.	Was a surface water management or wetland resource permit application pending on June 15, 1994?	☐	☐
	or		
	Was a surface water management or wetland resource permit application submitted and complete prior to October 3, 1995?	☐	☐

The answer to question 1 must be yes for the grandfathering provisions of §373.414(14), F.S., to apply.

WHAT DOES THIS MEAN?
Applications qualifying for an exemption under this section shall be reviewed under the rules adopted pursuant to §403.91-403.929, F.S., as amended, and Part IV of Chapter 373, F.S., in existence prior to October 3, 1995. Alternatively, the applicant may elect to have the application reviewed under the new ERP rules.

With respect to wetland delineations, applicants meeting the requirements in question 1 above are exempt from the wetland delineation methodology ratified in §373.4211, F.S. The rules in effect prior to October 3, 1995, shall instead be applicable unless the applicant elects to have the methodology of §373.4211, F.S., apply.

XII. MINING (§§373.414(15) and (16), F. S.)

Although Subsections 373.414(15) and (16), F.S., grandfather certain mining activities, DEP is responsible for permitting all mining projects pursuant to §II. A.1. e. of the Operating Agreement Concerning Regulation Under Part IV, Chapter 373., F.S. Between South Florida Water Management District and Department of Environmental Protection. Therefore, these grandfathering provisions are not addressed here.

LEGAL / INSTITUTIONAL PERMITTING CRITERIA AND POST-PERMIT SUBMITTALS

I. What are "legal / institutional" requirements?

"Legal / institutional" requirements refer to information required by the SFWMD to provide reasonable assurance that a project's operating entity is acceptable and that it has sufficient power, rights and responsibilities to operate and maintain the project's surface water management system and conservation areas. Such assurances are normally contained in the operating entity / homeowners association documents (ie. declaration of covenants and restrictions and articles of incorporation). In some cases, drainage easements may also be required to document that the operating entity has sufficient legal interest to operate and maintain the surface water management system. The enclosed checklist is used by permit application reviewers to determine whether all legal / institutional criteria have been met prior to issuance of a permit.

Another component of the legal / institutional requirements relates to completion of the project, conversion of the permit from the construction phase to the operation phase and transfer of the permit to the operating entity. This is further discussed below.

II. How does the SFWMD determine whether an operating entity is acceptable?

The SFWMD criteria provide that local governments, "298 districts," community development districts, special assessment districts, homeowners associations, property owners associations, condominium associations, community associations and master associations are acceptable entities to operate and maintain a surface water management system if they meet the criteria set forth in Section 9.0, Basis of Review. In certain circumstances, a property owner or developer may be an acceptable entity if they will retain ownership over the entire surface water management system.

Generally, subdivided, phased or mixed land use projects are required to form a master association (usually comprised of representatives from each sub-association) which has legal interest in, and has ultimate responsibility for operating and maintaining, the surface water management system and conservation areas. Similarly, if the project includes a golf course containing surface water management components, and the golf course is not owned by the association, the owner of the golf course should be a member of the association and drainage / maintenance easements between the association and the golf course owner should be submitted to allow for cross-drainage and ingress and egress for system maintenance.

III. What information is required post-permit after commencement of construction?

The SFWMD legal / institutional post-permit requirements include submittal of construction commencement notices, annual construction status reports, and documentation of satisfaction of permit conditions (e.g. successful mitigation / compensation). Within 30 days after completion of construction, the developer must submit an engineer's certification certifying that drainage facilities have been constructed in accordance with permitted specifications.

IV. How is a permit converted from the construction to the operation phase and transferred to the operating entity?

The SFWMD's rules *require* that a project be certified within 30 days after completion of construction. This is accomplished by submitting documentation that a project has been constructed in substantial compliance with permit requirements, via an engineer's certification, and that outstanding permit conditions have been satisfied (e.g. mitigation / compensation). Once the engineer's certification and permit conditions satisfaction have been accepted for conversion to the operation phase, the permit may be transferred to the operating entity. Until such time as the permit is transferred, the developer / permittee remains responsible for compliance with all permit requirements. Therefore, it is to the developer's benefit to timely certify the project and convert and transfer the permit upon construction completion.

A. Conversion of non-phased projects

Along with submittal of the engineer's certification, the developer should submit recorded association documents, recorded easements and plats, evidence of satisfaction of applicable permit conditions, a request for conversion of the permit from the construction phase to the operation phase, and a request from the operating entity for transfer of the permit. If the submitted documentation meets the District's criteria and any outstanding compliance issues have been resolved, the permit will be converted and transferred and will become the responsibility of the operating entity.

B. Conversion of phased projects

Large projects developed in phases may also be finalized in phases. In addition to submitting the documentation referenced in *IV.A.*, above, the developer must submit an engineer's certification for either (1) the primary / backbone drainage system or (2) the independent phase with documentation that the phase can function satisfactorily independent of the primary drainage system. If the submitted documentation meets the District's criteria and any outstanding compliance issues have been resolved, the permit will be converted and transferred and will become the responsibility of the operating entity.

V. When and why are drainage easements required?

A drainage easement is a recorded document which gives the grantee the right to drain surface water across the property of another. SFWMD requires documentation of drainage easements in instances where the surface water management system will be jointly owned. Easements may also be required in some cases where information submitted is not conclusive that a permitted project has a legal outfall (ie. the legal authority to discharge surface water through or into the property of another). In a nutshell, a drainage easement must be: (A) recordable, (B) granted in perpetuity, (C) allow ingress / egress for maintenance and repair, and (D) require SFWMD notification before amendment.

LIST AND EXPLANATION OF TERMS COMMONLY USED IN SFWMD LEGAL/INSTITUTIONAL PERMITTING CRITERIA

Articles of Incorporation

A document filed with the Secretary of State to form and incorporate a property owners association. Upon filing, a Certificate of Incorporation is issued by the Secretary of State which signifies that the association is a current and active corporate body. The required content of the Articles of Incorporation can be found in Section 9.0, Basis of Review. All owners must be members (including any golf course owners). The association must have a perpetual existence, however, if it dissolves, the common areas upon which the surface water management system and conservation areas are located are to be dedicated to another acceptable entity.

Common Areas:

Those lands within the project outside of individual lots or condos which are to be owned, maintained and operated by the association. The SFWMD requires that the surface water management system be located in common areas or that appropriate easements are granted.

Conservation of wetlands and buffer zones:

Wetlands and buffers should be dedicated as conservation easements and their use should be restricted in the association documents and by plat. (See the section of this manual titled Conservation Easements for further discussion.)

Declaration of Restrictive Covenants or Declaration of Condominium (Deed Restrictions):

Required content of this document can be found in Section 9.0, Basis of Review. This document delineates the rights, rules, regulations and responsibilities of the association. The developer must record the deed restrictions in the public records of the County prior to the sale of the individual parcels.

Dedication:

Usually seen in the deed restrictions, easements or on plats, where the developer specifies responsibilities and grants easements over water management tracts and over wetlands for conservation. Once such dedication is recorded in the Official Records of the County, the rights granted in the dedication become the responsibility of the party dedicated to.

Document or Instrument:

An agreement, deed, easement, restrictive covenant, plat, or any other legal mechanism preferably to be recorded in the public records of the County, which can be used as evidence to meet permit criteria.

Drainage Easements:

Easements can be granted via an easement deed, on the plat or in the deed restrictions for the association. If a project is accepting off-site discharge, and/or is proposing to discharge off-site, documentation of legal authority (legal outfall) may be requested. Such documentation must be executed and recorded in order to sustain the easement in perpetuity.

Grant:

One person or entity grants certain rights or property, such as an easement, to another person or entity in a document which is or is to be recorded in the Official Records of the County.

Home Owner's / Property Owner's / Community / Condominium Association:

A non-profit association of people who own property in a given development formed for the purpose of improving or maintaining the quality of the area. The association is usually formed by the developer to, among other purposes, carry out the responsibilities required by the District's permitting criteria and the County's requirements in which the project is located.

Maintenance Easement:

The SFWMD's criteria requires that a 20 foot maintenance easement around water management areas be dedicated to the project's operating entity. Such easements must be shown on in the design plan's lake cross sections and must be dedicated by a recordable document, such as a deed or plat.

Maintenance of surface water management system:

To upkeep or preserve the condition of the surface water management system so that it may be operated and function in accordance with permitting specifications and requirements.

Operation of surface water management system:

The use of a surface water management system to collect and treat stormwater runoff within a development in accordance with permitting specifications and requirements.

Ownership documentation:

This can be a recorded warranty deed, fee simple deed, Trustee's deed, mortgage deed or quit claim deed which conveys property rights in a certain parcel of land.

Perpetuity:

A term used in legal documents meaning "Continuing forever." It ensures that rights granted or restrictions of records will not be removed or terminated. The SFWMD requires that conservation easements and drainage easements be granted in perpetuity.

Plats:

Subdivided projects are usually platted. A plat is a drawing of all or a phase of the project, recorded in the Plat Book of the County, which depicts the location and boundaries of individual parcels of land subdivided into lots and which includes streets, drainage and utility easements, conservation areas, common areas, etc. The owner (developer) dedicates easements and common areas for their intended use and to the operation entity on the first page of a plat.

Recordation:

In order to be binding, a legal document must be recorded in the Official Records of the County. Recorded documents can be differentiated from unrecorded documents by the stamped Official Records Book Number and Page Number(s).

Right-of-Way:

If a project proposes to discharge directly into a District owned waterway, the applicant should be advised that a right-of-way permit will be required and should apply to the Land Management Department.

Surface water management system:

A collection of devices, improvements or natural systems whereby surface waters are controlled, impounded or obstructed. The term includes lakes, ditches, swales, dams, impoundments, reservoirs, drainage maintenance easements and those works defined by statute in Section 373.403(1)-(5), Fla. Stat.

(This page is reserved.)

Affidavit for Operating Entity Documents

Application No(s). _____

Permit No. _____

Project Name: _____

AFFIDAVIT

I, _____, on behalf of

_____ in

_____ capacity, hereby attest to the following pertaining to the above project:

(9.2.3, BOR) I attest that the Home or Property Owners' or Condominium or Community or Master-Association has the following general powers and attributes set forth in the Articles of Incorporation or other documents on the page numbers indicated:

1. a. All the powers set forth in Section 617, Fla. Stat.	Page no. _____
b. All the powers set forth in Section 718, Fla. Stat.	Page no. _____
OR	
1. The power to:	
a. own and convey property;	Page no. _____
b. operate and maintain common property, specifically the surface water management (SWM) as permitted by the SFWMD including all lakes, retention areas, culverts and related appurtenances;	Page no. _____
c. establish rules and regulations;	Page no. _____
d. assess members and enforce assessments;	Page no. _____
e. to sue and be sued; and	Page no. _____
f. contract for services to provide for operation and maintenance services.	Page no. _____
2. All homeowners, lot owners, property owners, unit owners and golf course(s), if any are members of the Association.	Page no. _____
3. The Association exists in perpetuity; however, if the Association is dissolved, the property consisting of the surface water management system will be conveyed to an appropriate agency of local government. If this is not accepted, then the surface water management system will be dedicated to a similar non-profit corporation.	Page no. _____

(9.2.4, BOR) I further attest that the following covenants and restrictions are contained in the Declaration of Protective Covenants, Declaration of Condominium, Deed Restrictions or Articles of Incorporation (documents) on the page numbers indicated:

1. The Association is responsible for the operation and maintenance of the SWM system described in the permit.	Page no. _____
2. The SWM system is: a. owned by the Association; or b. described in the documents as common property.	 Page no. _____ Page no. _____
3. The Association is responsible for assessing and collecting fees for the operation, maintenance, and if necessary, replacement of the SWM system.	Page no. _____
4. Any amendment proposed to these documents which would affect the SWM system, conservation areas or water management portions of the common areas will be submitted to the District for a determination of whether the amendment necessitates a modification of the SFWMD permit. If a modification is necessary, the District will so advise the permittee.	Page no. _____
5. The rules and regulations shall remain in effect for a minimum of twenty-five (25) years and shall be automatically renewed thereafter.	Page no. _____
6. If wetland mitigation or monitoring is required the association shall be responsible to carry out this obligation. The rules and regulations state that it shall be the association's responsibility to complete the task successfully, including meeting all (permit) conditions associated with wetland mitigation, maintenance and monitoring.*	Page no. _____
7. a. The SFWMD Permit No. _____ is attached to the documents as Exhibit _____. b. Copies of the permit and any future SFWMD permit actions shall be maintained by the Association's Registered Agent for the Association's benefit.*	Page no. _____ Page no. _____
8. The District has the right to take enforcement action, including a civil action for an injunction and penalties against the association to compel it to correct any outstanding problems with the surface water management system facilities or in mitigation or conservation areas under the responsibility or control of the association.	Page no. _____

* You may strike out this section if it is not applicable.

(9.2.6, BOR) If the project is a phased project or has independent associations, I further attest that the following powers and duties are contained in the documents:

1. The (Master) Association has the power to accept into the association subsequent phases, that will utilize the same SWM system; or	Page no. _____
2. a. The documents provide that independent associations have the right to utilize the permitted SWM system;	Page no. _____
b. The documents delineate maintenance responsibilities between the independent associations;	Page no. _____
c. Cross easements for drainage, and ingress and egress for maintenance, copies of which are attached, have been granted between all independent associations utilizing the SWM system.	Page no. _____
d. The golf course owner / operator is a member of the Association and the documents reflect this relationship.	Page no. _____

_____
Signature

State of Florida)
County of _____) ss

I HEREBY CERTIFY that on the _____ day of _____, 20_____, before me, an officer authorized in the State aforesaid and in the County aforesaid to take acknowledgements by _____, who is personally known to me or has produced _____ as identification and who did (did not) take an oath.

_____
Notary Public, State of Florida

* You may strike out this section if it is not applicable.

(This page is reserved.)

Permit Applicant Operating Entity Checklist

CHECKLIST FOR HOMEOWNER/PROPERTY OWNER ASSOCIATION DOCUMENTS

Application or Permit No. _____
Project Name _____

This checklist is to be used in the review of Homeowner/Property Owner Association (Association) Article of Incorporation, Declaration of Protective Covenants, Deed Restrictions, Declaration of Condominium or other recorded documents (Documents) for compliance with Section 9.2 of the Basis of Review for Environmental Resource or Surface Water Management permits within the South Florida Water Management District (BOR).

I. POWERS AND ATTRIBUTES OF THE ASSOCIATION

Pursuant to Section 9.2.3, BOR, the Articles of Incorporation or other documents of record shall set forth-general powers and attributes of the association.

A. Do the documents state that the Association shall have all the powers set forth in Section 617.0302, F.S. ? _____; page number _____

B. If not, do the documents give the Association the following powers?
   1. to own and convey property; _____; page number _____

   2. to operate and maintain common property, including the surface water management system (SWM) permitted in the SFWMD Permit _____; page number _____

   3. the power to establish rules and regulations _____; page number _____

   4. to assess members and enforce assessments _____; page number _____

   5. to sue and be sued _____; page number _____ and

   6. to contract for services _____; page number _____

C. Pursuant to Section 9.2.3(g) and 9.2.6(d), BOR, are all homeowners; lot, property and unit owners; and the golf course (if any) members of the association? _____; page number _____

II. LEGAL DESCRIPTION AND EASEMENTS

A. Do the documents cover the entire project according to the legal description? _____
If not, which phase(s) does it cover? _____

B. Is the legal description included as an exhibit? _____; Exhibit number _____

C. Is the legal description by plat? _____ Are golf courses, if any, platted? _____

D. Where or how will conservation, drainage, access and maintenance easements be dedicated? _____

_____

E. 1. Are drainage, access and maintenance easements defined and reserved/dedicated to the operating entity? [1]_____; page number _____

2. Does the dedication/reservation state that the easement may not be removed from its intended use by subsequent owners or others? _____; page number _____

3. If a reservation or dedication to the operating entity is not included in the documents, please identify the document(s) where such a reservation or dedication is made. _____

F. Are conservation easement use restrictions defined and included in the documents?[2] _____ ; page number _____

III. OWNERSHIP AND MAINTENANCE

A. Pursuant to Section 9.2.4(a), BOR, the documents should state that "It is the responsibility of the Association to operate and maintain the SWM system." Do the documents provide that the association shall operate and maintain the SWM system? _____; page number _____

B. Pursuant to Section 9.2.4(b), BOR, do the documents state that the Association owns the common areas and SWM system? _____; page number _____

C. Pursuant to Section 9.2.4(c), BOR, there must "be a method of assessing and collecting the assessment for operation and maintenance of the SWM system." Do the documents provide that the association can assess and collect for the operation, maintenance and replacement of the swm system through regular and special assessments? _____; page number _____

IV. AMENDMENTS, DURATION AND DISSOLUTION

A. Section 9.2.4(d), BOR, states: "That any proposed amendment to the Association's documents, that would affect the SWM system (including environmental conservation areas and the water management portions of the common areas) must be submitted

---

[1] See Section 7.5, BOR.

[2] Although not specifically required by Section 9.2, BOR, the inclusion of conservation easement use restrictions in the documents is considered informative.

to the District for a determination of whether the amendment necessitates a modification of the SWM permit. If a modification is necessary, the District will so advise the permitee."

Is an amendment section included, which requires SFWMD approval if the swm system, environmental conservation areas, and/or water management portions of common areas requested by the permit would be affected? _____; page number _____

B. Pursuant to Section 9.2.4(e), BOR, "The rules and regulations must be in effect for at least 25 years with automatic renewal periods thereafter." Do the documents have a minimum 25-year duration with automatic renewal periods thereafter? _____; page number _____

C. Section 9.2.3(h), BOR states: the Association shall exist in perpetuity; however, if the Association is dissolved, the Articles of Incorporation must provide that the property consisting of the surface water management system shall be conveyed to an appropriate agency of local government. If it is not accepted, then the surface water management system must be dedicated to a similar non-profit corporation.

1. Do the documents provide that the Association shall exist in perpetuity? _____; page number _____

2. If the Association is dissolved, are their provisions requiring the SWM system, property containing the SWM system and water management portions of common areas required to be conveyed to local government determined to be acceptable by the SFWMD? _____; page number _____

3. If the local government declines to accept the conveyance, do the documents require the SWM system, property containing the SWM system and water management portions of common areas be dedicated to a similar non-profit corporation? _____; page number _____

V. MONITORING AND MAINTENANCE

If monitoring and/or maintenance of mitigation areas are required by the permit, please answer the following questions.

Section 9.2.4(f), BOR, states: "If wetland mitigation monitoring will be required and the operational entity will be responsible to carry out this obligation, the rules and regulations shall state that it will be the association's responsibility to complete the task successfully, including meeting all conditions associated with mitigation maintenance and monitoring."

A. If mitigation monitoring will be the responsibility of the Association, do the Association documents indicate that the Association shall be responsible for mitigation monitoring? _____; page number _____

B. Are any requirements pertaining to perpetual mitigation maintenance included in the documents? _____; page number _____

VI. ATTACHMENT OF PERMIT(S) AND CONDITIONS

A. Section 9.2.4(g), BOR states that ERP or SWM permits and conditions shall be attached to the rules and regulations as an exhibit. Is the permit(s) referenced as an exhibit to the Association documents? _____; Exhibit number _____

B. Pursuant to Section 9.2.4(g) BOR, is the Association Registered Agent required to maintain copies of all further permitting actions for the benefit of the association? _____; page number _____

VII. PHASED PROJECTS OR INDEPENDENT ASSOCIATIONS

A. Pursuant to Section 9.2.4(h), BOR, do the documents provide that the District has the right to take enforcement action, including a civil action for an injunction and penalties, against the association to compel it to correct any outstanding problems with the surface water management system facilities or in mitigation or conservation areas under the responsibility or control of the association? ____; page number ____

B. Pursuant to Section 9.2.6, BOR, if a master association is proposed for a project which will be constructed in phases and subsequent phases will use the same SWM system, does this Association have the ability to accept future phases into the Association? _____; page number _____

C. Pursuant to Section 9.2.6, BOR, if the development contemplates independent associations for different phases, but proposes an interdependent water management system for the different phases, one of the following alternatives should be chosen by the applicant for setting up the operating entities.

A master association may be formed which includes all of the various associations within the project, with the master association having the responsibility and legal ability to operate and maintain the SWM system for the entire project.
or

If no master association is proposed, each entity which will operate and maintain a portion of an integrated SWM system must have cross easements for drainage, ingress and egress capabilities and the ability to enter and maintain the various portions, should any sub association fail to operate and maintain the portion of the SWM system within their boundaries. A definition of operation and maintenance responsibilities between the entities shall be included in any such document.

1. Do the documents provide that the independent associations , if any, have the right to utilize the permitted SWM system? _____; page number _____

2. Do the documents delineate maintenance responsibilities between the parties and grant ingress and egress easements for maintenance? _____; page number _____

Additional Documents Required Prior to Construction Completion Certification

Prior to or simultaneous with the submittal of the construction completion/construction certification statement, the following additional documents will be required:

1. filed copy of the articles of incorporation;

2. recorded copy of deed restrictions and associated exhibits;

3. copy of the certificate of incorporation;

4. copies of all plats; and

5. a signed written statement from the proposed transferee that it has reviewed the District permit and project design and will be bound by all terms and conditions of the permit, including all compliance requirements, for the duration of the permit.

OPERATING AGREEMENT CONCERNING REGULATION UNDER PART IV, CHAPTER 373, F.S., AND AQUACULTURE GENERAL PERMITS UNDER SECTION 403.814, F.S., BETWEEN SOUTH FLORIDA WATER MANAGEMENT DISTRICT AND DEPARTMENT OF ENVIRONMENTAL PROTECTION

I. INTENT

The South Florida Water Management District (DISTRICT) and the State of Florida Department of Environmental Protection (DEPARTMENT) enter into this operating agreement to further streamline environmental permitting, while protecting the environment. This agreement divides responsibility between the DISTRICT and the DEPARTMENT for the exercise of their authority regarding permits, compliance, and enforcement under Part IV, Chapter 373, F.S. This agreement also divides responsibility between the DISTRICT and DEPARTMENT regarding formal wetland determinations pursuant to Subsection 373.421(2) through (5), F.S. Finally, this agreement is intended to reflect the aquaculture provisions of Section 373.046(5), F.S. and the delegation of Chapter 403, F.S aquaculture general permitting authority under Section 403.814, F.S. It is a goal of this operating agreement that the division of responsibilities provides no reduction in levels of compliance monitoring and enforcement and, where possible, allow increased levels of compliance monitoring and enforcement.

This agreement supersedes the following agreements: Operating Agreement concerning Management and Storage of Surface Waters Regulation, and Wetland Resource Regulation between South Florida Water Management District and Department of Environmental Regulation, dated October 27, 1992; and First Amendment to October 27, 1992 Operating Agreement concerning Management and Storage of Surface Waters Regulation, and Wetland Resource Regulation Between South Florida Water Management District and Department of Environmental Regulation, dated January 18, 1994 and Operating Agreement Concerning Regulation Under Part IV, Chapter 373, F.S., Between South Florida Water Management District and Department of Environmental Protection dated August 11, 1994.

As a future step to further increase the efficiency and effectiveness of environmental permitting, the DEPARTMENT and the DISTRICT shall jointly pursue further integration and streamlining of federal and state wetlands regulations.

II. RESPONSIBILITIES OF DISTRICT AND DEPARTMENT

A. DEPARTMENT RESPONSIBILITIES

1. **Permits and Variances**

The DEPARTMENT shall review and take final action on all applications for permits and petitions for variances, under Part IV, Chapter 373, F.S., and variances or waivers under Section 120.542, F.S., for the project types listed in a. through s. below. The permit applications encompassed within the DEPARTMENT's responsibilities hereunder include those submitted for wetland resource (dredge and fill) permits and management and storage of surface water (MSSW) permits, pursuant to Subsections 373.414(11) through (16), F.S., as well as those submitted for environmental resource permits. However, the division of responsibilities for permitting aquaculture facilities is covered exclusively in Section II.E. of this agreement.

a. All solid waste management facilities that require a permit under Chapter 403, F.S. However, the DISTRICT shall review and take final action on permit applications when the solid waste management facility qualifies for a solid waste general permit and is merely an incidental component of a project for which the DEPARTMENT does not review and take final action on permit applications under any other paragraph in Section II.A.1. of this agreement.

b. Hazardous waste facilities that require a permit under Chapter 403, F.S. However, the DISTRICT shall review and take final action on permit applications when the storage of hazardous waste is merely an incidental component of a project for which the DEPARTMENT does not review and take final action on permit applications under any other paragraph in Section II. A. 1. of this agreement.

c. Domestic wastewater treatment facilities that require a permit under Chapter 403, F.S., including effluent disposal sites. However, the DISTRICT shall review and take final action on permit applications for:

(1) That part of a facility which constitutes the application of reclaimed water to irrigate crops, golf courses, or other landscapes;

(2) That part of a facility which constitutes the application of reclaimed water to rehydrate wetlands or to provide artificial recharge to reduce or mitigate drawdown impacts due to well withdrawals; and

(3) Those facilities which address any of the requirements of Chapters 40E-4, 40E-40, and 40E-41, F.A.C., through a system or activity which is not fully contained on the domestic wastewater facility site, but which is part of a larger project for which the DEPARTMENT does not review and take final action on

permit applications under any other paragraph in Section II. A. 1. of this agreement.

d. Industrial wastewater treatment facilities that require a permit under Chapter 403, F.S. However, the DISTRICT shall review and take final action on permit applications for:

(1) Those facilities that qualify for a general permit pursuant to Sections 62-660.801 (Laundromat Wastewater Disposal Systems), 62-660.802 (Pesticide Waste Degradation Systems), 62-660.803 (Car Wash Recycle Systems), 62-660.805 (Tomato Wash Water Disposal), or 62-621.300(2) (Generic Permit for the Discharge of Produced Ground Water from any Non-Contaminated Site Activity), F.A.C.;

(2) The excavation of a borrow pit which does not involve any on-site material grading or sorting;

(3) Those facilities in which the industrial wastewater component is merely an HVAC (heating, ventilation, and air conditioning) cooling tower discharge, or other industrial wastewater treatment facility which is merely an incidental component of a project for which the DEPARTMENT does not review and take final action on permit applications under any other paragraph in Section II. A. 1. of this agreement; and

(4) That part of a facility which constitutes the application of treated industrial wastewater to irrigate crops or landscapes.

e. All mining projects, including phosphate, heavy minerals, fuller's earth, peat, limerock, sand, gravel, and shell. However, the DISTRICT shall review and take final action on permit applications for borrow pits which have no on-site material grading or sorting facilities.

f. Power plants and electrical distribution and transmission lines and other facilities related to the production, transmission and distribution of electricity.

g. Communication cables and lines.

h. Natural gas or petroleum exploration, production, and distribution activities and facilities, product pipelines, and other facilities related to the exploration, production, and distribution of natural gas and petroleum.

i. Docking facilities, boardwalks, shore protection structures, and piers, including the adjacent docking and boating related development and navigational dredging. Adjacent docking and boating related development includes parking areas for the docking facility, dry storage facilities, boat sale and supply facilities, maintenance and repair facilities, associated seafood loading

and processing facilities, restaurants, harbor master and marina administration facilities. Residential development and other commercial development is not considered docking or boating related. However, the DISTRICT shall review and take final action on permit applications for all docking facilities, boardwalks, shore protection structures, and piers, including adjacent docking and boating related development and navigational dredging, whenever such facilities are part of a larger plan of other commercial or residential development that has received or requires a permit under Part IV of Chapter 373, F.S. For the purposes of this paragraph, where a docking, boating related, or shore protection structure project includes existing project related commercial or residential development that does not have a DISTRICT issued individual or standard general permit under Part IV of Chapter 373, F.S., because the development preceded implementation of the DISTRICT'S permitting program or was below the DISTRICT'S permitting size thresholds, the DEPARTMENT shall review and take final action on any such docking, boating related, or shore protection facility.

j. Systems proposed in whole or in part seaward of the coastal construction control line (CCCL). In Monroe, Martin and Collier Counties, where a CCCL has not been established, systems along sandy, non-vegetated shorelines proposed in whole or in part seaward of a point 50 feet above the mean high water line at any riparian coastal location fronting the Gulf of Mexico or Atlantic coast shoreline of the state, exclusive of bays, inlets, rivers, bayous, creeks, passes, and the like.

k. Permitting actions as they are required for the Central Florida Beltway, pursuant to Section 338.250, F.S., the February 28, 1989 letter from Dale Twachtmann to Henry Dean, and the March 8, 1989 letter from Henry Dean to Dale Twachtmann.

l. Projects constructed, operated or maintained by the DISTRICT; however, activities of the DISTRICT permitted under Sections 403.91-403.929, F.S., or the rules adopted pursuant to those statutes, and activities of the DISTRICT which did not require a permit under such statutes or rules, shall not require a permit under Part IV of Chapter 373, F.S., provided such activities are part of a project which was commenced prior to October 3, 1995.

m. Navigational dredging conducted by governmental entities except where associated with a larger project that is otherwise the responsibility of the DISTRICT for review and final action.

n. Seaports and adjacent seaport related development where the applicant or property owner is a port authority as defined in Subsection 315.02(2), F.S.

o. A system which serves only one single family dwelling unit, duplex, triplex, or quadruplex (hereinafter referred to as residential unit), except (i) where

the residential unit is part of a larger common plan of development or sale proposed by the applicant, or (ii) where the residential unit is only an incidental part of a parcel that is otherwise used for agricultural activities for which a permit has been issued or is required under Part IV of Chapter 373, F.S.

p. The following systems in wetlands or other surface waters when they are not part of a larger plan of development: boat ramps, ski jumps, ski slalom courses, aids to navigation, mooring buoys and fields, piling supported structures which are not physically connected to uplands, aquatic plant management activities regulated under Chapter 369, F.S., fish attractors, artificial reefs, treasure salvage, and archeological research or exploration.

q. Temporary systems proposed for commercial film productions.

r. High speed rail facilities under Sections 341.321 through 341.386, F.S.

s. Magnetic levitation demonstration projects under Sections 341.401 through 341.422, F.S.

2. **Formal Determinations**

The DEPARTMENT shall review and take final action on petitions for formal determinations of the extent of wetlands and other surface waters pursuant to Section 373.421, F.S., filed by entities regarding properties on which they propose to undertake activities for which the DEPARTMENT would have permitting responsibility under this agreement.

The DEPARTMENT shall provide the DISTRICT with copies of formal determinations of the extent of wetlands or other surface waters issued by the DEPARTMENT.

3. **Mitigation Banks**

a. The DEPARTMENT shall review and take final action on all permit applications for mitigation banks, under Part IV of Chapter 373, F.S., filed by:

(1) Entities which propose mitigation banks primarily to offset the impacts of solid waste management facilities for which the DEPARTMENT is responsible under Section II.

(2) Entities engaged in the business of mining which propose mitigation banks primarily to offset the impacts of mining projects for which the DEPARTMENT is responsible under Section II.

(3) Entities engaged in the business of power production which propose mitigation banks primarily to offset the impacts of power plants or electrical distribution or transmission lines or other facilities related to the production, transmission or distribution of electricity for which the DEPARTMENT is responsible under Section II.

(4) Entities engaged in the business of communication transmission which propose mitigation banks primarily to offset the impacts of communication cables or lines for which the DEPARTMENT is responsible under Section II.

(5) Entities engaged in the business of natural gas or petroleum exploration, production, or distribution which propose mitigation banks primarily to offset the impacts of natural gas or petroleum exploration, production or distribution activities or facilities, or product pipelines for which the DEPARTMENT is responsible under Section II.

(6) Governmental entities which propose mitigation banks primarily to offset the impacts of navigational dredging which they conduct for which the DEPARTMENT is responsible under Section II.

(7) Port authorities as defined in Subsection 315.02(2), F.S., which propose mitigation banks primarily to offset the impacts of seaports or adjacent seaport related development for which the DEPARTMENT is responsible under Section II.

(8) The DISTRICT.

b. For the purposes of Section II.A.3., "primarily to offset" shall mean that greater than 50 percent of the assigned mitigation credits from the proposed mitigation bank are proposed to offset impacts which result from the project type as specified in one of paragraphs 1. through 7. of Section II.A.3.a. However, nothing in Section II.A.3. shall prohibit a banker from using, selling, or transferring credits to offset impacts other than those identified in Section II.A.3. as specified in the mitigation bank permit.

B. DISTRICT RESPONSIBILITIES

1. The DISTRICT shall review and take final action on all applications for permits, petitions for variances, and petitions for formal determination under Part IV, Chapter 373, F.S., and variances and waivers under Section 120.542 F.S., except for those identified as the DEPARTMENT's responsibility under this operating agreement, and accept as provided in Section II.E. of this agreement. The permit applications encompassed within the DISTRICT's responsibility hereunder include those submitted for wetland resource permits and MSSW permits, under to Subsections 373.414(11) through (16), F.S., as well as those submitted for environmental resource permits.

2. The DISTRICT shall review and take action on projects constructed, operated or maintained by the DEPARTMENT. However, activities of the DEPARTMENT permitted under Sections 403.91-403.929, F.S., or the rules adopted pursuant to those statutes, and activities of the DEPARTMENT which did not require a permit under such statutes or rules, shall not require a permit under Part IV of Chapter 373, F.S., provided such activities are part of a project which was commenced prior to October 3, 1995.

3. The DISTRICT shall provide the DEPARTMENT with copies of formal determinations of the extent of wetlands or other surface waters issued by the DISTRICT.

C. Incorrectly Submitted Applications and Petitions; Modifications

1. Permit applications, petitions for variances or waivers, and petitions for formal determinations submitted to the incorrect agency pursuant to the terms of this operating agreement shall be returned to the applicant or with the applicant's concurrence, be forwarded to the correct agency. The application shall not be considered received for purposes of Subsection 120.60(1), F.S., until it is received by the correct agency. A refund of any submitted fee shall be made to the applicant. Prior to transferring the application, the incorrect receiving agency shall coordinate with the proper reviewing agency and the applicant in order to inform all parties that the application has been submitted incorrectly and is being either returned or forwarded.

2. Notwithstanding sections II.A. and II.B. of this agreement, permit modification requests shall be processed by the agency issuing the original permit. If the permit has been modified, the agency that issued the last modification to the permit shall process the modification. However, all modifications to permits shall be processed by the DEPARTMENT for:

a. Solid waste management facilities as described in Section II.A.1.a.; and

b. Mining projects as described in Section II.A.1.e., when the modification involves the addition of new lands to the permit or the expansion of mining activities into areas not previously approved for mining.

c. Seaports and seaport related development as described in Section II.A.1.n., when the modification involves the addition of new lands to the project, or involves dredging and the management of dredged materials, or for other related activities necessary for development, including the expansion of navigation channels, port harbors, turning basins, harbor berths, and associated facilities.

D. Special Cases

By written agreement between the DISTRICT Executive Director or designee, and the DEPARTMENT, responsibilities may deviate from the responsibilities outlined in II.A., B., or C. above. Instances where this may occur include:

1. An extensive regulatory history by either the DISTRICT or the DEPARTMENT with a particular project that would make a deviation result in more efficient and effective regulation;

2. Simplification of the regulation of a project that crosses water management district boundaries;

3. The incorrect agency has begun processing an application or petition and transfer of the application or petition would be inefficient; or

4. Circumstances in which a deviation would result in the application or petition being more efficiently or effectively processed.

E. Aquaculture

Notwithstanding any other provision of this agreement, the division of responsibility for permitting, compliance and enforcement of aquaculture facilities which are not exempt from Part IV, Chapter 373, F.S. or which require aquaculture general permits under Chapter 403, F.S., shall be pursuant to Sections 373.046 and 403.814, F.S. For aquaculture activities for which the District has Chapter 403, F.S. general permitting authority, the District shall also have the authority to issue letters determining that no permit is required and to perform compliance monitoring and enforcement activities.

III. DELEGATION OF AUTHORITY: MIXING ZONES, ZONES OF DISCHARGE, VARIANCES

A. The DEPARTMENT delegates authority to the DISTRICT to review and take final action on requests for zones of mixing in surface waters and zones of discharge in groundwater, in accordance with Sections 62-4.242, 62-4.244, 62-28.700, 62-522.400 and 62-522.410, F.A.C., when the requests are associated with a permit application for which the DISTRICT is responsible under the terms of this operating agreement.

B. The DEPARTMENT delegates the authority to the DISTRICT to take action on petitions for variances or waivers from state water quality standards in accordance with Sections 120.542 and 403.201, F.S., and Section 40E-4.311, F.A.C., when the petition is associated with a permit application for which the DISTRICT is responsible under the terms of this operating agreement.

IV. COMPLIANCE MONITORING AND ENFORCEMENT

A. Division of Responsibilities

Each agency shall perform compliance monitoring on all projects for which that agency has issued a permit, consent order, final order, or for which a consent order or final judgment has been entered in order to determine compliance with the conditions thereof and will enforce said conditions by taking appropriate enforcement action where necessary. However, if the DEPARTMENT or the DISTRICT modifies a permit previously issued by the other agency, pursuant to this operating agreement, the agency modifying the permit shall thereafter determine compliance with the permit and enforce all provisions or conditions of that permit.

Each agency shall investigate activities regulated under Part IV of Chapter 373, F.S., which are undertaken without the required permits, and take appropriate enforcement action, when it has permitting responsibilities for those activities under this operating agreement.

B. Special Cases

1. By written agreement between the DISTRICT Executive Director or designee, and the DEPARTMENT, enforcement responsibilities for specific cases may deviate from the responsibilities outlined in Section IV.A. Instances where this may occur include:

a. The case also includes activities which may be violations of rules of the DEPARTMENT or DISTRICT that are not the subject of this agreement;

b. The case involves activities that cross water management district boundaries; or

c. Deviation would result in the case being more effectively or efficiently handled.

V. EMERGENCIES

In a declared emergency, pooling of staff resources and deviations from the terms of this agreement may be in the best interest of public service and protecting or restoring property and environmental resources. Therefore, notwithstanding the divisions of responsibilities specified in this agreement, where the Governor has issued an Executive Order which declares an emergency and the DEPARTMENT and the DISTRICT has issued emergency orders to implement the Executive Order, either party to this agreement can review and take agency action on any activities regulated under Part IV of Chapter 373, F.S., that are authorized by an emergency order during the duration of the emergency orders of the DEPARTMENT and the DISTRICT.

VI. INTERAGENCY COMMITTEE

In order to seek consistency in the environmental resource permit (ERP) program and to facilitate the implementation of the DEPARTMENT's responsibilities under Subsection 373.026(7), F.S., and Section 62-340.100, F.A.C., the DEPARTMENT and DISTRICT agree to form and participate in an ERP Committee (Committee). The Committee shall meet at least twice a year, but may meet more frequently as issues arise that require interagency coordination. The Committee shall provide a forum for the DEPARTMENT and water management districts to coordinate and communicate regarding the following:

a. Joint training efforts to maximize the use of training resources and ensure that adequate training is provided.

b. Promotion of consistent interpretation and implementation of ERP rules.

c. Proposed amendments to ERP rules.

d. Development of consistent ERP compliance and enforcement.

e. Future revisions to the DEPARTMENT and DISTRICT operating agreements regarding the ERP program.

f. Development of a statewide ERP data set and a computer data exchange methodology.

g. Such other activities which the Committee deems necessary or desirable to achieve and maintain the goals of this operating agreement.

VII. EFFECTIVE DATE

A. This operating agreement shall take effect upon execution by both parties and adoption of rule amendments which incorporate this operating agreement by reference.

B. Applications, petitions, and enforcement cases, under Part IV of Chapter 373, F.S., which are pending on the effective date of this agreement shall continue to be processed by the agency to which application or petition was made or which initiated the enforcement case, except when the DISTRICT and the DEPARTMENT agree, and in the case of an aquaculture activity the applicant also agrees, that an application, petition or enforcement case should be transferred in order to provide for more efficient processing and enforcement. Applications and petitions received after the effective date of this operating

agreement will be processed as described in Section II of this operating agreement.

AGREED TO this 27th day of October, 1998.

SOUTH FLORIDA
WATER MANAGEMENT DISTRICT
BY ITS GOVERNING BOARD

FRANK WILLIAMSON, JR.
CHAIRMAN, GOVERNING BOARD
Post Office Box 24680
West Palm Beach, Florida
33416-4680

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

for VIRGINIA B. WETHERELL
SECRETARY
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Legal Form Approved

OVERVIEW OF THE STATUTORY EXEMPTION FOR THE MAINTENANCE OF WORKS

I. THE MAINTENANCE EXEMPTION

Part IV of Chapter 373, Florida Statutes, (F.S.), requires any person proposing to construct, alter, or operate a dam, impoundment, reservoir, appurtenant work, or works, to obtain a permit from the District. However, the question often arises as to whether a permit is required when work is being done to an existing insect control structure, dike, irrigation or drainage ditch, existing manmade canal, channel, basin, berth, intake, or discharge structure.

The answer to this question will depend upon whether the work is a maintenance activity or an alteration of an existing work. Maintenance activities, which meet the requirements discussed herein, do not normally require a permit. The alteration of an existing work, however, will normally require a permit. It is strongly recommended that District staff be contacted, before any work begins, to determine if the proposed work falls within the maintenance exemption.

Subsection 373.403(8), F.S., defines maintenance as follows:

"Maintenance" or "repairs" means remedial work of a nature as may affect the safety of any dam, impoundment, reservoir, or appurtenant work or works, but excludes routine custodial maintenance.

Paragraph 403.813(2)(f), F.S., exempts many maintenance dredging activities from permitting requirements.

Paragraph 403.813(2)(g), F.S., exempts maintenance of insect control facilities, with certain restrictions, as follows:

(2) No permit under this chapter, chapter 373...shall be required for activities associated with the following types of projects...

(g) the maintenance of existing insect control structures, dikes, and irrigation and drainage ditches, provided that spoil material is deposited on a self contained, upland spoil site which shall prevent the escape of the spoil material into waters of the state.... **In all cases, no more dredging is to be performed than is necessary to restore the dike, irrigation or drainage ditch to its original design specifications.** [emphasis added]

Both the statutes and caselaw rely heavily on the original design specifications to determine whether an activity is exempt and whether or not exempt maintenance activities can occur or have occurred.

Rule 40E-4.051(2), Florida Administrative Code, is the SFWMD's rule implementing the statutory exemption for maintenance of systems. It essentially tracks the statutory language of Section 403.813, F.S., and is applicable to maintenance dredging of existing manmade canals, channels, basins, berths, and intake and discharge structures.

II. ALTERATION OF WORKS

Subsection 373.403(7), F.S., defines "alter" as follows:

> "Alter" means to extend a dam or works beyond maintenance in its original condition, including changes which may increase or diminish the flow or storage of surface water which may affect the safety of such dam or works.

Alteration activities *do* require permits. However, maintenance activities *do not* require permits, if within the scope of the exemption.

III. MAINTENANCE CHECKLIST

The following checklist has been developed as a tool to assist in the determination of whether an activity is maintenance or an alteration. Before using the checklist, you may wish to obtain the following information:

1. Original design specifications;

2. A location map or other information indicating where spoil materials will be deposited;

   and

3. A record of past routine maintenance activities.

After receiving this information, the following checklist should be consulted by District staff.

1. The activity should not change the original design specifications. An improvement or expansion of hydraulic capacity does not fall within the exemption. If construction drawings exist which depict the original or permitted dimensions, then maintenance activities should be done with a goal of restoring or maintaining the original dimensions.[1]

2. All spoil material must be deposited on a self-contained, upland spoil site which will prevent the escape of the spoil material into waters of the state.

3. Any proposed dredging should be only to restore either a dike, or an irrigation or drainage ditch, to original design specifications.

---

[1] If construction drawings do not exist, then it may be necessary to limit excavation to the removal of vegetation only, unless it can be demonstrated that shoaling has occurred. If shoaling has occurred and vegetation is still evident beneath the barren shoal, the shoal may be removed to the depth which exposes buried vegetation. If the shoal has remained in place long enough for a plant community to become established, then a soil boring should be performed in order to ascertain the location of the bottom prior to the occurrence of the shoal. The District's Environmental Resource Compliance Division should always be consulted before beginning these activities.

4. The activity should be consistent with past routine maintenance activities. New activities should not be greatly in excess of what has been done on a routine basis in the past.

5. The work should not be extensive or anticipated to have more than a minimal adverse environment impact.

6. The activity must not occur within 200 feet of wetlands or be connected to wetlands.

7. Changes should not increase or diminish the flow or storage of surface water, thereby affecting the safety of a dam or works.

8. In the case of maintenance dredging, control devices should be utilized at the dredge site to prevent turbidity and toxic or deleterious substances from discharging into adjacent waters during maintenance dredging.

9. Natural or manmade barriers, which separate a canal or canal system from adjacent wetlands or other surface waters, should not be removed.

STATE WATER QUALITY CERTIFICATION

Section 401 of the Clean Water Act authorizes states to determine whether activities permitted by the federal government are in accordance with state water quality standards. (33 U.S.C. Section 1341) Pursuant to Rule 40E-4.303(1), F.A.C., issuance of an individual or standard general environmental resource permit constitutes certification of compliance with state water quality standards, unless the permit is issued pursuant to the net improvement provisions of subsection 373.414(1)(b), F.S., or the permit specifically denies such certification.

Subsection 373.414(1)(b), F.S., provides that "if the applicant is unable to meet water quality standards because existing ambient water quality does not meet standards, the governing board or department shall consider mitigation measures proposed by the applicant that cause net improvement of water quality in the receiving body of water for those parameters which do not meet standards."

If a review of a water quality mitigation proposal indicates that it will provide a net improvement of the parameter that does not meet standards, a permit may be issued, assuming all other permitting criteria are met. Such permits must include a specific condition which states the following:

"The State of Florida herein notifies the U.S. Army Corps of Engineers and any other interested parties that this permit is issued pursuant to Section 373.414(1)(b), F.S., and does not constitute certification of compliance with state water quality standards pursuant to Section 401 of the Clean Water Act."

Unless the EPA elects to issue or deny water quality certification for the project, water quality consideration is considered waived, and the Corps may proceed with issuance of the federal dredge and fill permit.

COASTAL ZONE CONSISTENCY DETERMINATIONS

The Coastal Zone Management Act requires applicants for federal permits in a state's coastal zone to furnish a certification that the proposed activity will be consistent with the state's coastal zone management program. (16 U.S.C. Section 1456 (c) (3)) Pursuant to Rule 40E-4.303(2), F.A.C., a complete application for an individual or standard general environmental resource permit for projects located in or seaward of coastal counties, and which have regulated activities in, on or over wetlands or other surface waters also constitutes a request for the State's concurrence that the project is consistent with the Florida Coastal Zone Management Program. Final agency action on the permit shall constitute the state's determination as to whether the activity is consistent with the federally approved Florida Coastal Zone Management Program. (Section 373.428, F.S.)

DESIGN AIDS

Surface Water Management Design Aids

SURFACE WATER MANAGEMENT DESIGN AIDS

This part of "Design Aids" is a compilation of suggested methods and information that can be used to design a surface water management system. Included are a set of drainage basin maps and information on many topics including rainfall, water table, runoff, water storage, weirs, orifices, exfiltration trenches, hydrographs and flood routings. The methods and information do not constitute additional rule criteria, and should not be used in lieu of adopted criteria or in a manner which is inconsistent with duly-adopted rules.

The **Drainage Basin Maps** section consists of maps, created in 1996, which show the major drainage basin boundaries within the District. The allowable discharge from a project is based upon the location of the project in relation to the receiving surface watercourse. The allowable discharge for District canals is based on the formulas, factors, and equations shown in Appendix 2 of the *Basis of Review*.

The **Rainfall** section includes isohyetal maps, taken from the District *Technical Memorandum Frequency Analysis of One and Three-Day Rainfall Maxima for Central and Southern Florida October 1990*, for storm events with return frequencies of 5, 10, 25 and 100 years. Storm event durations are 24 and 72 hours in all instances, except for the 5 year storm. That storm is described as only a 24-hour duration event. There are two rainfall distribution patterns that are most frequently utilized in applications submitted to this District: 1) "SFWMD", which was developed by this District and is similar to the Soil Conservation Service (SCS) (now the Natural Resource Conservation Service (NRCS)) Type 2 distribution, and 2) "Orange County", which was developed by Orange County for use in that area.

The **Determination of Seasonal High Water Table** section provides an in-depth discussion of the methodology and indicators used to establish the elevation of the seasonal high water table. Definitions of all indicators are provided, as well as a checklist of the indicators with notes on characteristic features.

The **Runoff** section contains a method for estimating the volume of runoff from rainfall information. The method was developed by the NRCS and was derived from experimental data. Sheetflow runoff rates can be estimated for undeveloped watersheds by utilizing the sheetflow runoff curves presented herein. Runoff rates obtained in this manner should be adjusted for any depressional storage that may be present on site. Most applicants are aware that there are numerous methods for computing runoff rates and volumes. Many of these methods have been converted into computer software. The District allows the use of any method that can be shown to be applicable to design conditions within the SFWMD.

The **Water Storage** section is in two parts: surface and soil. Surface storage is relatively easy to comprehend and calculate. Soil storage, on the other hand, is dependent on several variables including soil type and compaction. The NRCS has furnished additional data, describing soil storage volumes for specific soil types, that have been included in this section.

#6

The **Exfiltration Trenches** section has only one change since the last revision. A third frequently used method for determining the hydraulic conductivity, the Florida Department of Transportation test method, is now provided.

The **Water Quality** section contains selected material from Chapters 62-4 and -302, F.A.C. The material sets forth the State anti-degradation policy requirements for projects which are proposed to discharge into Outstanding Florida Waters.

The **Discharges** section presents several types of structure designs which regulate the flow of water. Free and submerged weir flow are described in addition to v-notch and orifice flow. Once the initial structure design is decided upon, the applicant is advised to verify that the water control structure is regulating the project discharge and not the culvert (if any) downstream of the structure.

Discussions of **Hydrographs** and **Flood Routing** complete this part. While there are several methods for determining the shape of a runoff hydrograph only one is described in detail. The Santa Barbara Urban Hydrograph (SBUH) method produces results which correlate well with gauged watersheds in south Florida. While the NRCS curve number method is also useful in generating an instantaneous runoff hydrograph for small projects, the SBUH method should give a more realistic representation for larger, more complicated projects.

For projects with numerous drainage basins, there are an ever-increasing number of software programs available to generate runoff hydrographs and route them through a water management system. One of these is the Routing Model Cascade 2001 developed by the SFWMD. This program has the ability to analyze multiple cascading basins interconnected by multiple discharge structures. The program may be obtained from the District's Surface Water Management Division.

The District will allow the use of any hydrograph generating and routing model that can be configured to duplicate accurately the ambient design conditions applicable to projects within the SFWMD.

#6

Drainage Basin Maps

The allowable discharge from a project is based, among other things, upon the location of the project in relation to the receiving surface watercourse. Figures B-1 through B-21 show the major drainage basin boundaries within the District.

The allowable discharge for District canals is based on the formulas, factors and curves shown in Appendix 2 of the *Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District.*

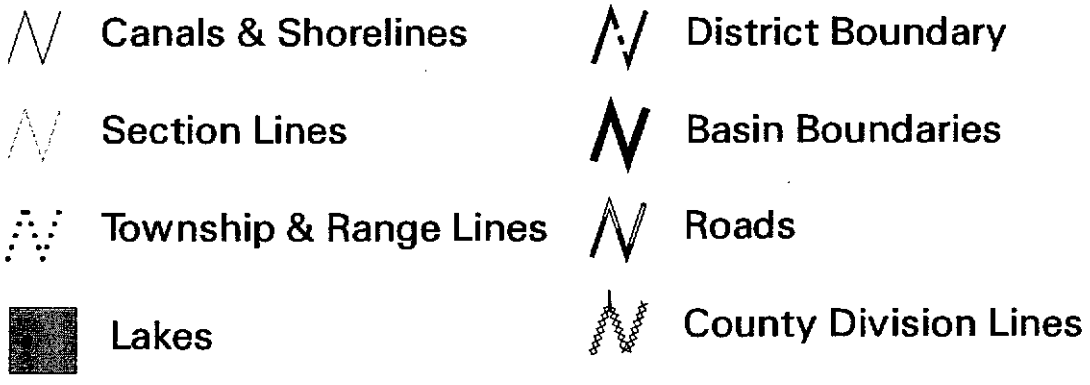
Drainage Basin Maps

Organized by county to show the major drainage basin boundaries within the District.

Figures

B-1 Eastern Broward Co.
B-2 Western Broward Co.
B-3 Charlotte Co.
B-4 Eastern Collier Co.
B-5 Western Collier Co.
B-6 Glades Co.
B-7 Hendry Co.
B-8 Highlands Co.
B-9 Lee Co.
B-10 Martin Co.
B-11 Northern Miami-Dade Co.
B-12 Southern Miami-Dade Co.
B-13 Monroe Co.
B-14 Okeechobee Co.
B-15 Orange Co.
B-16 Northern Osceola Co.
B-17 Southern Osceola Co.
B-18 Eastern Palm Beach Co.
B-19 Western Palm Beach Co.
B-20 Polk Co.
B-21 St. Lucie Co.

Legend

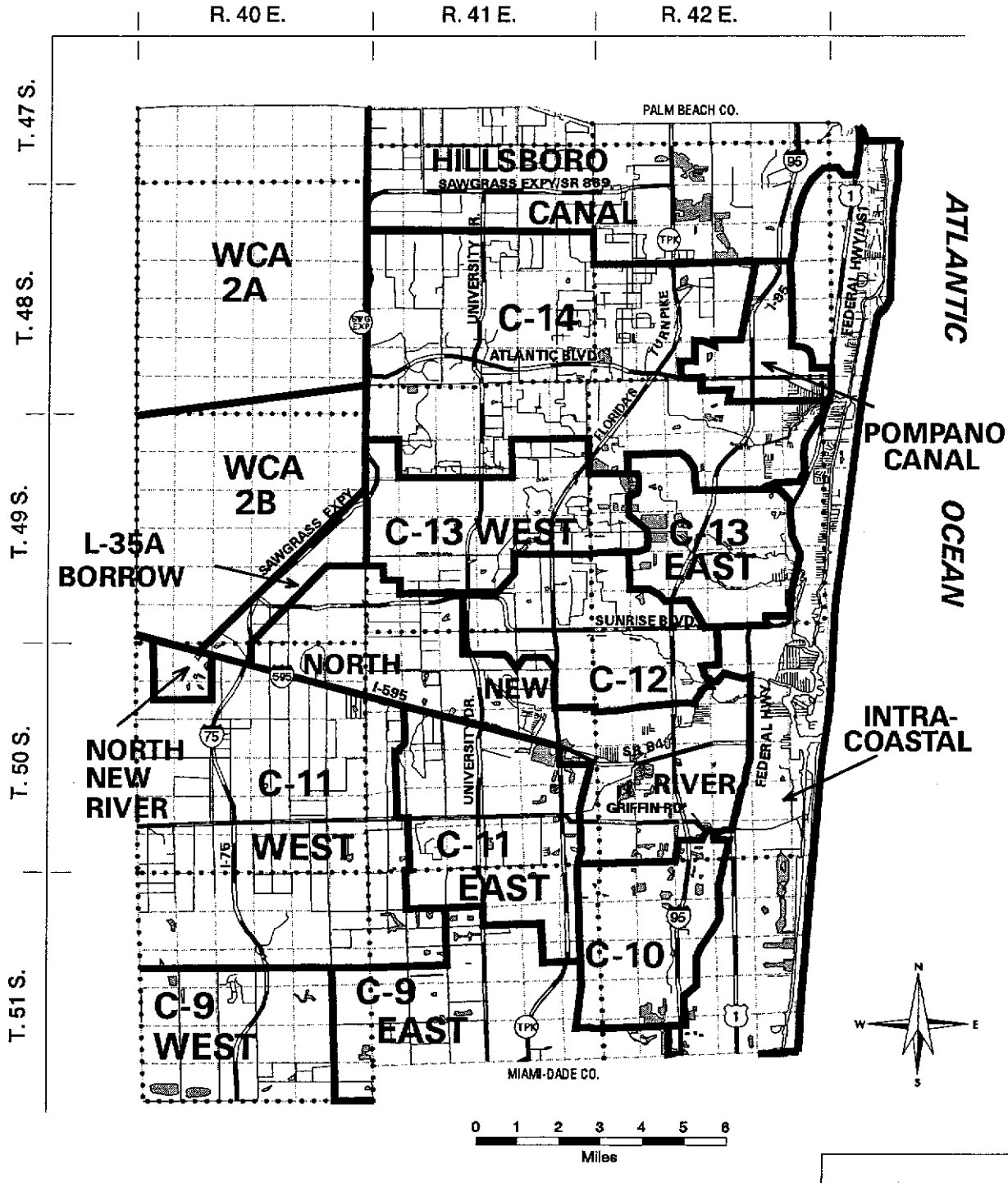


All maps projected in State Plane Coordinates.

Drainage basin maps were created and edited by the Regulation Department of the South Florida Water Management District.

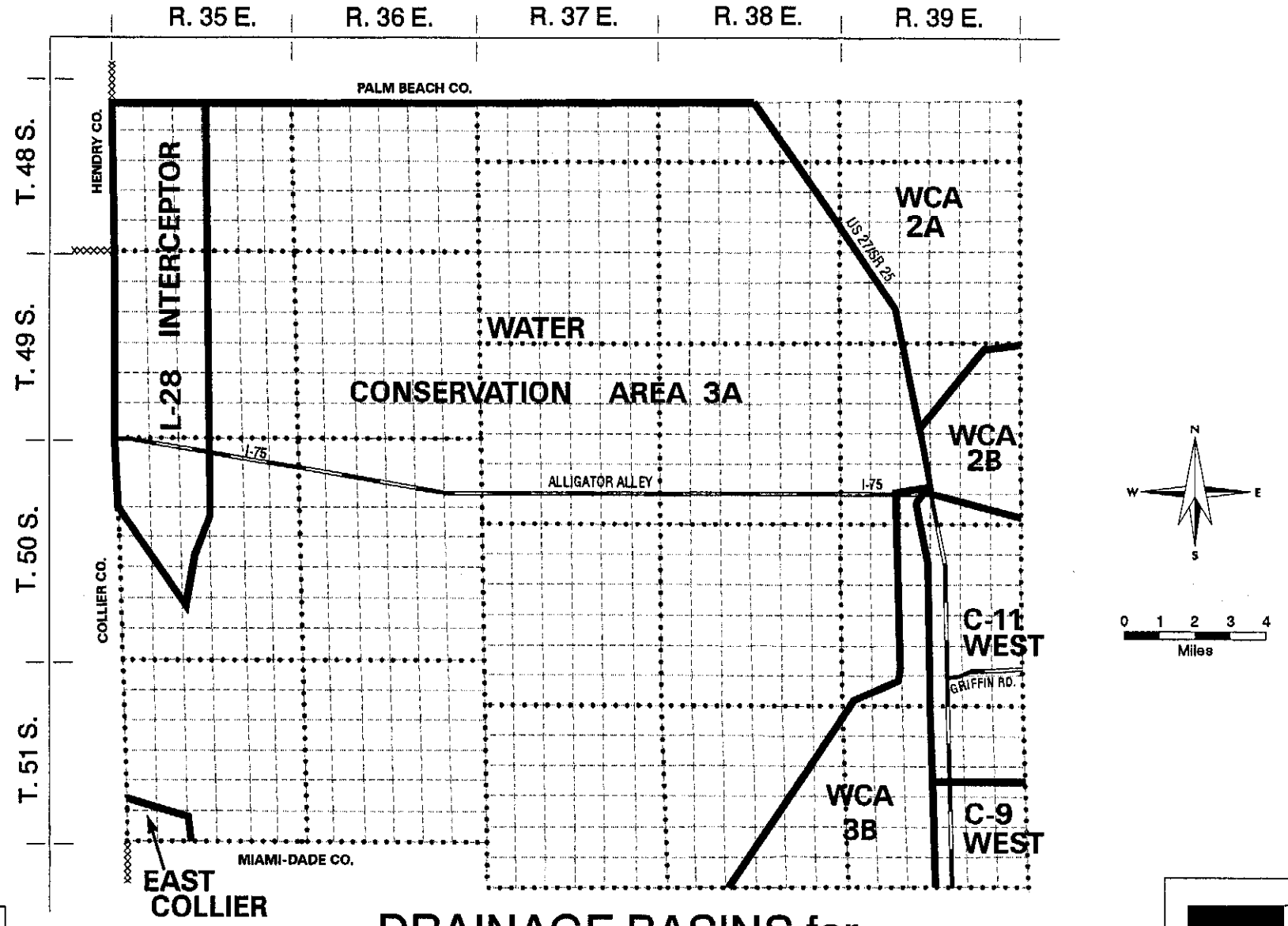
Basin boundaries were reviewed and updated in 1989 by the Water Resources Division.

Revised September 1999



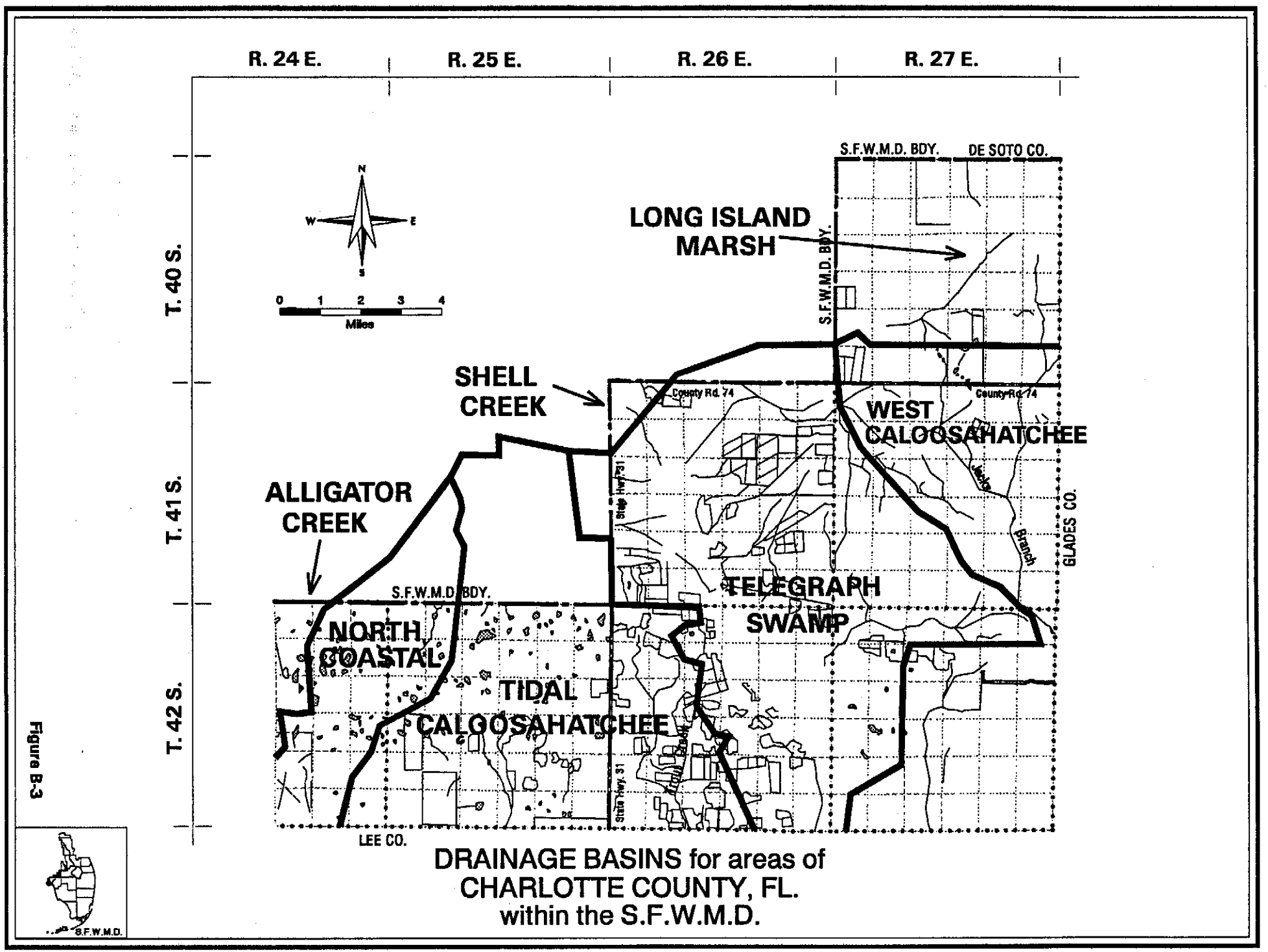
DRAINAGE BASINS for EASTERN BROWARD COUNTY, FL.

Figure B-1



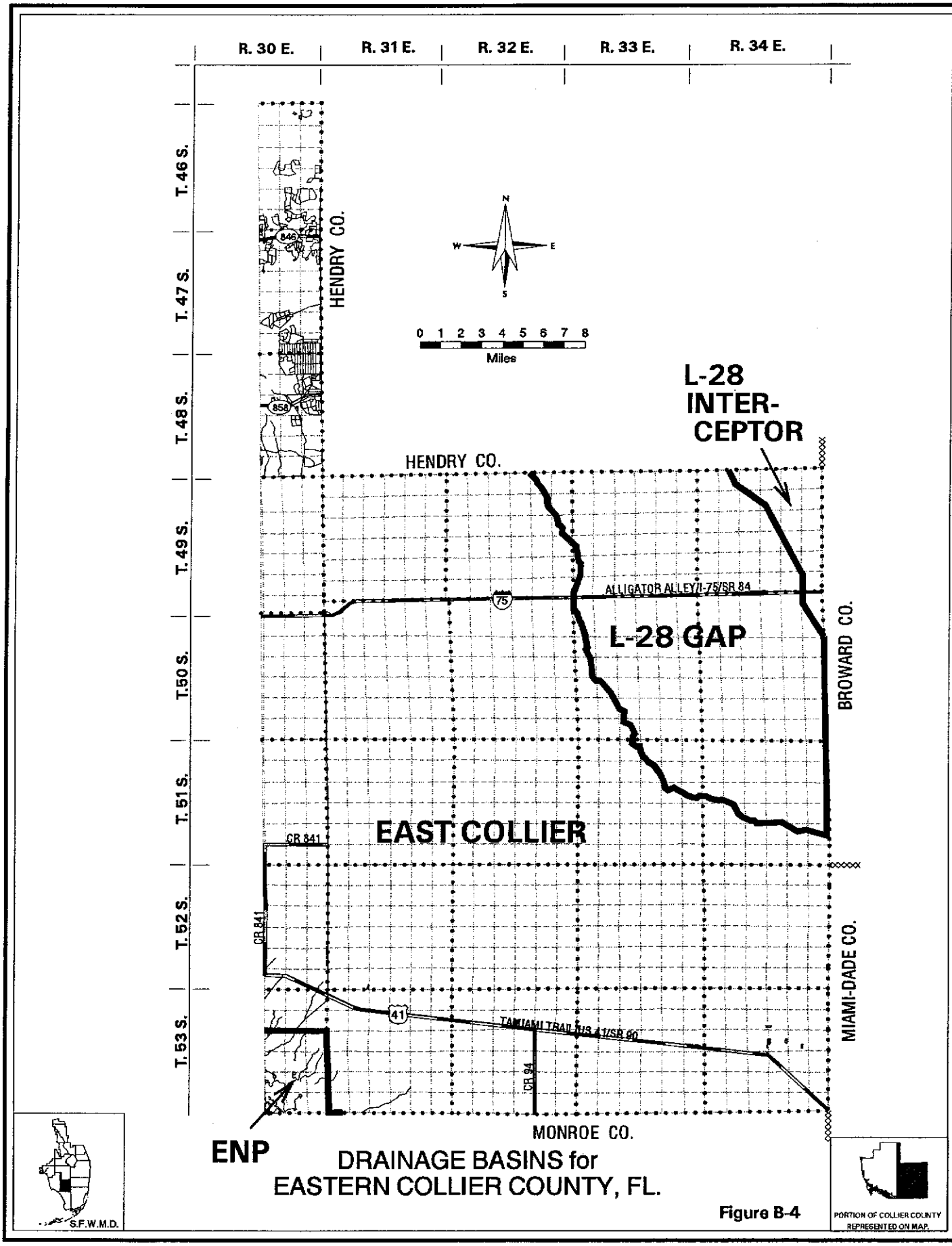
DRAINAGE BASINS for WESTERN BROWARD COUNTY, FL.

Figure B-2



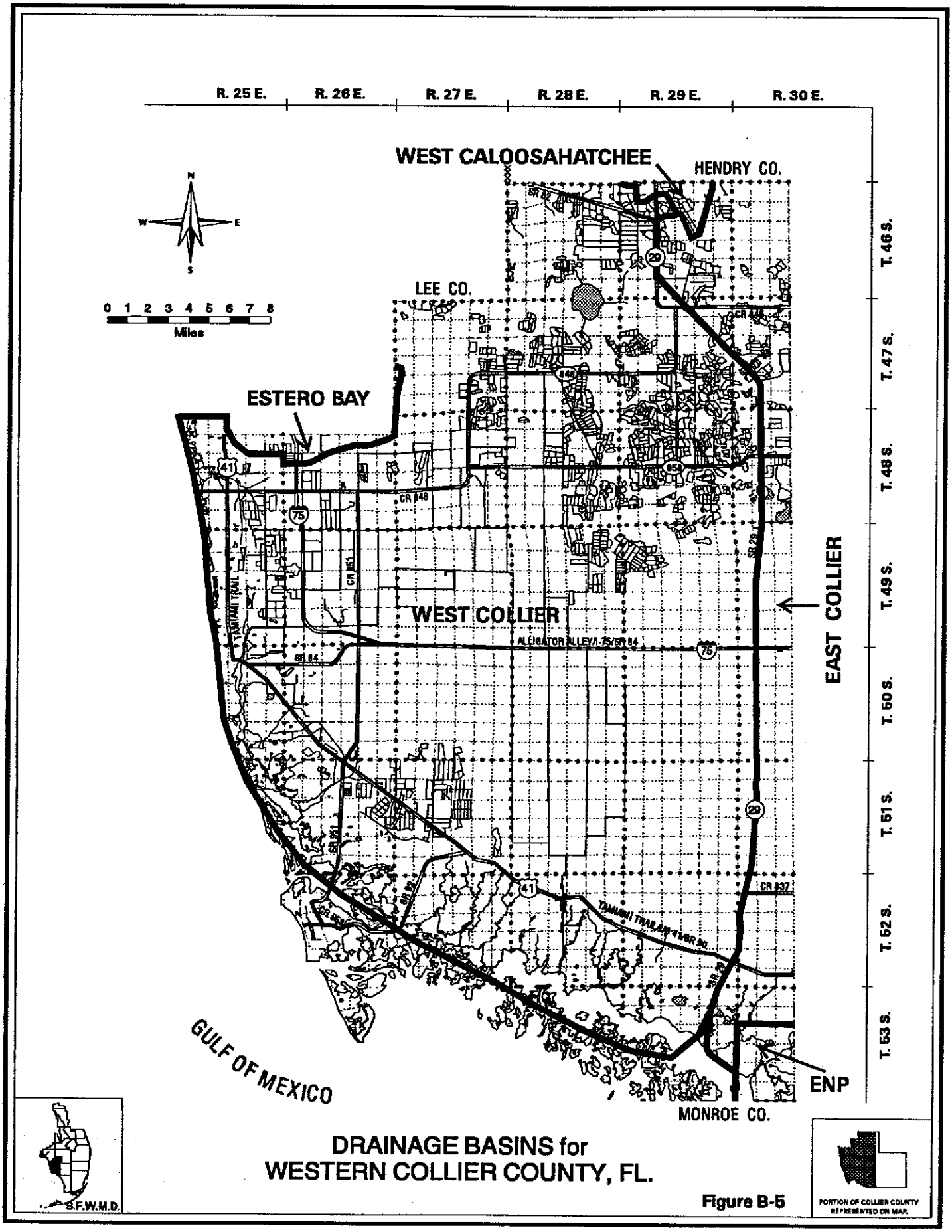
DRAINAGE BASINS for areas of
CHARLOTTE COUNTY, FL.
within the S.F.W.M.D.

Figure B-3



DRAINAGE BASINS for
EASTERN COLLIER COUNTY, FL.

Figure B-4



DRAINAGE BASINS for WESTERN COLLIER COUNTY, FL.

Figure B-5

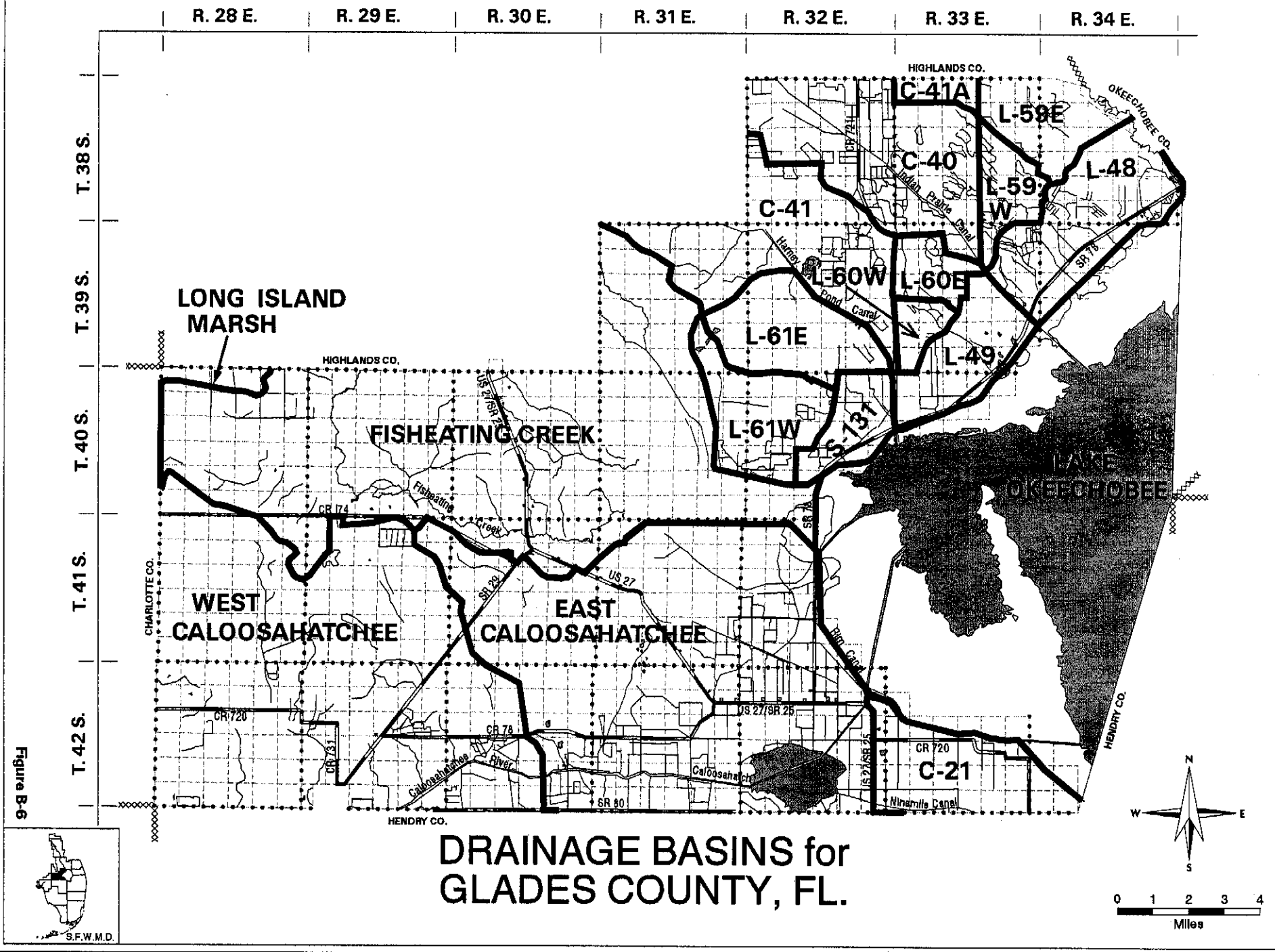


Figure B-6

DRAINAGE BASINS for GLADES COUNTY, FL.

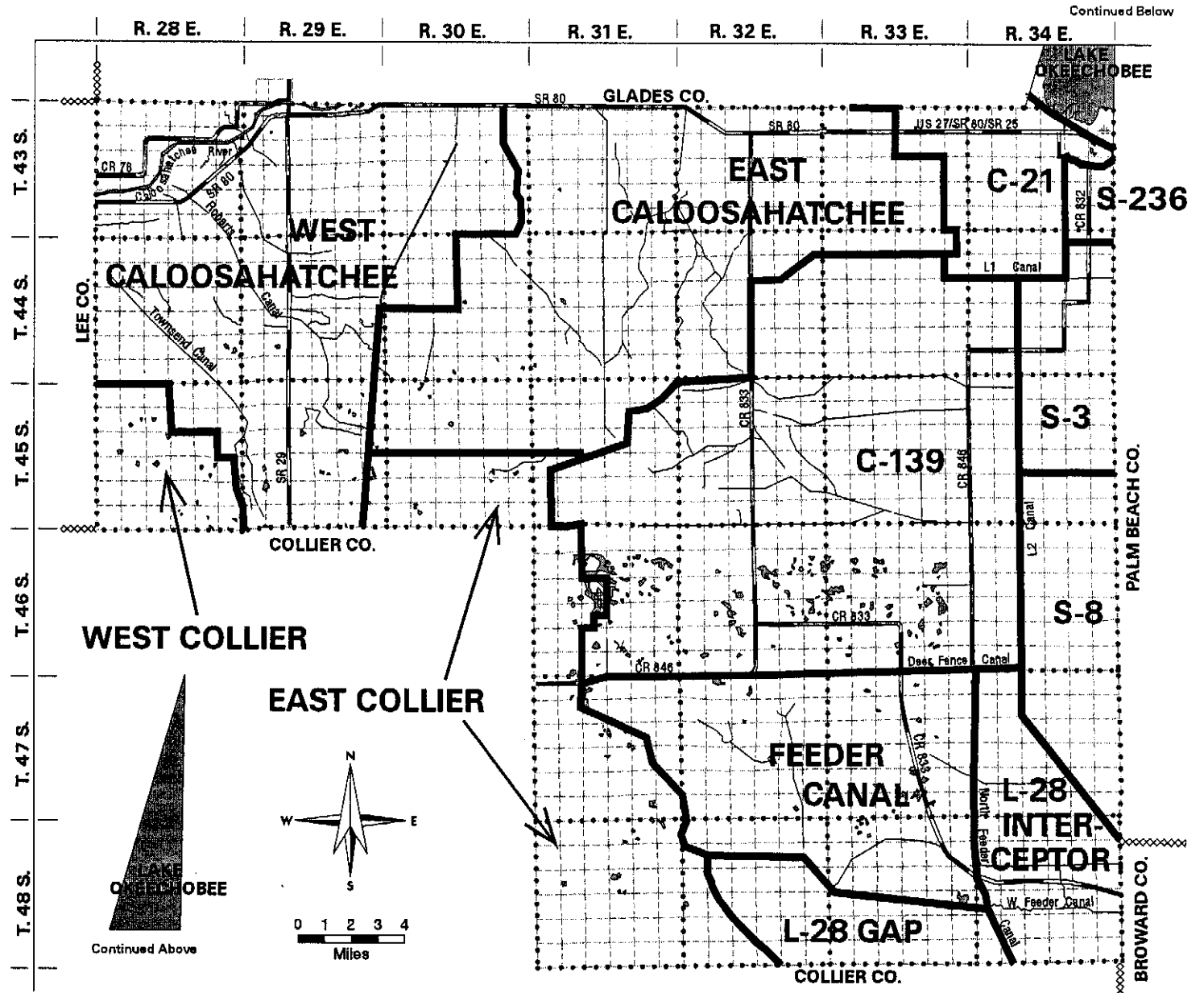
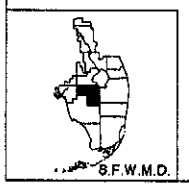
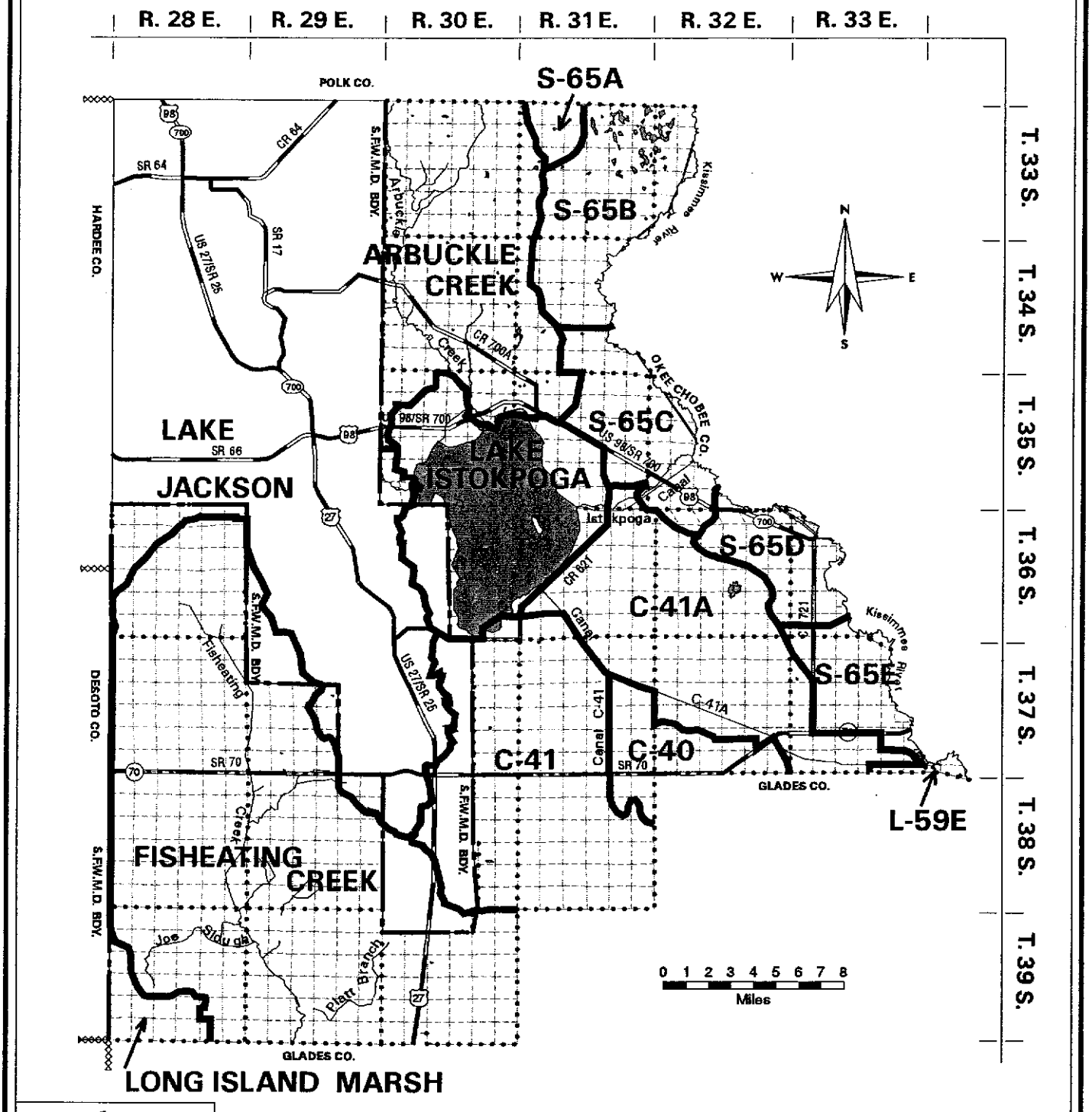


Figure B-7



DRAINAGE BASINS for HENDRY COUNTY, FL.



DRAINAGE BASINS for areas of HIGHLANDS COUNTY, FL. within the S.F.W.M.D.

Figure B-8

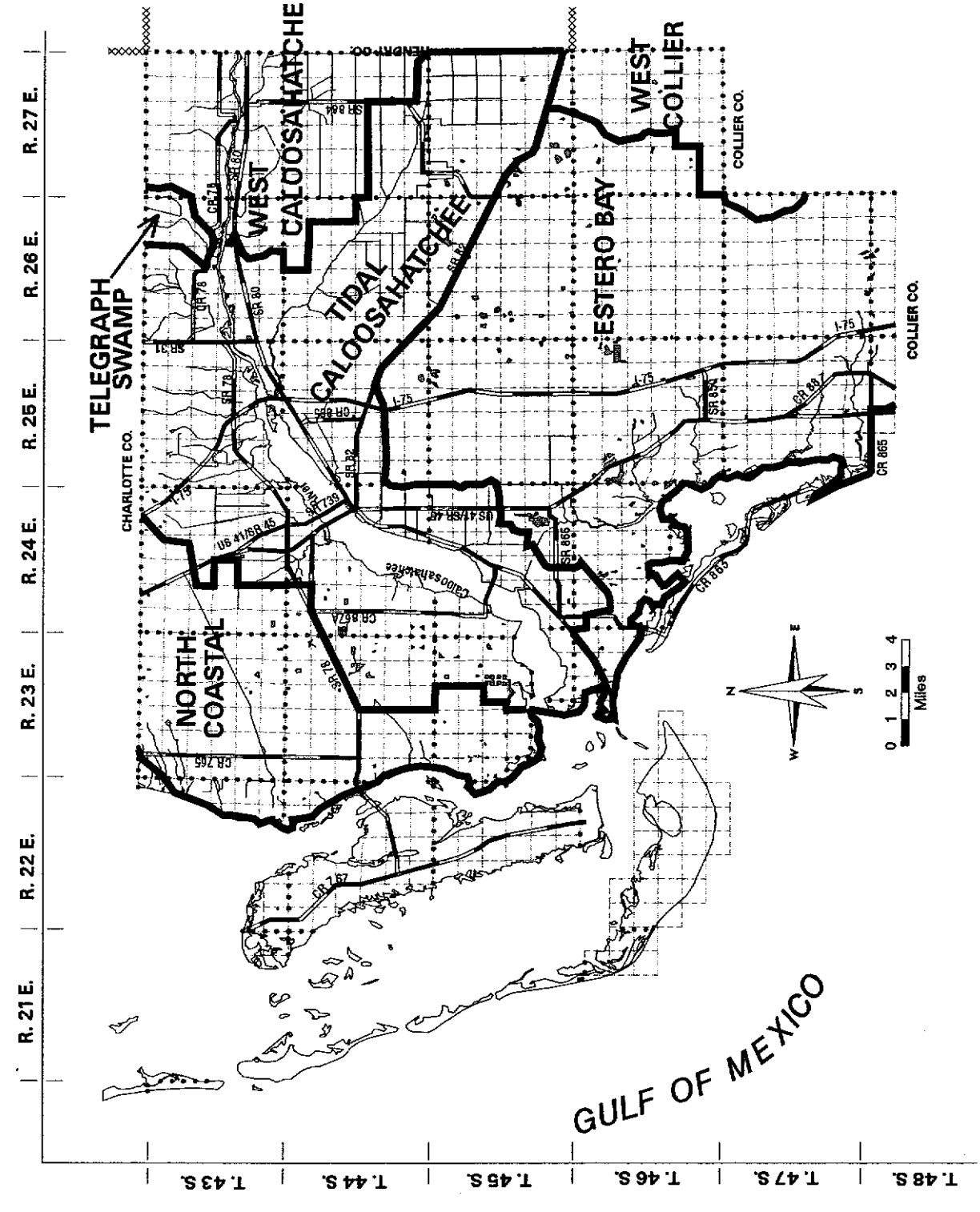
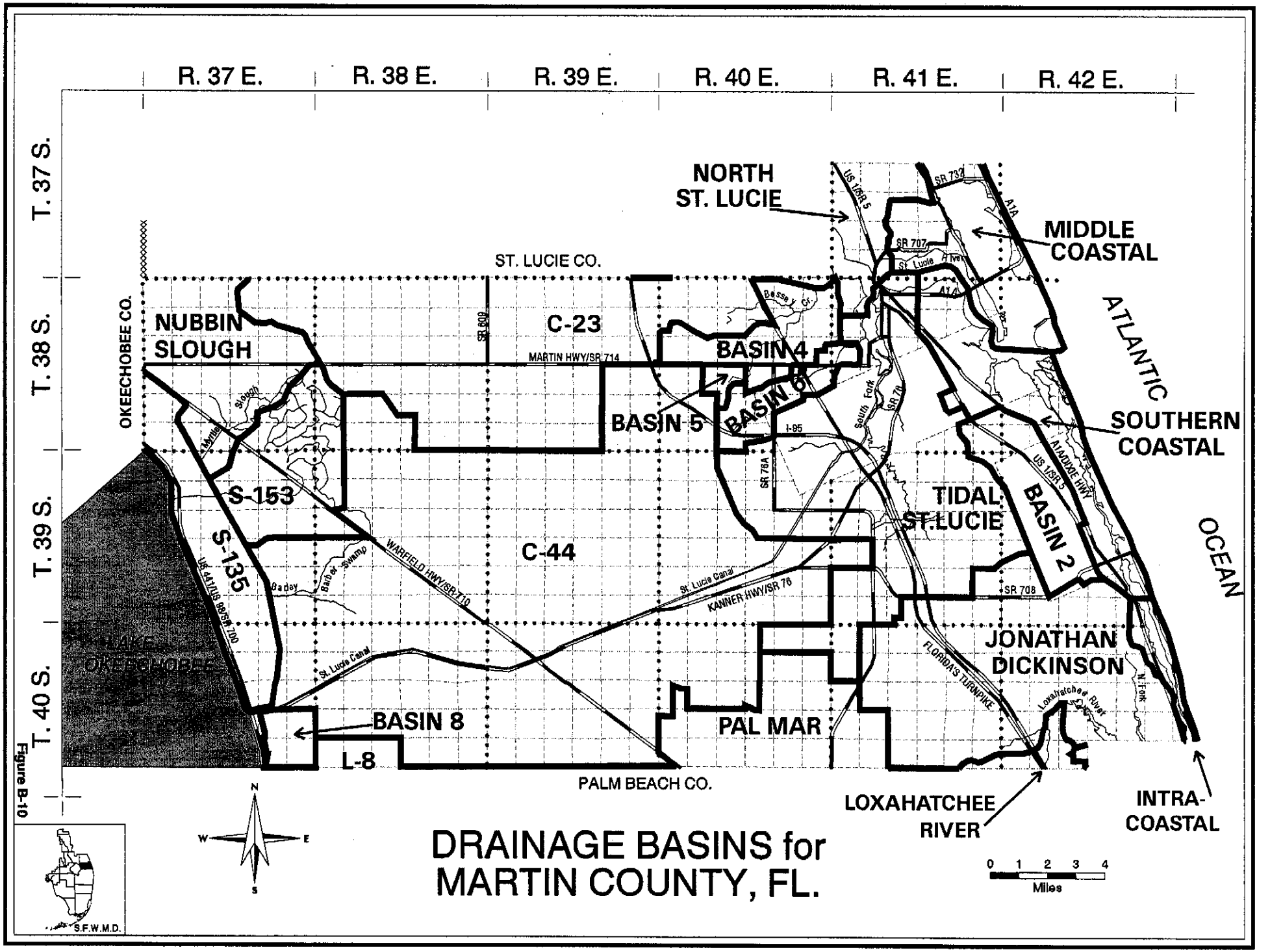

DRAINAGE BASINS for
LEE COUNTY, FL.
TELEGRAPH SWAMP
WEST CALOOSAHATCHEE
TIDAL CALOOSAHATCHEE
ESTERO BAY
WEST COLLIER
NORTH COASTAL
CHARLOTTE CO.
COLLIER CO.
HENDRY CO.
GULF OF MEXICO
R. 21 E.
R. 22 E.
R. 23 E.
R. 24 E.
R. 25 E.
R. 26 E.
R. 27 E.
T. 43 S.
T. 44 S.
T. 45 S.
T. 46 S.
T. 47 S.
T. 48 S.
Miles
0 1 2 3 4
S.F.W.M.D.

Figure B-9



DRAINAGE BASINS for MARTIN COUNTY, FL.

Figure B-10

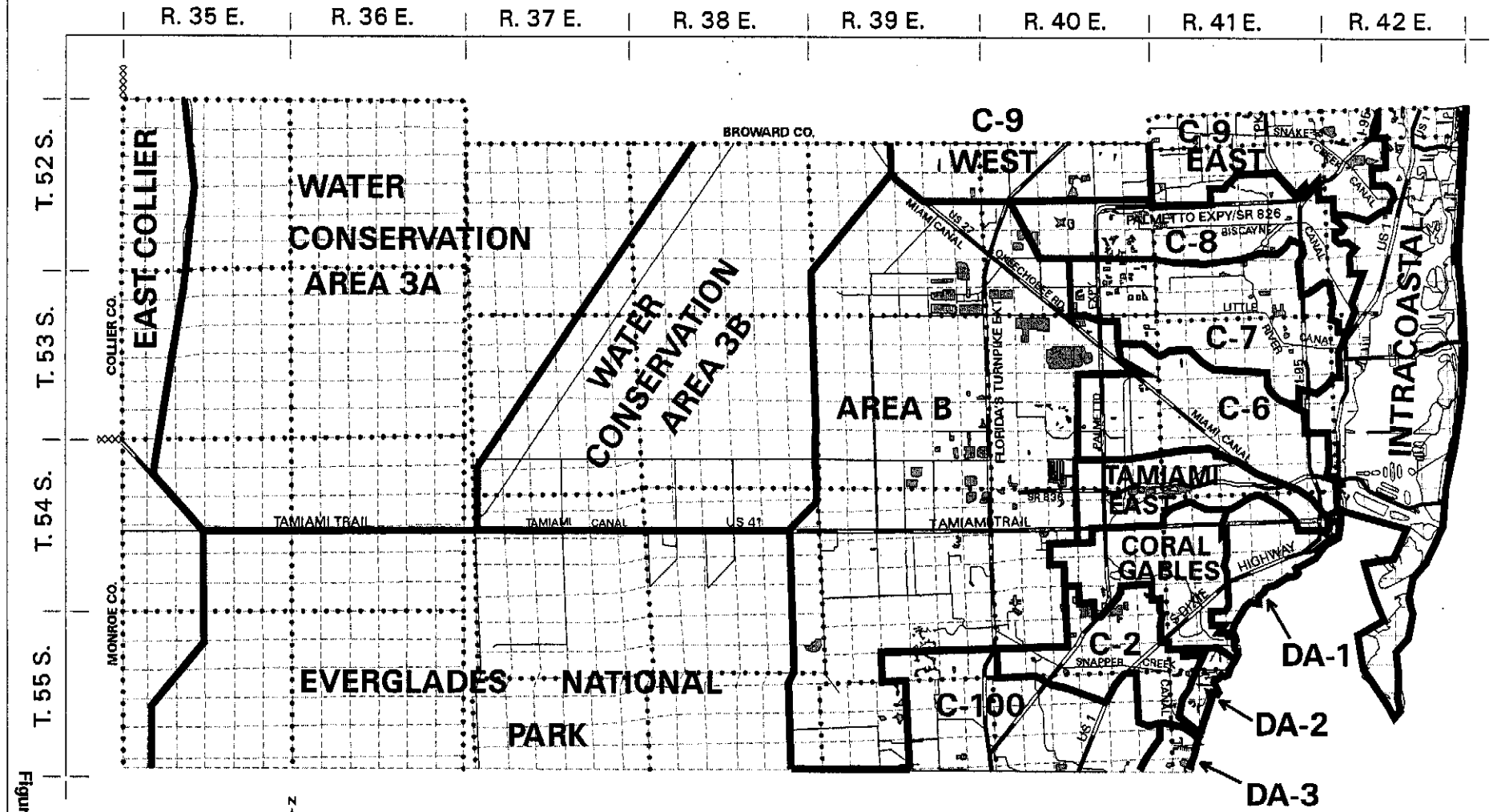


Figure B-11

DRAINAGE BASINS for NORTHERN MIAMI-DADE COUNTY, FL.

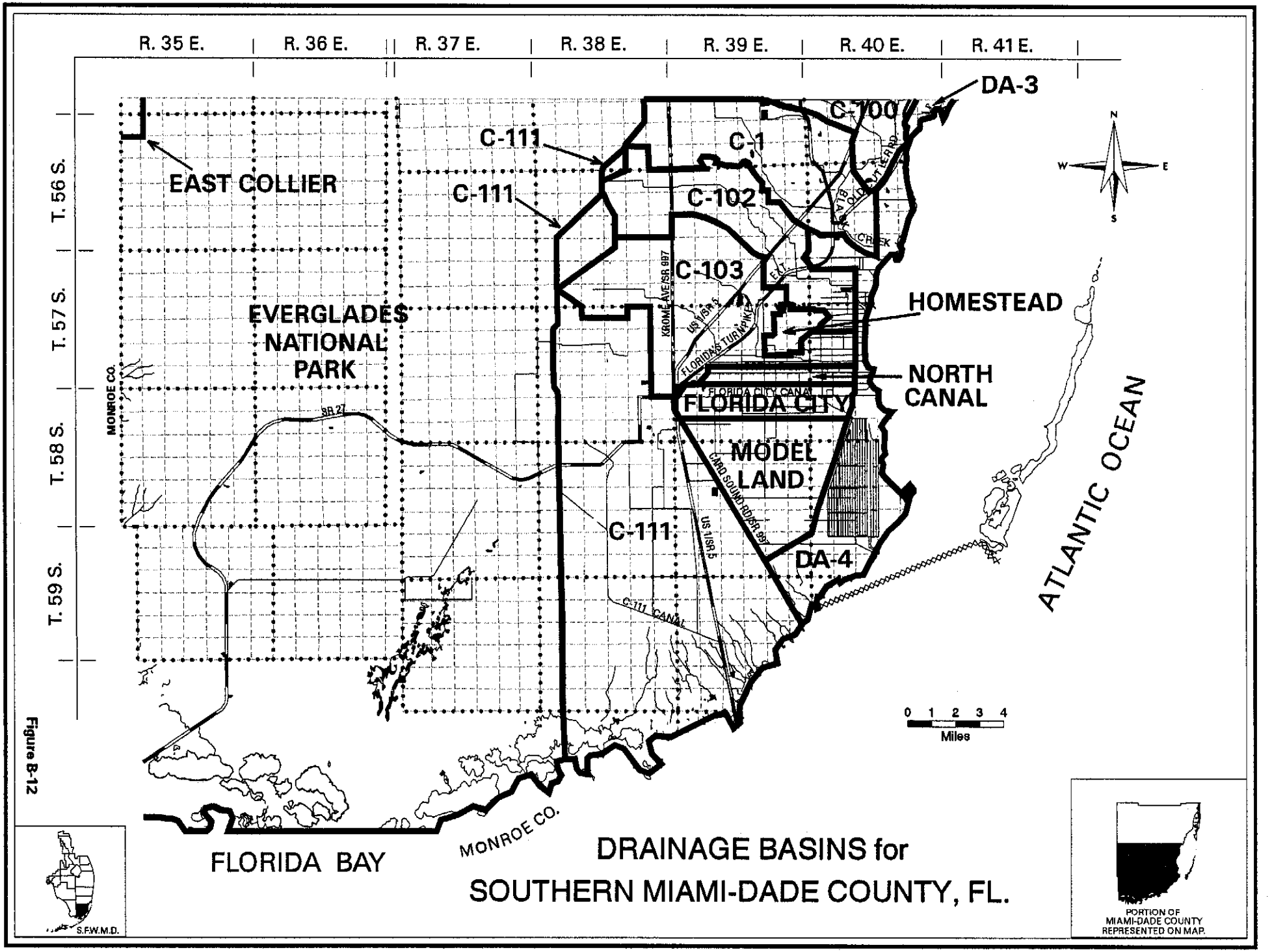
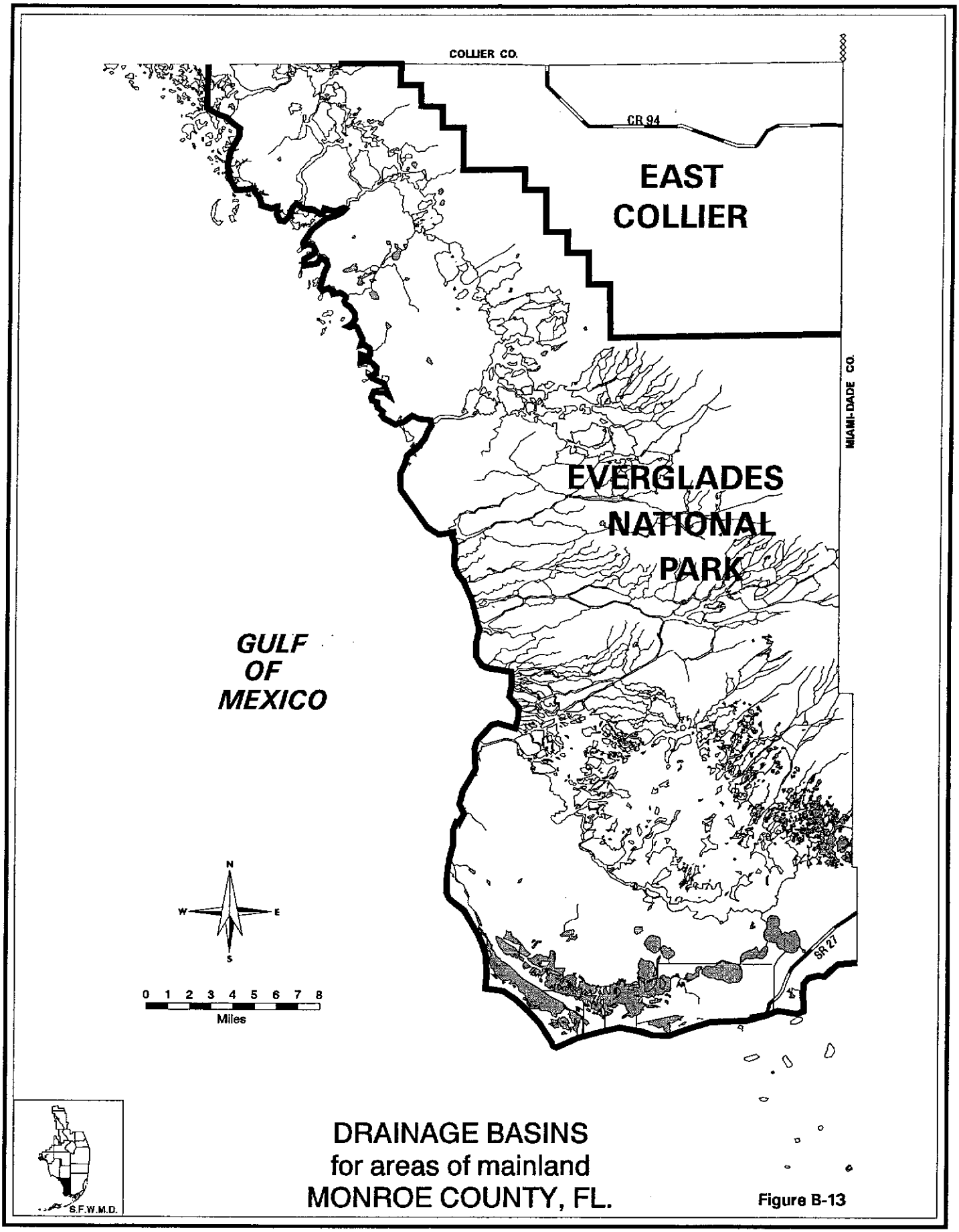
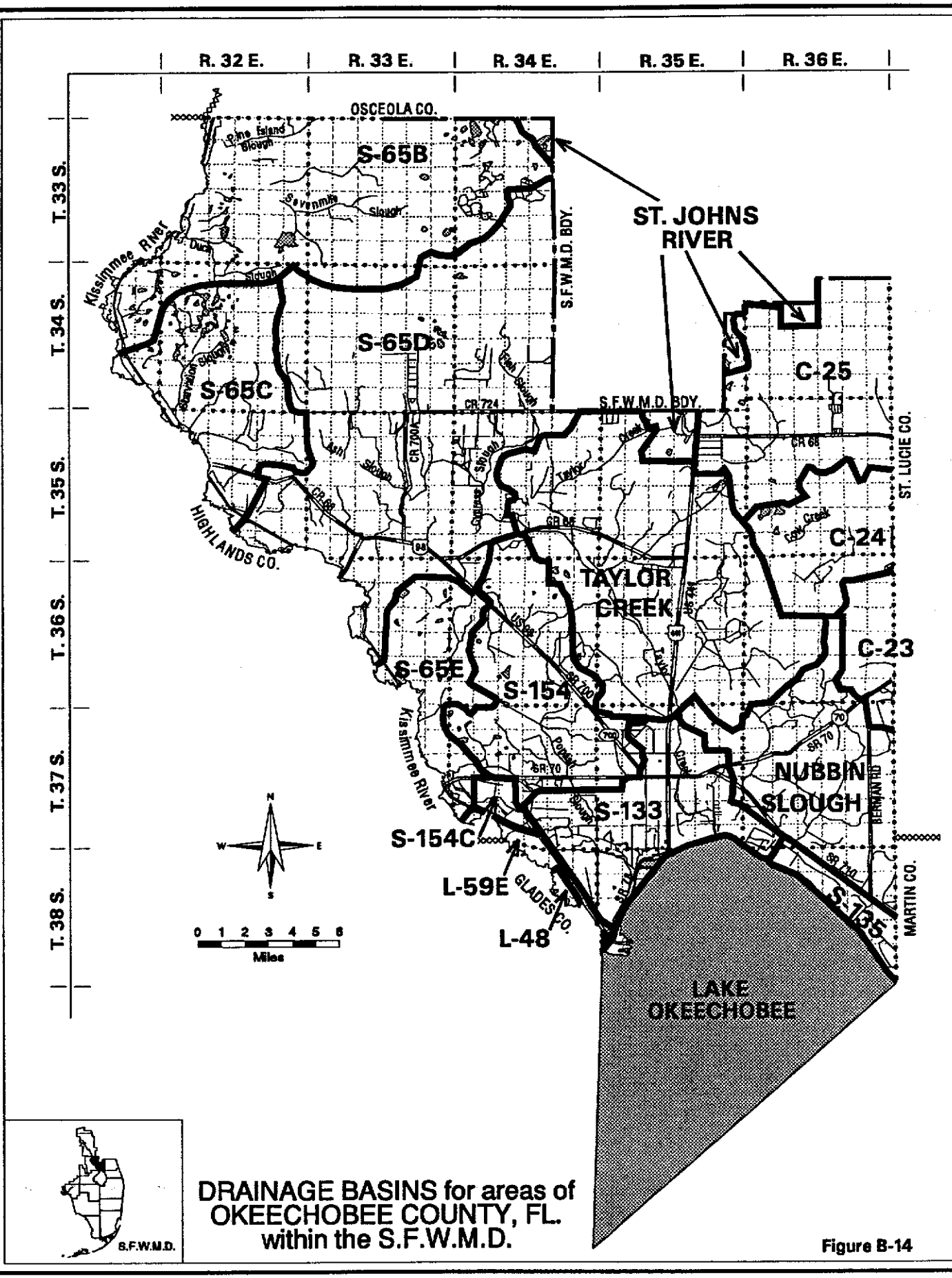

R. 35 E.
R. 36 E.
R. 37 E.
R. 38 E.
R. 39 E.
R. 40 E.
R. 41 E.
T. 56 S.
T. 57 S.
T. 58 S.
T. 59 S.
DA-3
C-100
C-1
C-111
C-102
C-103
EAST COLLIER
EVERGLADES NATIONAL PARK
HOMESTEAD
NORTH CANAL
FLORIDA CITY
MODEL LAND
DA-4
ATLANTIC OCEAN
MONROE CO.
SR 27
US 1/SR 5
KROME AVE/SR 997
FLORIDA'S TURNPIKE
FLORIDA CITY CANAL
CARD SOUND RD/SR 997
C-111 CANAL
0 1 2 3 4
Miles
FLORIDA BAY
MONROE CO.
DRAINAGE BASINS for
SOUTHERN MIAMI-DADE COUNTY, FL.
S.F.W.M.D.
PORTION OF MIAMI-DADE COUNTY REPRESENTED ON MAP.

Figure B-12



DRAINAGE BASINS
for areas of mainland
MONROE COUNTY, FL.

Figure B-13



DRAINAGE BASINS for areas of OKEECHOBEE COUNTY, FL. within the S.F.W.M.D.

Figure B-14

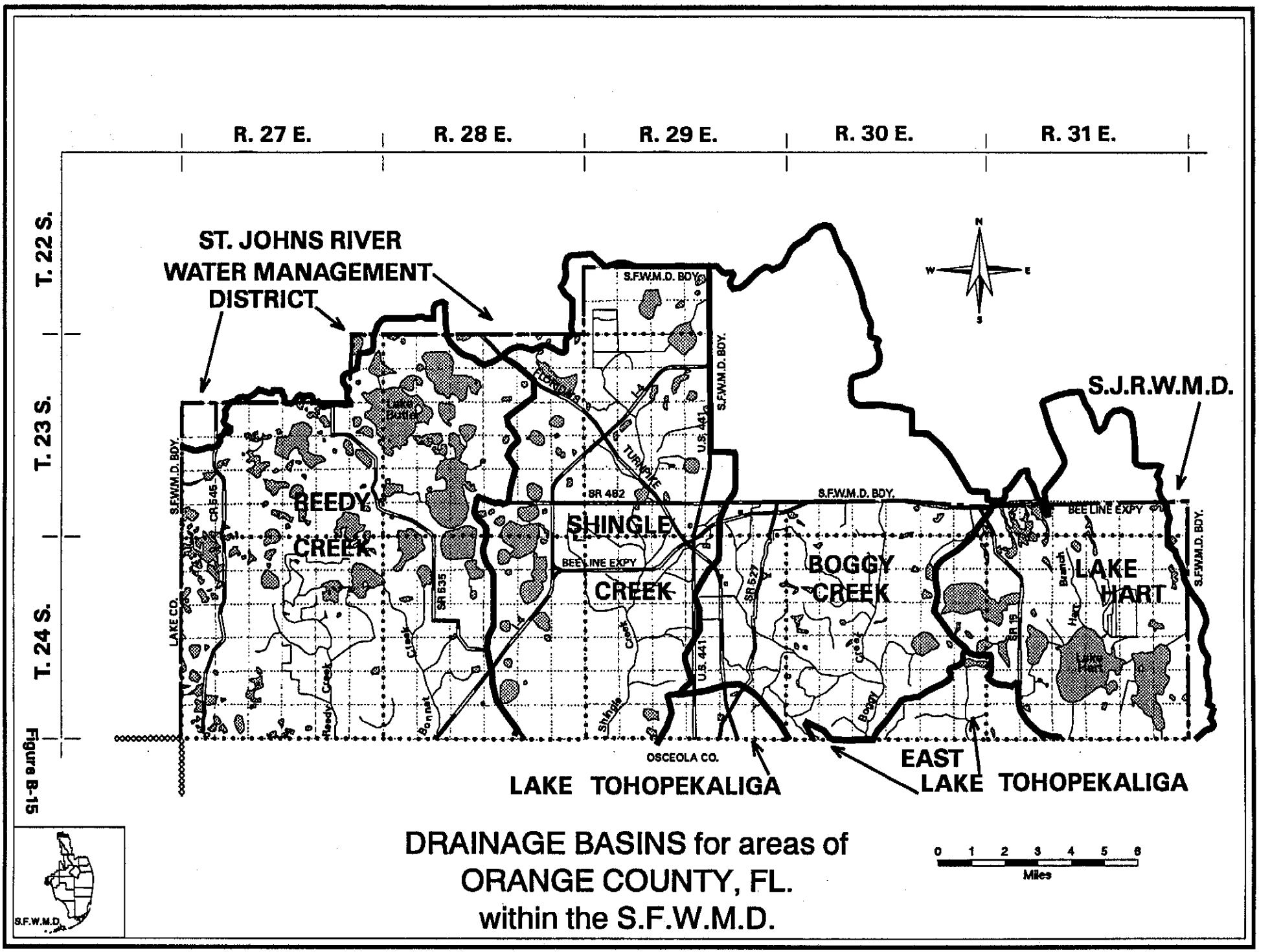


Figure B-15

DRAINAGE BASINS for areas of ORANGE COUNTY, FL. within the S.F.W.M.D.

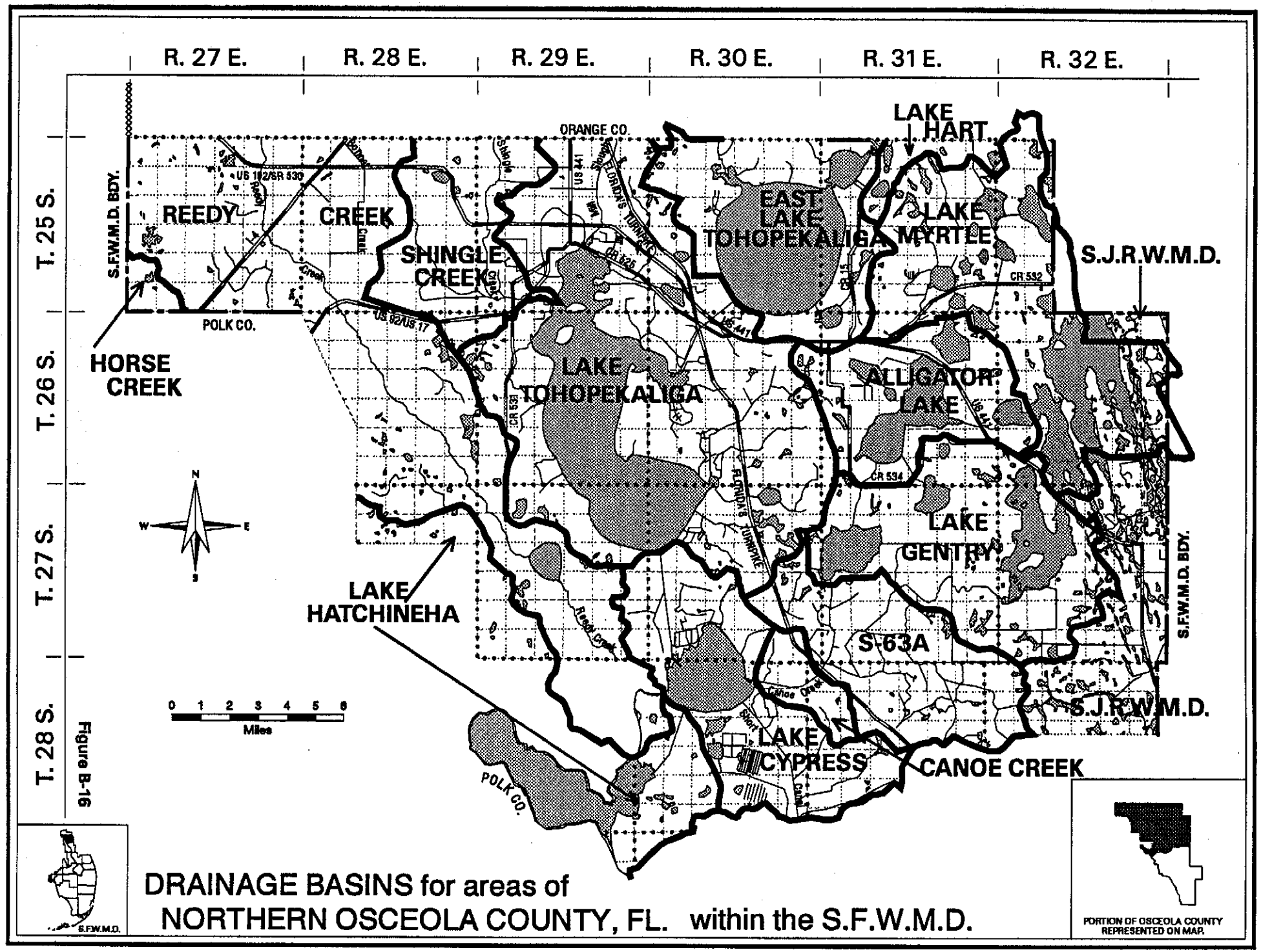
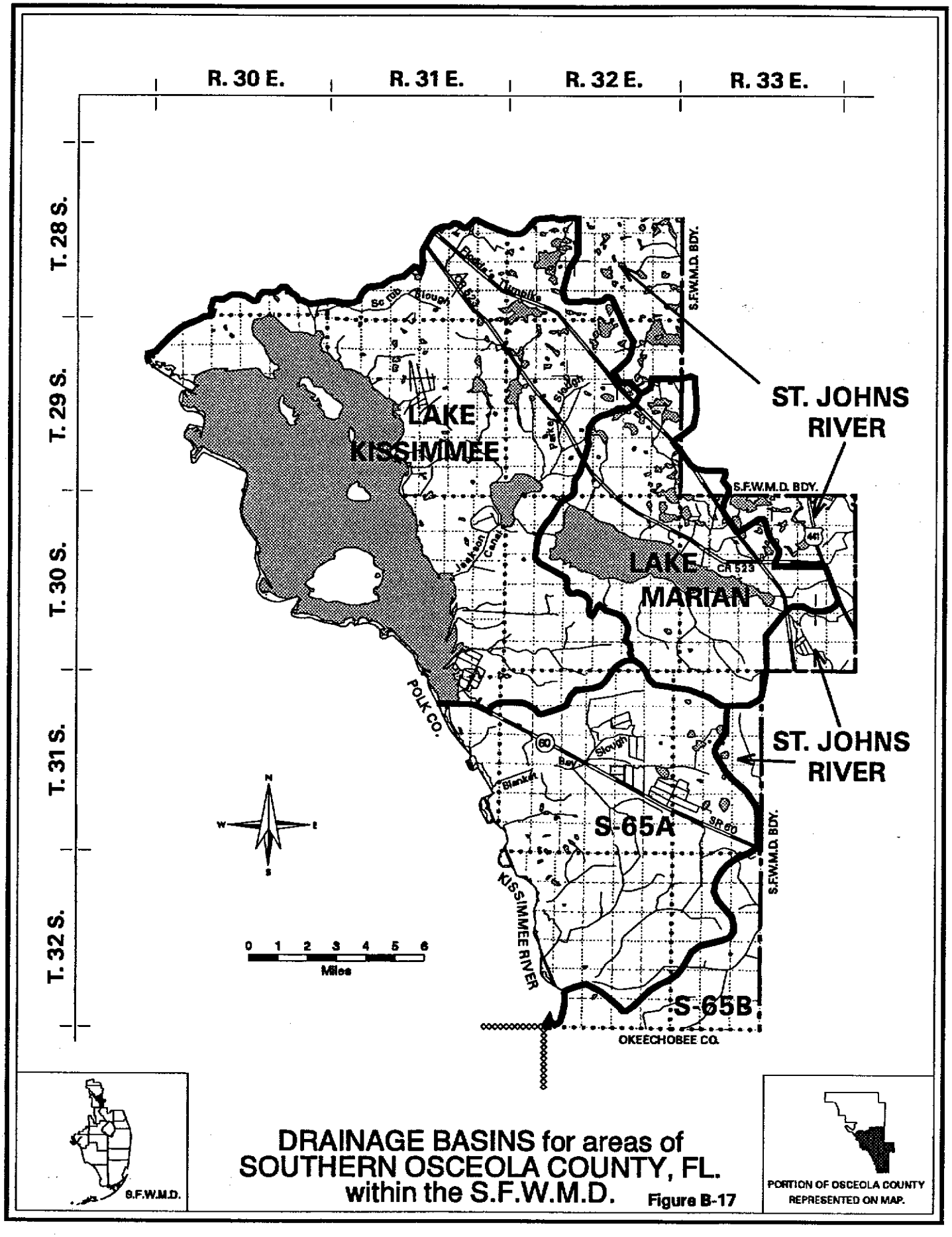


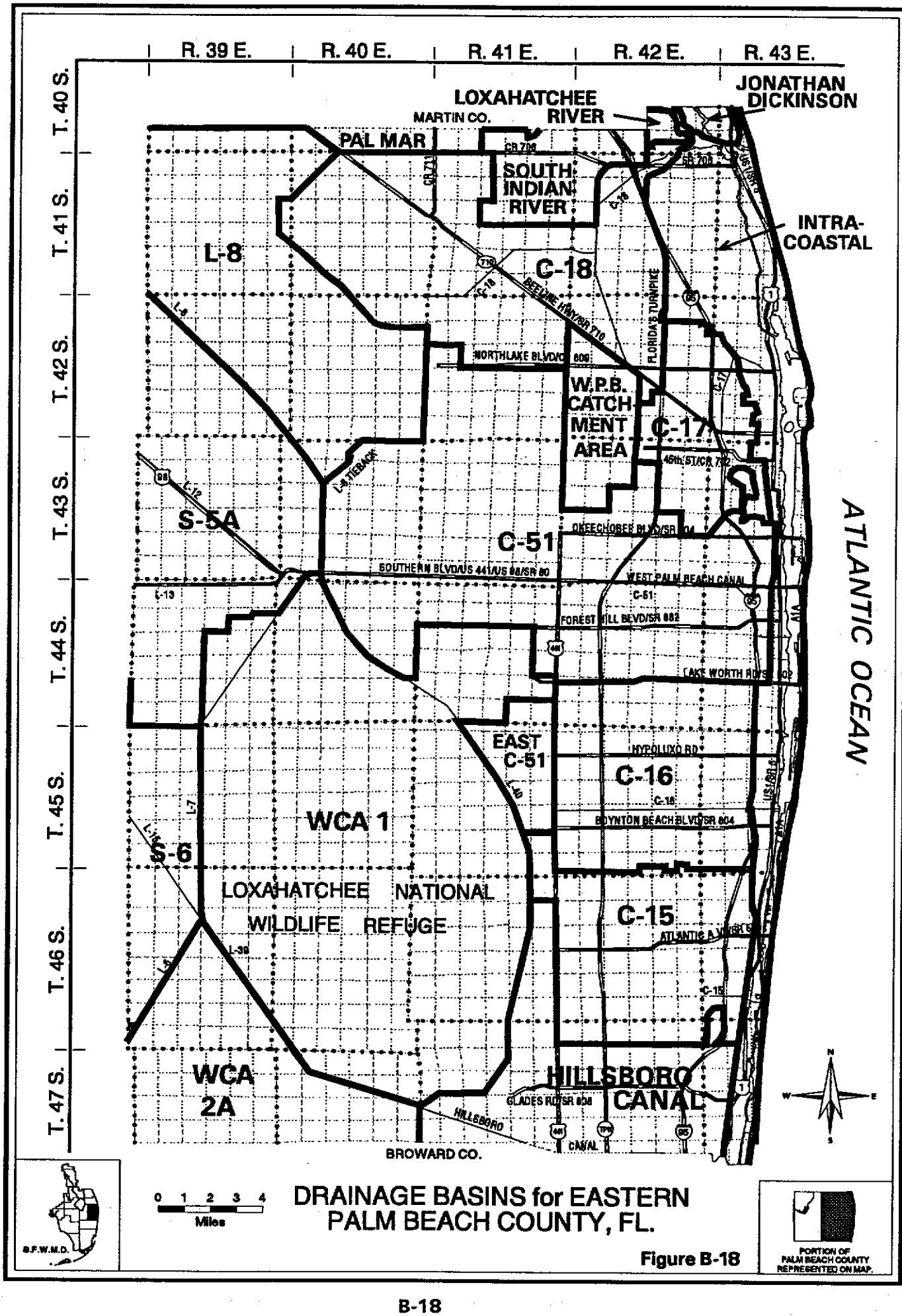
Figure B-16

DRAINAGE BASINS for areas of NORTHERN OSCEOLA COUNTY, FL. within the S.F.W.M.D.



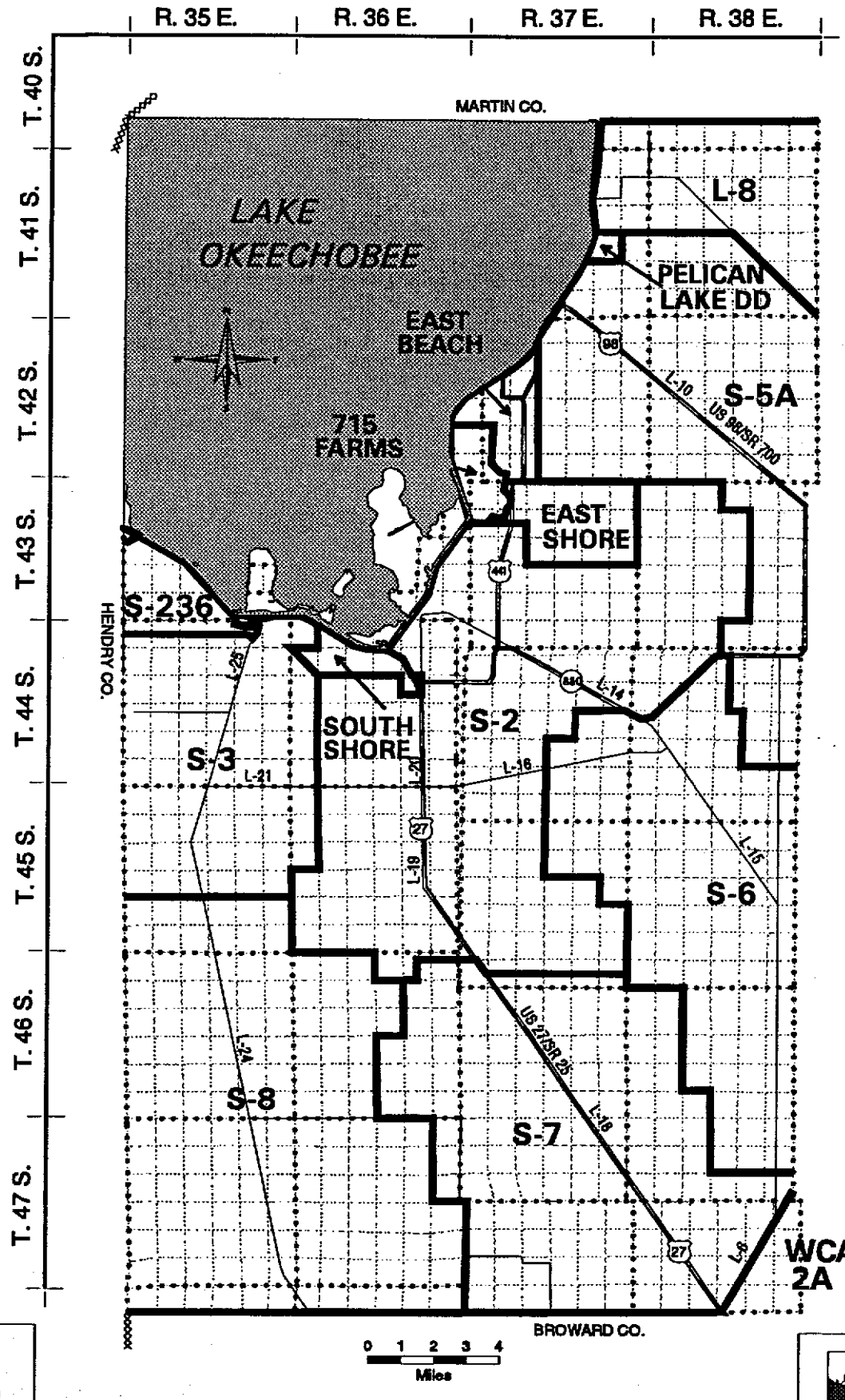
DRAINAGE BASINS for areas of SOUTHERN OSCEOLA COUNTY, FL. within the S.F.W.M.D.

Figure B-17

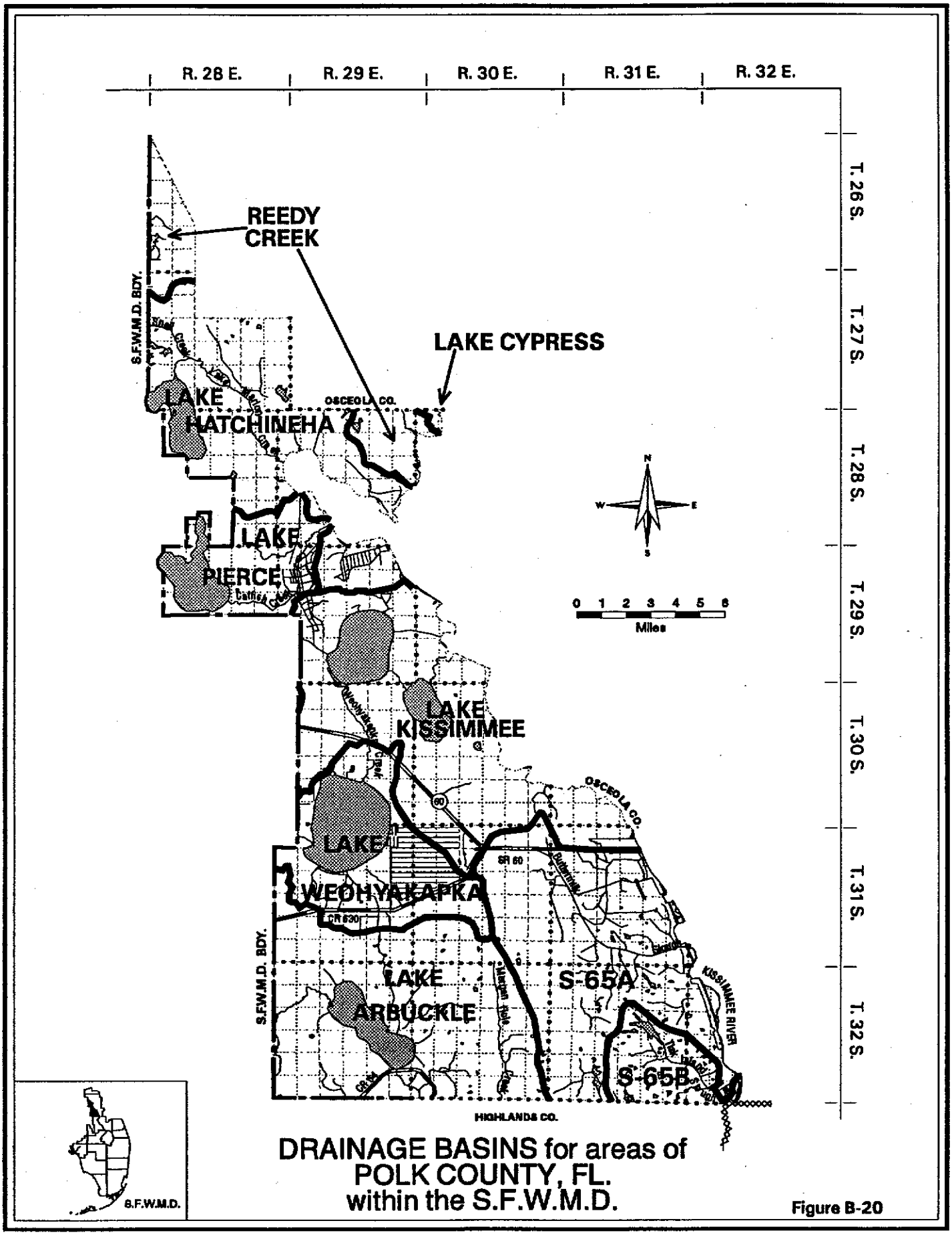


DRAINAGE BASINS for EASTERN PALM BEACH COUNTY, FL.

Figure B-18

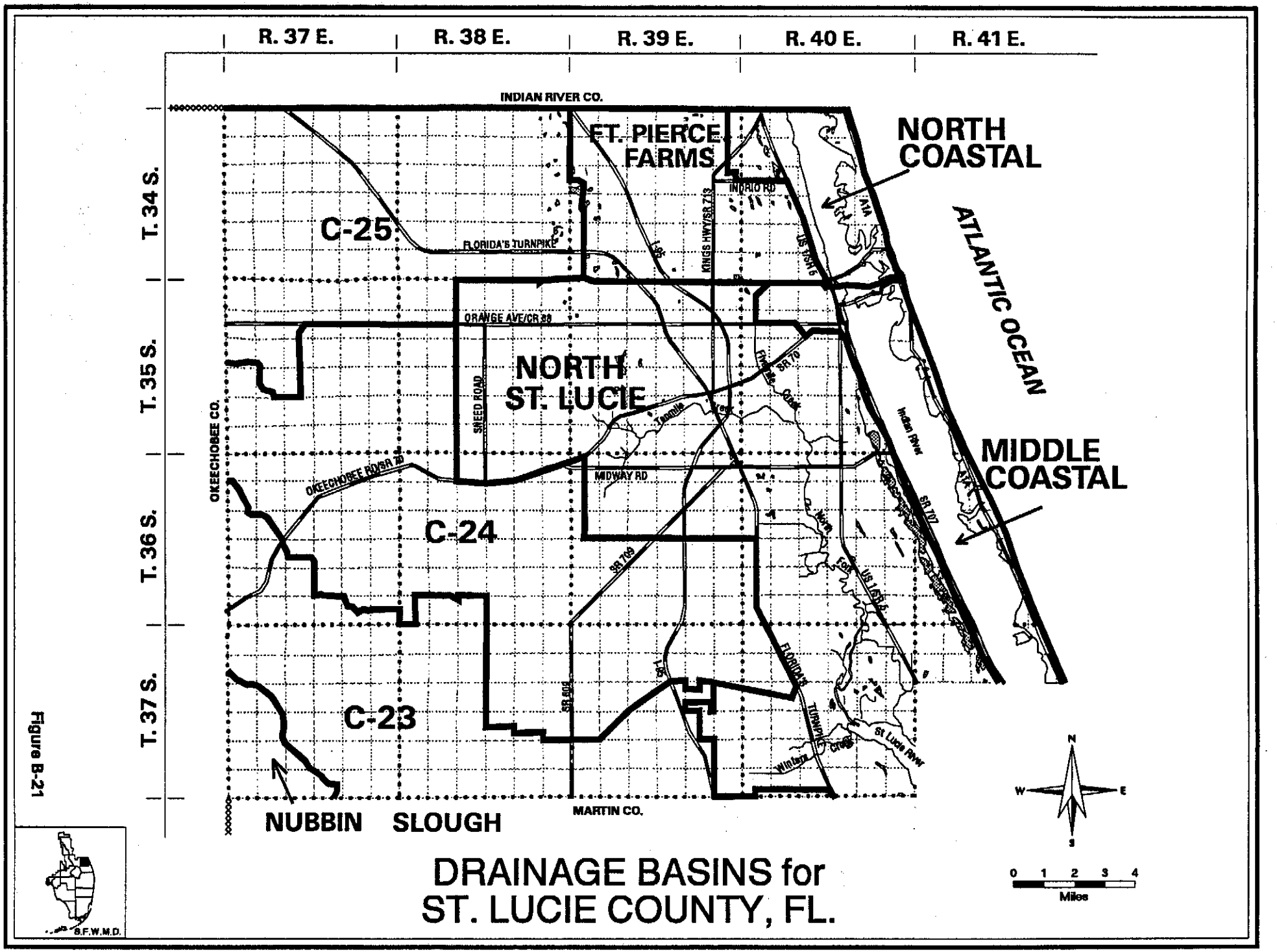


DRAINAGE BASINS for WESTERN PALM BEACH COUNTY, FL. Figure B-19



DRAINAGE BASINS for areas of POLK COUNTY, FL. within the S.F.W.M.D.

Figure B-20



DRAINAGE BASINS for ST. LUCIE COUNTY, FL.

Figure B-21

Rainfall

A. Selection of Design Event

The depth of rainfall in inches for a specific return frequency and storm duration is the most basic parameter needed in the design and analysis of a stormwater management system. The design event (return frequency storm) is determined either from local criteria or from the *Basis of Review* document.

B. Determination of Rainfall Amount

Once the design frequency and duration are known, use Figures C-1 through C-9 for estimating the appropriate rainfall depth.

Example 1:

Assume the following:

Frequency - 25-year
Duration - 24-hour
Location - West Palm Beach

From Figure C-5 the 25-year, 24-hour depth is approximately 10.1 inches at West Palm Beach.

10.1 inches Answer

Example 2:

Assume the following:

Frequency - 100-year
Duration - 72-hour
Location - Stuart

Method 1: From Figure C-6 the 100-year, 24-hour depth is 10.5 inches. From the *Basis of Review* modify the 24-hour value by 135.9% to obtain a 72-hour (3-day) depth. Consequently, the 100-year, 72-hour depth is:

10.5 x 1.359 = 14.3 inches Answer using Method 1

Method 2: From Figure C-9, the 100-year, 72-hour depth is approximately 13.8 inches at Stuart.

13.8 inches Answer using Method 2

The District will accept answers using either method, but the same method must be used throughout an application, and must be specified at the beginning of the design event determination process.

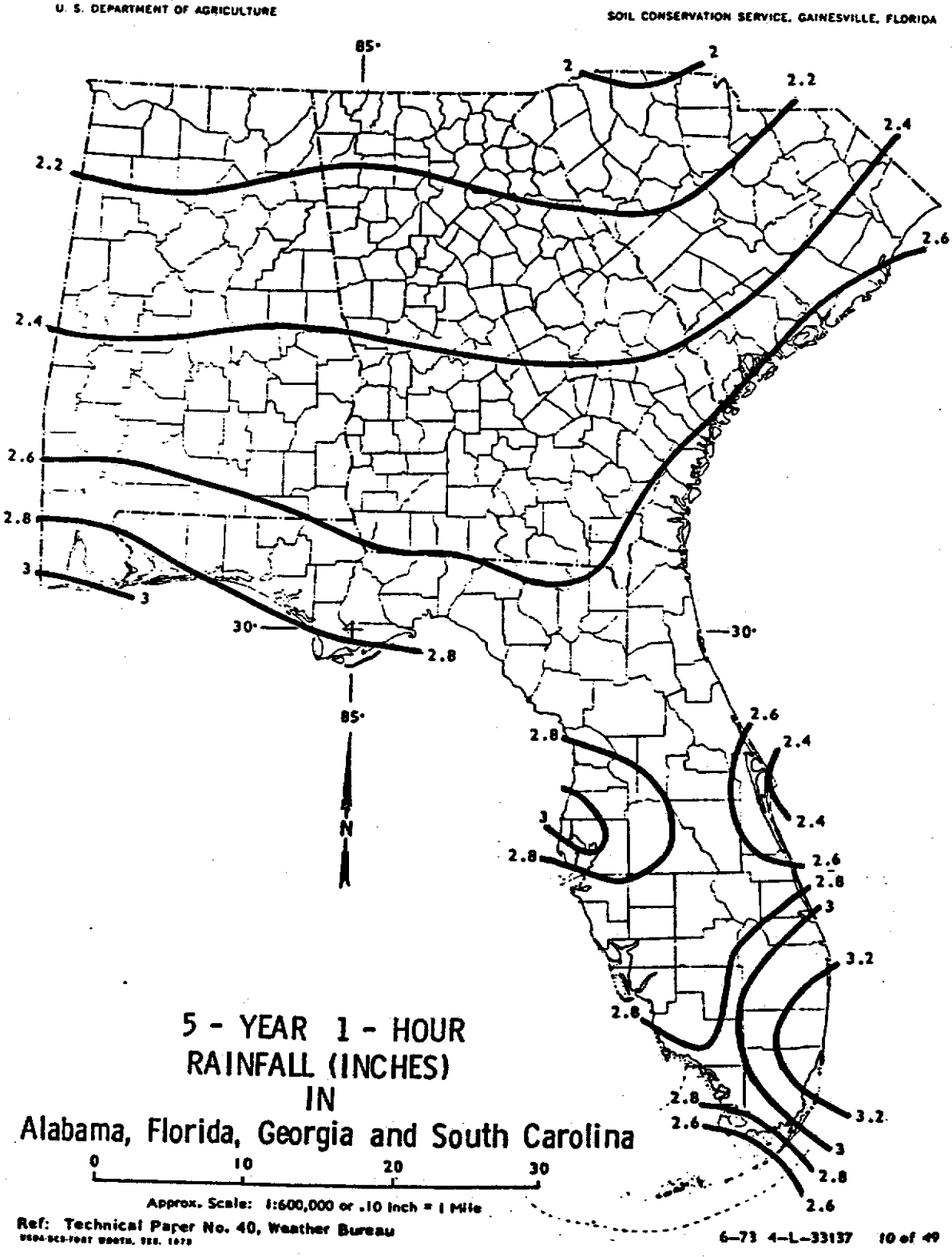

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE, GAINESVILLE, FLORIDA
85°
30°
2
2.2
2.4
2.6
2.8
3
3.2
N
5 - YEAR 1 - HOUR
RAINFALL (INCHES)
IN
Alabama, Florida, Georgia and South Carolina
0
10
20
30
Approx. Scale: 1:600,000 or .10 inch = 1 Mile
Ref: Technical Paper No. 40, Weather Bureau
6-73 4-L-33137 10 of 49

Figure C-1

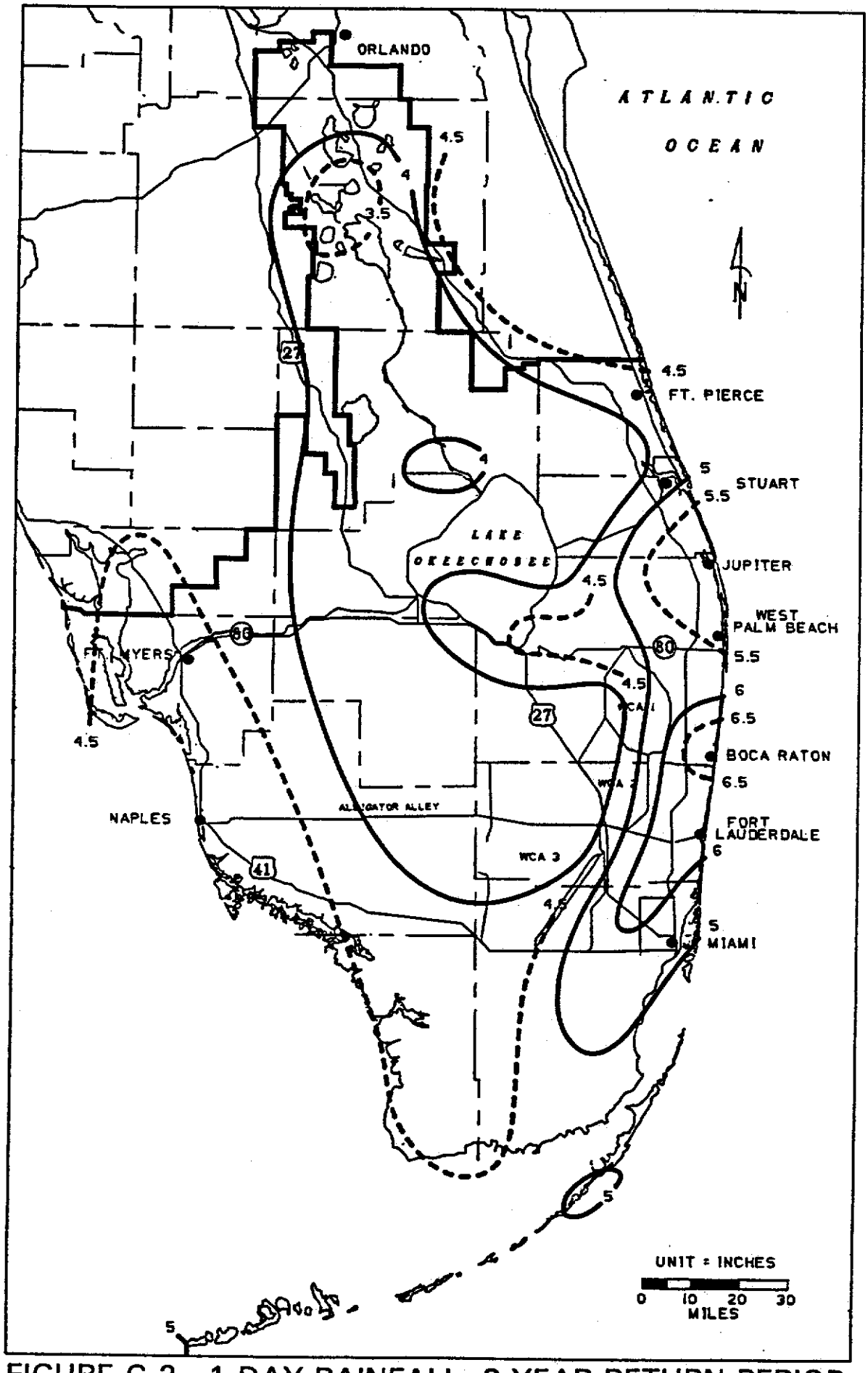


FIGURE C-2. 1-DAY RAINFALL: 3-YEAR RETURN PERIOD

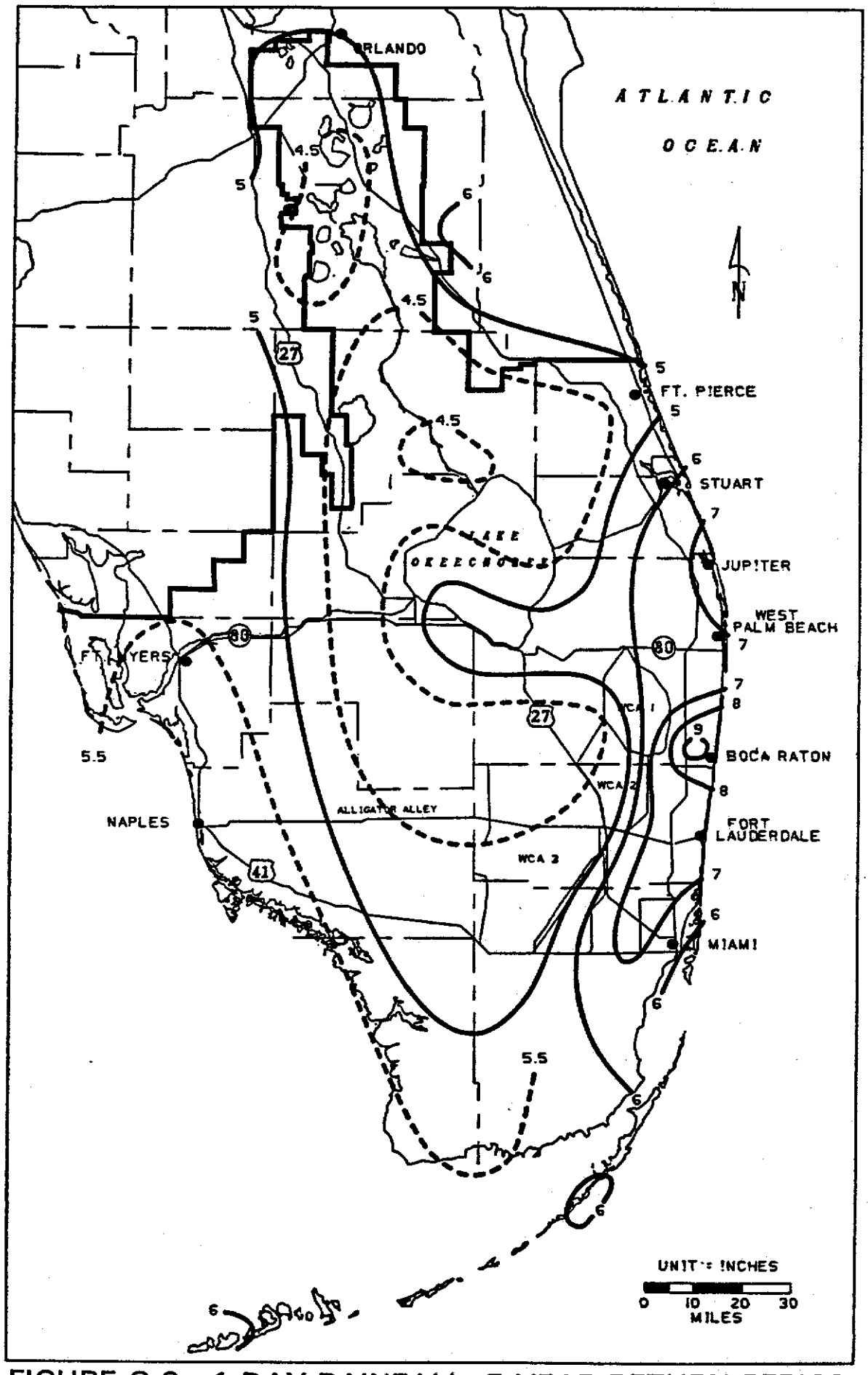


FIGURE C-3. 1-DAY RAINFALL: 5-YEAR RETURN PERIOD

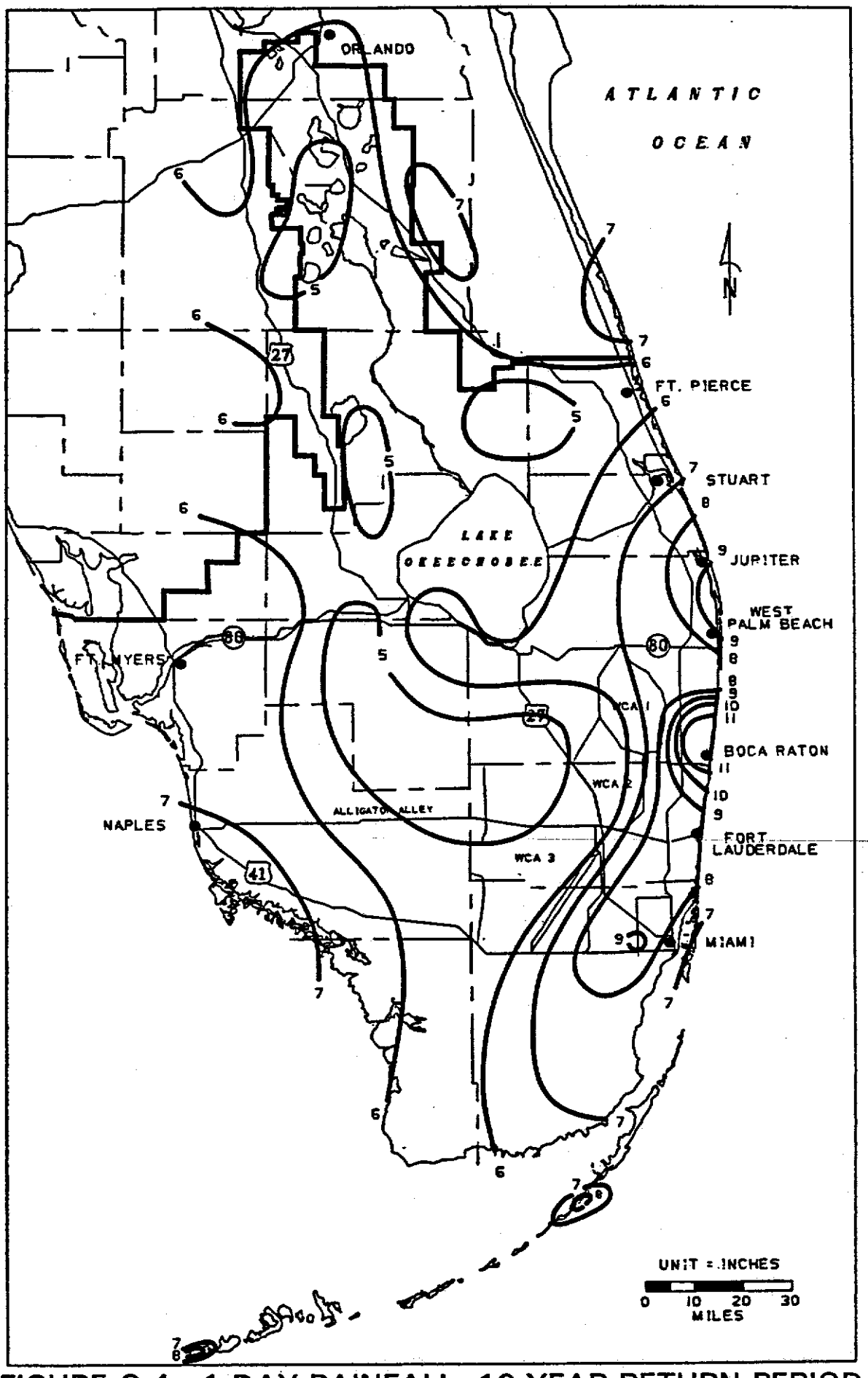


FIGURE C-4. 1-DAY RAINFALL: 10-YEAR RETURN PERIOD

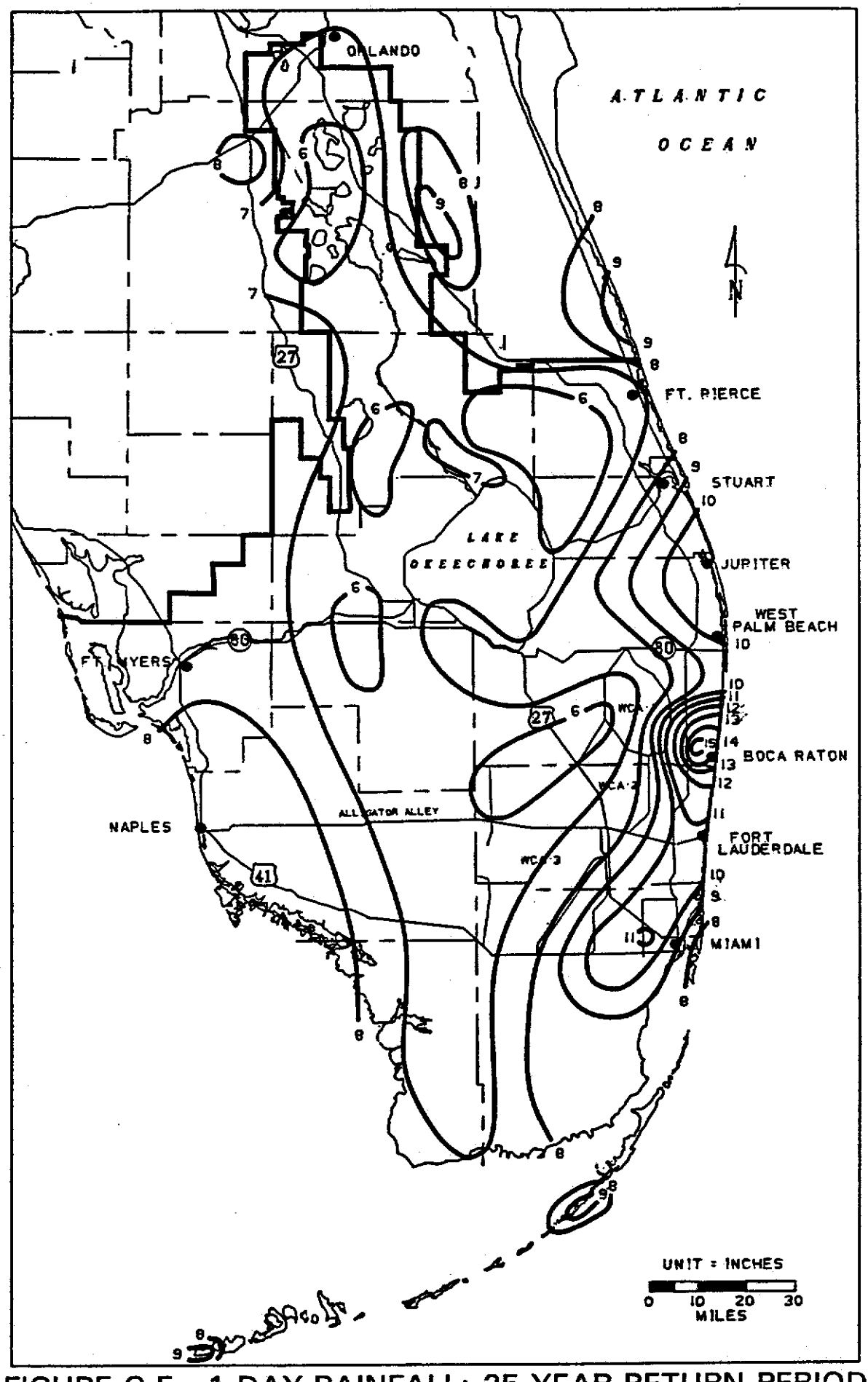


FIGURE C-5. 1-DAY RAINFALL: 25-YEAR RETURN PERIOD

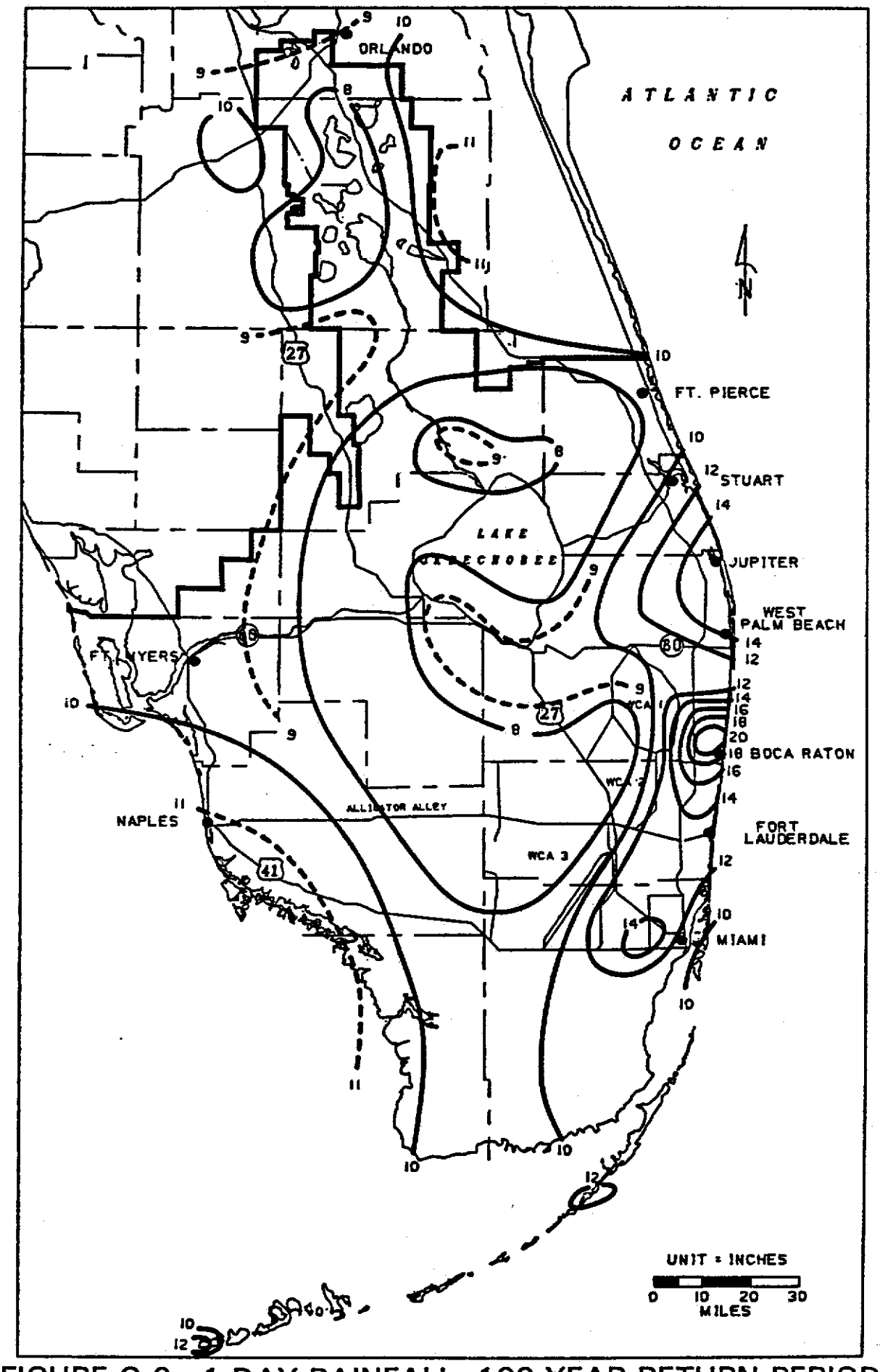


FIGURE C-6. 1-DAY RAINFALL: 100-YEAR RETURN PERIOD

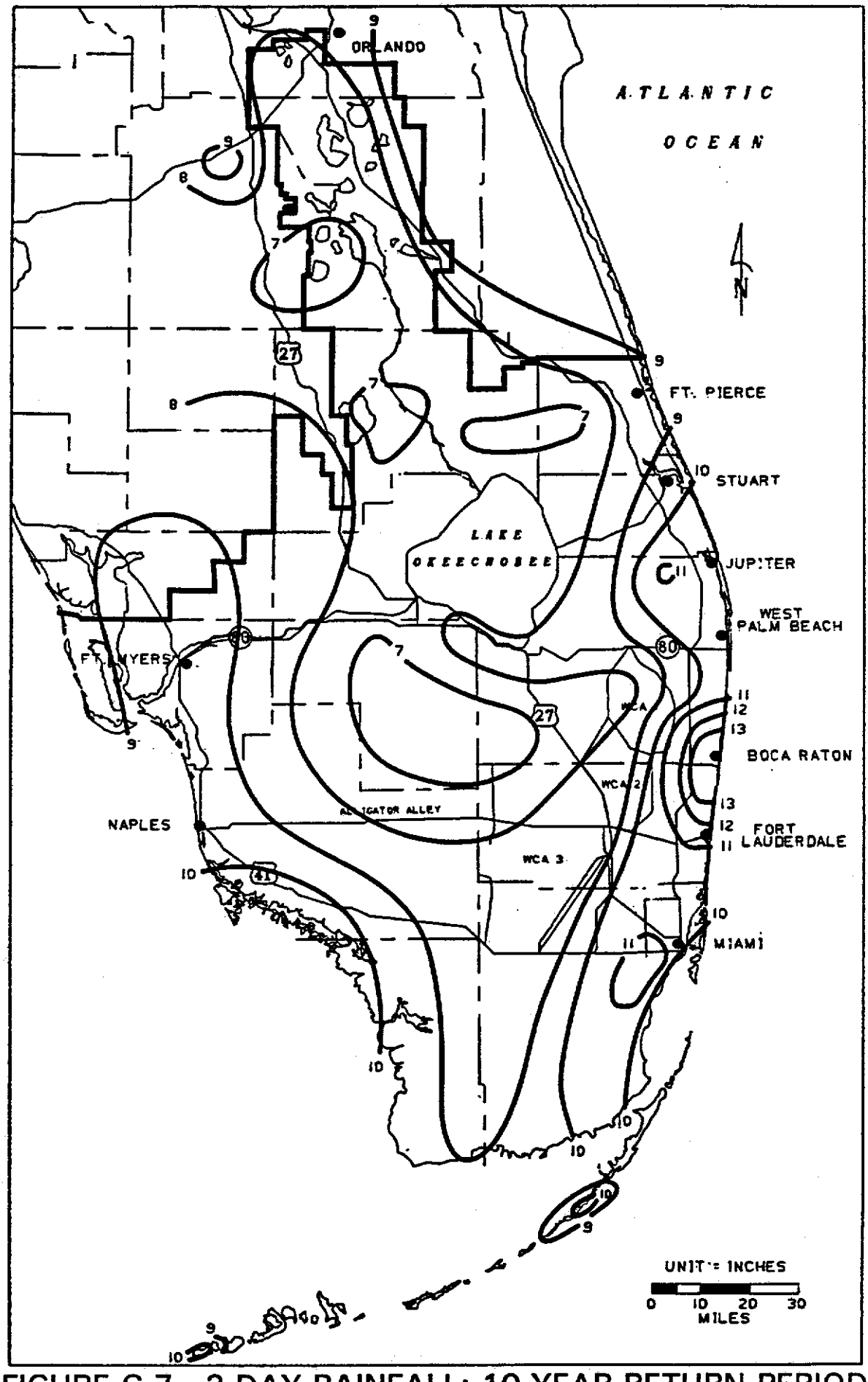


FIGURE C-7. 3-DAY RAINFALL: 10-YEAR RETURN PERIOD

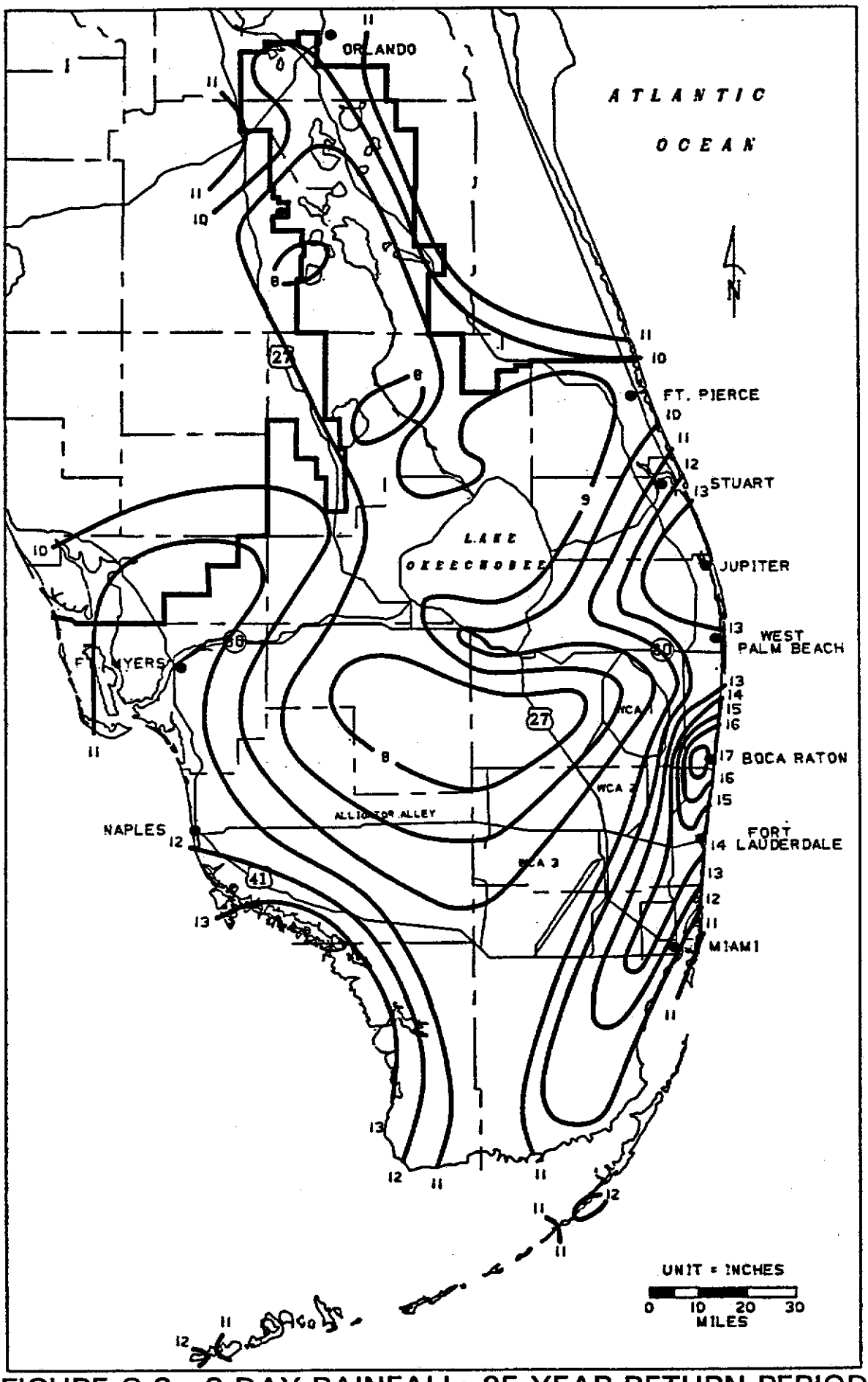


FIGURE C-8. 3-DAY RAINFALL: 25-YEAR RETURN PERIOD

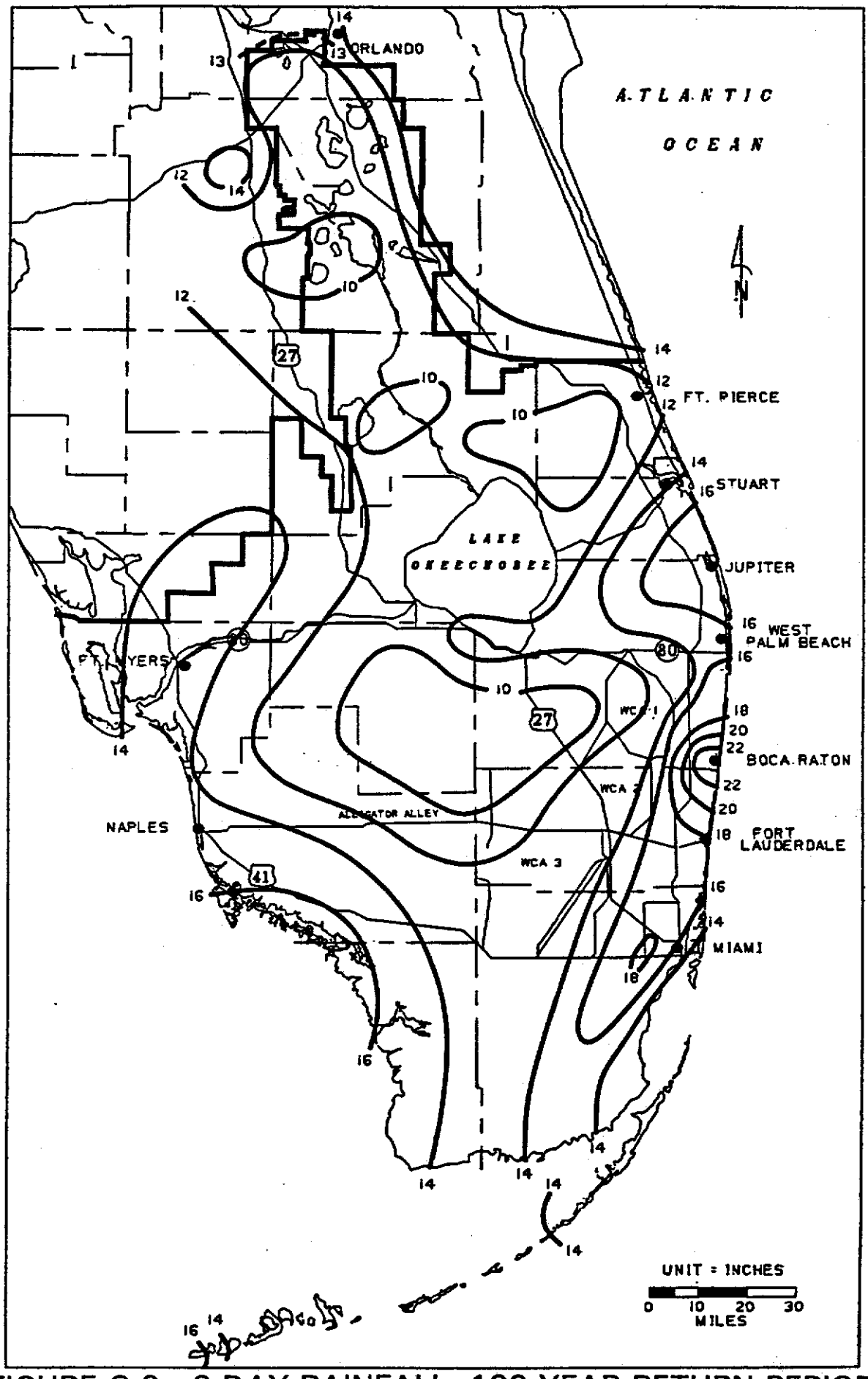


FIGURE C-9. 3-DAY RAINFALL: 100-YEAR RETURN PERIOD

Determination of Seasonal High Water Table (SHWT)

This section contains a discussion of certain indicators and methodologies that applicants can use to determine the elevation of the seasonal high water table (SHWT). The SHWT is the highest average depth of soil saturation during the wet season in a normal year. For the purposes of this section, the discussion of SHWT refers to water *below ground*. [Note: For a discussion of indicators of the seasonal high water *level* when it is *above ground*, see the section in the Environmental Design Aids titled "Protection of Wetland Hydroperiods."] The SHWT is one of the components that should be considered in the design of a surface water management system.

What follows is a summary of the methodology developed by the Natural Resource Conservation Service, NRCS, (formerly Soil Conservation Service (SCS)). This methodology is based on the chemical changes in the soil resulting from the presence of water. The water must be present in the soil for a time period sufficient to generate anaerobic conditions which result in changes in the color and morphology of the soil.

Discussion

An accurate evaluation of the SHWT elevation on a project site is an important aspect in the design of surface water management systems which meet the criteria in sections 5.4, 6.10, 6.11 and 6.12 of the *Basis of Review for Environmental Resource Permit Applications*.

The SHWT elevation should be used to design wet and dry detention and retention areas, predict soil storage, set project control elevations, and protect wetland hydroperiods. The proper use of the SHWT elevation in a project design also ensures the preservation of ground water supplies, protects estuaries from excess freshwater inflows, and aids in establishing wetland boundaries. [Note: there are additional factors to consider in establishing project control elevations such as wetland water level indicators, existing drainage facilities and existing projects. Applicants are advised to consult District staff regarding site-specific features which may affect establishing control elevations.]

Methods to determine the SHWT are either through direct physical measurements or indirectly by estimation of soil saturation through inspection and evaluation of the soil profile. Soils which experience continuous or periodic saturation may be identified by the presence of visible features within the soil.

Soil Surveys and Seasonal High Water Table

Preliminary information regarding the SHWT on a project site can be found in county soil surveys and soil interpretation documents. Such literature should be reviewed

and applied as an initial tool in the project planning stage. Data from the soil survey reports must be verified in the field. Due to the scale of soil maps and soil survey correlation procedures, inclusions of other soil types in a soil map unit are common. Site-specific data sufficient to characterize the various soil and vegetative community types present throughout the project site should be evaluated.

Soil surveys have been conducted as part of the National Cooperative Soil Survey Program since the end of the nineteenth century. Most of the county soil surveys compiled by the NRCS have been completed in Florida through years of field work.

Information on the SHWT of a soil can be found in tabular and text form in the published soil surveys. In recent surveys, wet and dry season water table information is provided in the soil map unit description and soil series description. The water table is described according to depth, duration, and dry season response. Entries in the soil survey are given to the nearest half-foot for soils in their natural state.

The SHWT depth and duration are listed by soil map units in tabular form under the title of "Soil and Water Features" in newer soil surveys, or "Water Features" in older ones. The information provided in soil surveys pertains to undrained soils. Water tables that have been modified by artificial drainage or impounding require additional consideration in determining SHWT elevations.

Field Identification of Seasonal High Water Table.

The SHWT indicators listed in Table CA-1 are field indicators that are used for determining the location (elevation) of the SHWT in a soil profile. SHWTs are determined by examining a freshly dug soil pit or soil boring for listed indicators. The presence of any one of the indicators at the shallowest depth in the soil, indicates the depth to the SHWT.

The identification of the SHWT is based on the premise that when soils are wet for a long enough duration, they exhibit certain visible properties that are easily observed in the field. Continuous or periodic inundation or saturation of the soil results in visible soil characteristics (color and morphology changes) that are indicative of wetness. Through years of observation and field verification by soil scientists, soil features have been reliably used to determine water table fluctuation patterns and to evaluate wet season water table conditions. This method holds true for evaluations conducted in either the wet or dry season, regardless of climatic anomalies.

Direct Measurement of the Seasonal High Water Table

The most direct way to estimate SHWT is through the measurement of water levels in shallow wells. Unfortunately, this approach is often too expensive, complicated and time-consuming to be practical because of variations in the water table over time

and spatial variability across the landscape. Because surficial water tables fluctuate in response to such factors as cumulative rainfall, antecedent moisture conditions, evapotranspiration rates, permeability of soil horizons, and aquifer leakage rates, gross differences have been reported in long-term versus short-term studies. About 10 to 12 years of data are needed to reflect representative conditions.

As the length of the study decreases, the uncertainty and variability of the data increase. Care must be taken to ensure that data are of an adequate duration, frequency, and accuracy to represent long-term hydrologic conditions. This includes taking into account variability in quantity and seasonality of rainfall and wet-year/dry-year cyclic variations.

Placement and construction of wells are also important considerations to reflect water table fluctuation accurately. Spatial variability in soils across the landscape and hydrologic effects of drainage structures must be reflected. Use of an unlined auger hole to determine saturation may be inaccurate or misleading, especially in clayey soils when only large cracks, fissures and voids (macropores) are filled with water after a recent rain, while the soil matrix itself remains unsaturated.

Temporal variations can also cause misleading data. In highly permeable sandy flatwood soils common to south Florida, water tables can drop six inches within 20 to 76 hours, depending on soil type.

The minimum number of years needed to describe water table depths adequately depends on 1) the amount of variability from long term average that is considered acceptable, 2) soil drainage class (a greater uncertainty occurs in poorly drained and very poorly drained soils than in better drained soils), and 3) season of the year.

Procedures in Determining Seasonal High Water Table

1. The first step is to consult the county soil survey. Identify the project boundaries on the soil survey maps and record each soil map unit found within the boundaries. Soil map unit descriptions, soil series descriptions, and soil-water interpretive tables will list the SHWT and drainage class for each soil on the project site. Record the SHWT for each soil type occurring within the project boundaries.

While the soil survey should be consulted first, it should be used only as a guide to determine soil characteristics and cannot be used as a substitute for on-site investigation.

2. Field verification is important in properly identifying the SHWT. Due to the scale of mapping and spatial variability of the soil, other soils are commonly found within a soil map unit. These soils can have the same or different water table relationship. Soil borings should be performed on the project site to determine the SHWT through observation and identification of indicators within the soil profile (see definitions and

Table CA-1). Borings should be conducted at the locations of proposed water management facilities. Each boring should include a description of the observed SHWT indicators. The use of a trained soil scientist or individual knowledgeable in the identification of SHWT indicators is recommended.

3. SHWT elevations should be surveyed in tenths of a foot to N.G.V.D. and the recorded data submitted with the permit application including each soil type, depth from ground surface, observed indicators, and N.G.V.D. elevation. A location map showing the position of each soil boring on the project site should be included.

4. Both soil survey estimations of SHWT and on-site evaluation results should be submitted in the application. If field-verified SHWT elevations vary significantly (more than six inches) from soil survey information, additional evaluation should be conducted to determine the cause of the discrepancy. An explanation of any significant difference between field-verified SHWT elevations and the soil survey data should accompany each application submittal.

Definitions

Dark surface: A surface layer $\geq$4 inches thick occurring within the upper 6 inches of the soil profile. The color of the soil is very dark gray or black with at least 70% of the soil particles coated by organic material.

Depleted matrix: Soil in which iron (Fe) has been removed or transformed by reduction and translocation to create contrasting color patterns of low chroma (gray) and high value (red or brown).

Gleyed: A soil condition which is manifested by the presence of bluish or greenish colors through the soil profile or in mottles (spots or streaks) among other colors. These colors are not synonymous with gray colors. Gleyed colors are indicative of long term soil saturation.

Hydrogen sulfide: A soil feature common to tidal marshes and mangrove swamps. A rotten-egg smell indicates that sulfate-sulfur has been reduced and the soil is anaerobic.

Marl: Soil formed or deposited in aquatic environments through precipitation by algae. Marl occurs in coastal areas predominantly in the Florida Keys but can extend northward to Indian River County on the east coast and to Collier County on the west coast. Marl reacts with dilute hydrochloric acid (HCl) to release carbon dioxide (CO_2).

Muck: A well decomposed soil material where virtually all of the organic material is decomposed, limiting recognition of plant parts. Muck soils commonly contain a

leaf/root mat which lies over the muck soil itself. The leaf/root mat includes leaves, needles or other plant remains. If this layer is present it must be removed from the soil surface before a determination of the presence of muck can be made. Generally, muck is black, has a greasy feel, and stains the hands when rubbed between the fingers. Sand grains should not be visible or felt when rubbing the soil sample.

Mucky mineral texture: Mineral soil material containing 5% to 12% organic matter. When rubbed between the fingers, the soil has a greasy feel; but unlike muck, sand grains can be seen or felt.

Organic bodies: Soil accretions, 1 to 3 cm in size, that are muck or mucky texture found within the soil matrix.

Redoximorphic features: Visible soil morphological features associated with wetness and which form by the processes of oxidation, reduction, and translocation of iron (Fe) and manganese (Mn). These features appear as irregular shaped spots or blotches of contrasting color in the soil.

Sandy redox: Terminology applied to the zones of accumulation of Fe and Mn nodules and concretions within the soil matrix and pore linings.

Saturation: A soil condition characterized by zero or positive pressure in the soil. Saturation can be estimated by observing free water in an unlined borehole (auger hole) allowing time for stabilization.

Stratified layers: Layers occurring in the soil along river flood plains and along other water bodies where flooding is common. These alluvial soils form alternating patterns of dark soils and light colored sands which result from periodic repeating flood events.

Stripped matrix: Color patterns within the soil that occur from the mobilization and translocation of Fe and Mn oxides and organic matter. Water fluctuation results in splotchy uncoated (stripped) areas within the soil profile. Two or more colors are generally recognizable where the stripped (gray) areas are rounded and about 1 to 3 cm in diameter.

For additional information on the above definitions, refer to the *Field Indicators of Hydric Soils in the United States*, United States Department of Agriculture, Natural Resource Conservation Service, July 1996.

Table CA-1 Seasonal High Water Table Indicators

INDICATORS	SANDY SOILS	LOAMY or CLAYEY SOILS	COMMENTS
Muck	U	U	Present only in surface layer. If found below the surface, not indicative of SHWT.
mucky mineral texture	U	U	Mucky sand or mucky fine sand. Present only in surface layer. If found below the surface, not indicative of SHWT.
hydrogen sulfide	U	U	Rotten egg smell.
gleyed (sandy matrix)	U		Bluish or greenish color (must begin within 6" of soil surface in sandy soils).
gleyed (loamy matrix)		U	Bluish or greenish color (must begin within 12" of soil surface in loamy & clayey soils).
dark surface	U		Black surface layer $\geq$ 4" thick.
organic bodies	U	U	Organic accretions 1 – 3 cm in size.
sandy redox	U		Fe & Mn accumulations.
stripped matrix	U		Fe & Mn oxides stripped from soil.
stratified layers	U	U	Alluvial soils in upper 6 " with alternating layers of sand & mucky texture.
marl		U	Silty gray material.
depleted matrix		U	Contrasting splotchy or stripped areas within the soil.

Note: The SHWT is found at the shallowest depth to the observed indicator.

Runoff

A. Volume

A method for estimation of runoff from rainfall information has been developed by the United States Department of Agriculture's Soil Conservation Service (SCS).

The runoff equation used by SCS was developed by Victor Mockus and others and presented in the U.S. Soil Conservation Service's *National Engineering Handbook*, Section 4, "Hydrology." The relationship between accumulated rainfall and accumulated runoff was derived from experimental data for numerous soils, vegetative cover and land treatment measures.

The equation is:

$$Q = \frac{(P - Ia)^2}{(P - Ia) + S}$$

where

Q = accumulated direct runoff (inches)

P = accumulated rainfall (inches)

Ia = initial abstraction including surface storage, interception, and infiltration prior to runoff (inches)

S = potential maximum retention (inches)

This equation is particularly easy to use with the cumulative rainfall distributions introduced in the previous section. For purposes of developing project-specific runoff generation relationships, District staff apply this formula using a weighted soil moisture storage value for the maximum retention parameter, S. For example, if a project had the ability to store 6.0 inches of rainfall in the soil profile and it was 50% impervious, then for purposes of calculating the cumulative runoff volumes, use an S value of:

6.0 inches X (1 - 0.50) = 3.0 inches

The relationship between Ia and S was developed from experimental watershed data. The empirical relationship used in the SCS runoff equation is:

$$Ia = 0.2S$$

Substituting 0.2S for Ia in the runoff equation, above, yields:

$$Q = \frac{(P - 0.2S)^2}{(P + 0.8S)}$$

To show the rainfall-runoff relationship graphically (see Figure D-1) S values are transformed into curve numbers (CN) by the following equation:

$$CN = \frac{1000}{S+10}$$

Example:

Assume the following:

P_{24} = 10.0 inches rainfall

S_o = 10.0 inches storage in soil profile

I = 50% impervious

S = 10.0 (1 - .50) = 5.0 inches

$$CN = \frac{1000}{S+10} = 67$$

Therefore,

$$Q = \frac{(P - 0.2S)^2}{P + 0.8S}$$

$$Q = \frac{(10.0 - 0.2(5.0))^2}{10.0+0.8(5.0)} = \begin{matrix}5.8 \text{ inches runoff} \\ \text{in 24 hours}\end{matrix}$$

The SCS computational procedure computes peak discharge (q) from daily runoff (Q) by means of an equation which uses a peak factor (K) which has a standard value of 484 in most parts of the United States. The peak factor relates the rising limb to the recession limb of the SCS triangular hydrograph. In the South Florida Water Management District, for slopes less than about 5 feet per mile, a value for K of 100 is recommended (Ref. Capece *et al* 1988) and for slopes greater than 5 feet per mile a factor of 256 is recommended.

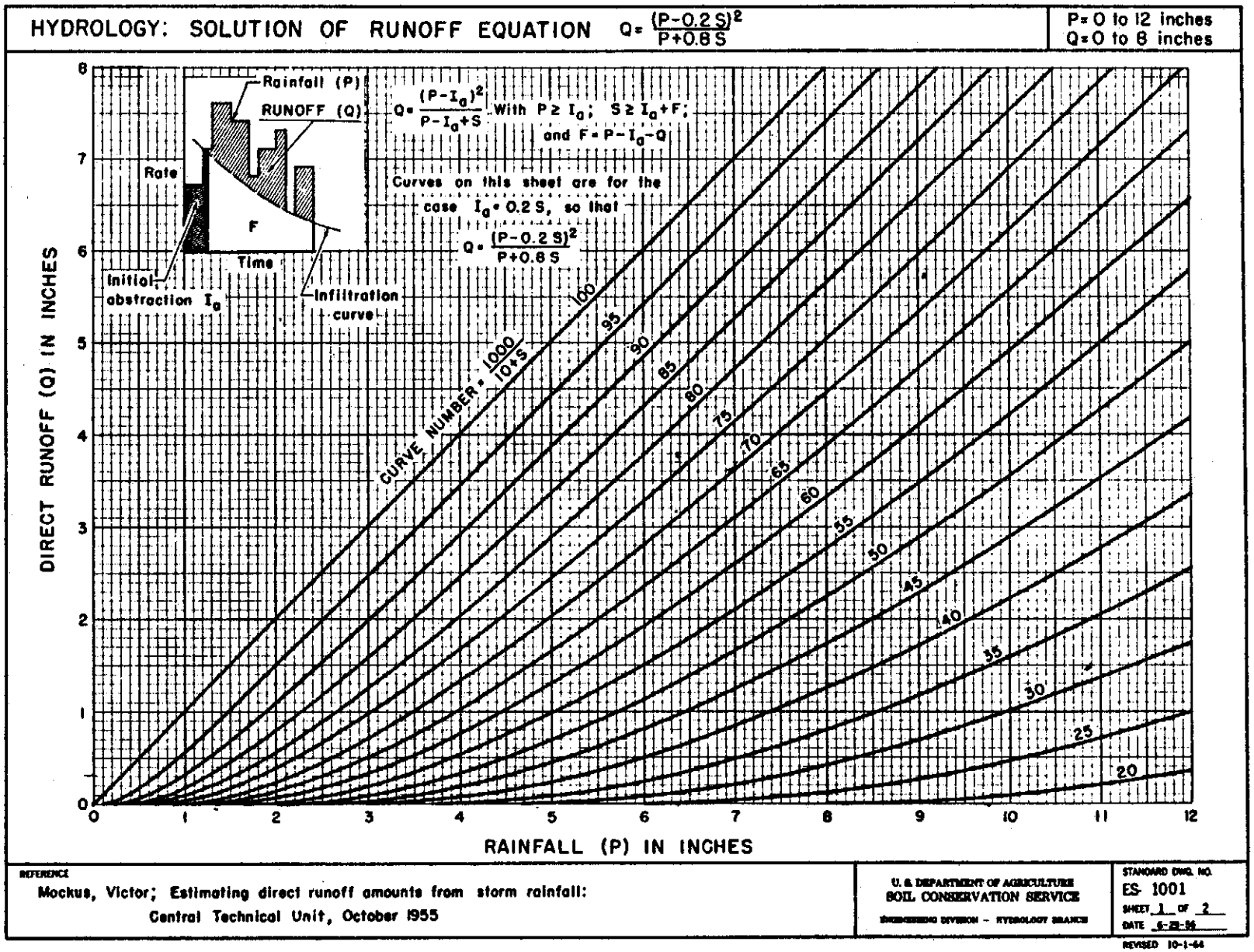


Figure D-1 (1 of 2)

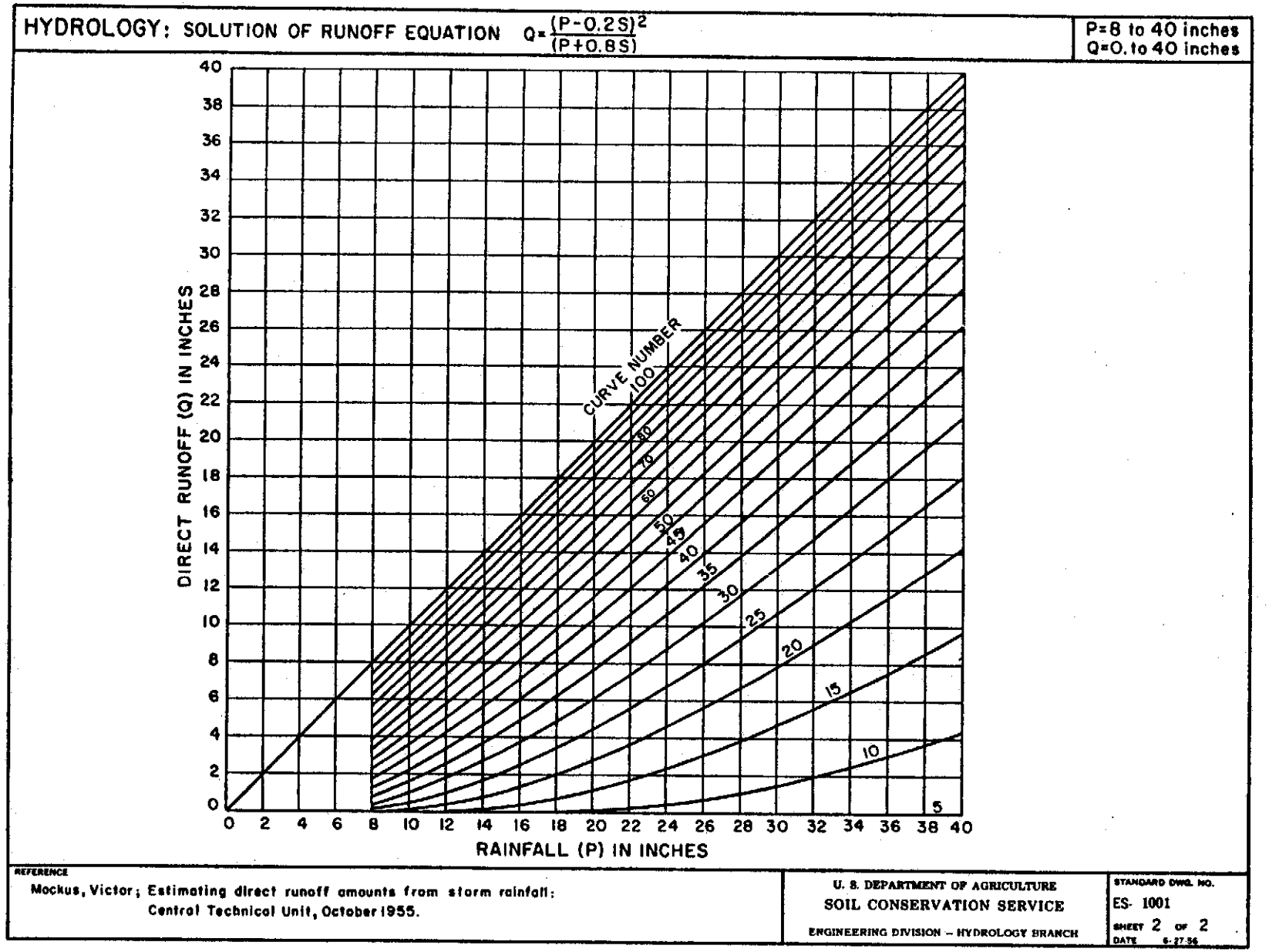


Figure D-1 (2 of 2)

B. Runoff Rate

The District staff have developed a procedure for estimating sheetflow runoff occurring from undeveloped watersheds in south Florida. The procedure was originally presented in *A Procedure for the Estimation of Sheetflow Runoff in the South Florida Water Management District*. The method requires the use of the curves shown in Figures D-2 through D-17.

The appropriate set of curves - Figures D-2 through D-16 - are entered with the appropriate 24-hour rainfall (P), average wet season water table depth prior to the design event (DWT), and the contributing sheetflow runoff length above the line or point under consideration. The value of discharge in cubic feet per second per square mile is then read using the appropriate slope curve for the average slope over the runoff length. The discharge value times the area of the watershed considered (in square miles) would give the discharge value for the watershed.

Since most Florida watersheds contain numerous "pockets" and depressions, Figure D-17 is included whereby the discharge value computed above is reduced to account for excess depression storage not included in the basic calculations. An average of 8 inches depth of depression was used in the preparation of these curves, which represents essentially initially dry storage above the water table. If depressions varied from this assumption a conversion can be made within the range of accuracy of the computations. For example, 10 percent depression storage area at an average depth of 24 inches could be converted to 30 percent in the curves [(24/8) x 10% = 30%]. For a 24-hour rainfall (P) of 9 inches this would indicate the value of discharge obtained from the figures should be reduced to approximately 53 percent of that value.

If a basin has significant grade breaks consisting of varying slopes and plateaus, it may be necessary to "route" the runoff across the basin to account for the varying runoffs on slopes and surface storage on the plateaus. Treating the basin as an average inclined plane will most likely produce excessive runoff values unless Figure D-17 is judiciously utilized. Consideration should also be given to the meander of runoff through a basin, since it is unusual for runoff to flow in a straight line.

The curves utilize a Manning roughness coefficient (n) of 0.25 which is applicable to dense grass. Since the runoff or discharge is inversely proportional to n, increasing values of n result in proportionally decreasing discharge values. For example, woods and brush might have n values of about 0.5 and swamps and sloughs values of as much as 1.0. Discharge values for such conditions might therefore be reduced to one half and one quarter respectively of the curve values.

Note: The curves were developed based upon the assumption of free outfall at the downstream end of the runoff length. Since design storm sheetflow leaving a site usually meets very similar conditions (water at shallow depths moving very slowly) on the downstream properties, the assumption of free outfall is usually not valid for design conditions. Indeed, the surface water on the neighboring properties usually creates a substantial backwater effect, and true discharge from the project site will be greatly reduced. Therefore, for most regions of south Florida, District staff will regard the numbers generated from use of the sheetflow runoff curves as the extreme upper limit of possible values. Such numbers will, in most cases, have to be reduced substantially due to downstream conditions. These reductions might be based upon further theoretical work, observed data, engineering judgement, or other means. Users of these curves should routinely confirm the values they finally decide upon, with District staff.

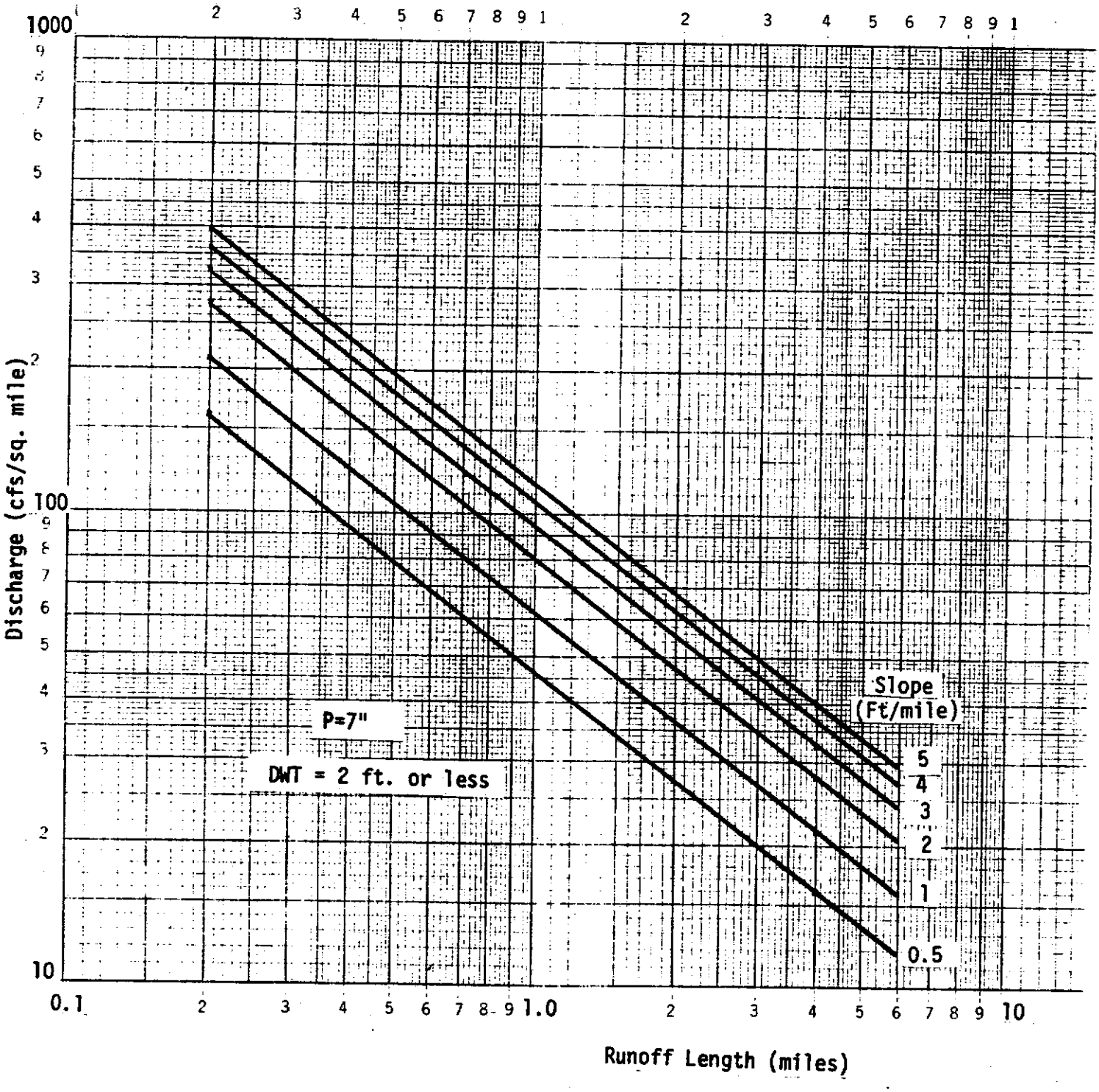

1000
100
10
Discharge (cfs/sq. mile)
0.1
1.0
10
Runoff Length (miles)
P=7"
DWT = 2 ft. or less
Slope
(Ft/mile)
5
4
3
2
1
0.5

Figure D-2

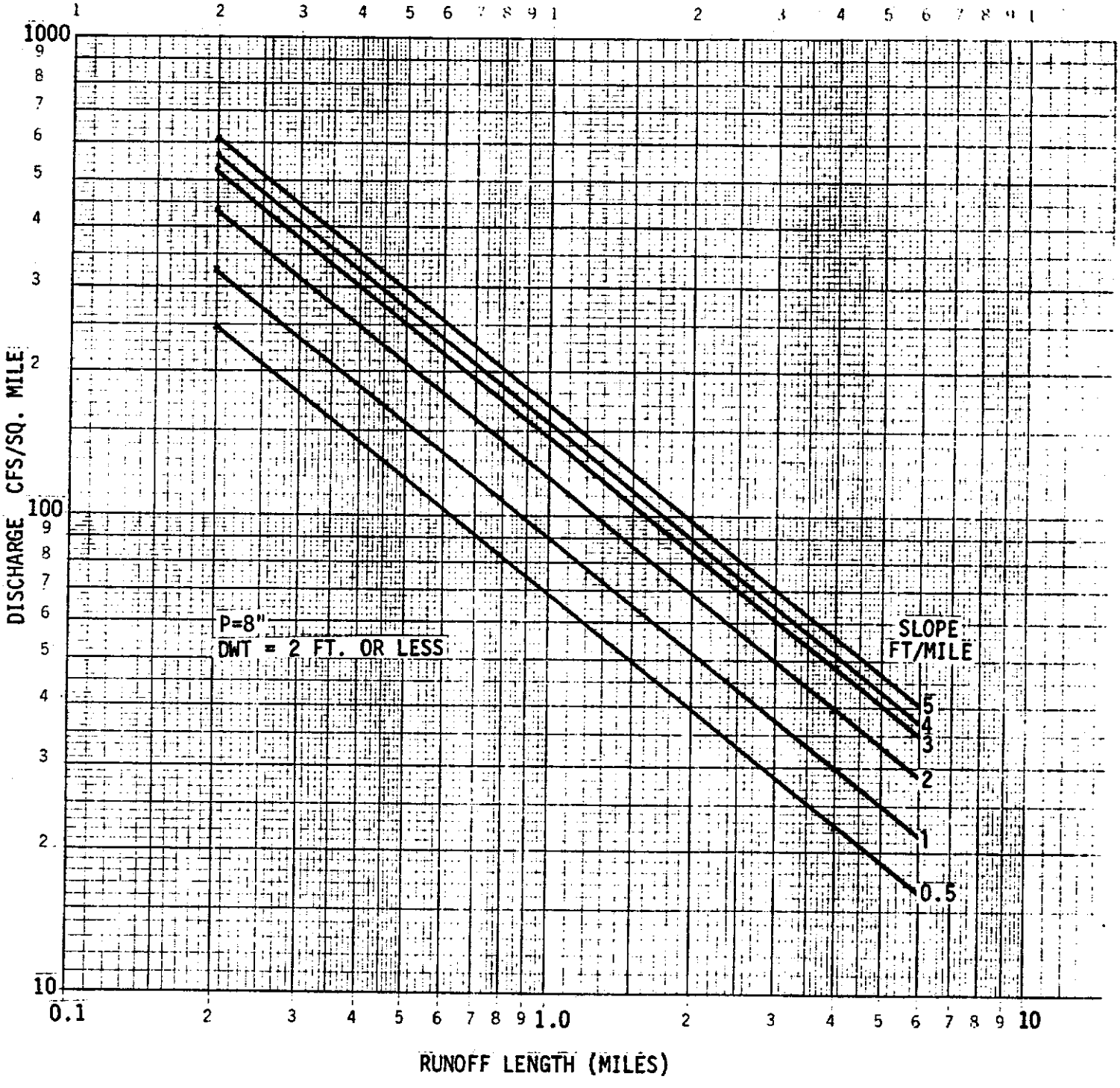

DISCHARGE CFS/SQ. MILE
1000
100
10
0.1
1.0
10
RUNOFF LENGTH (MILES)
P=8"
DWT = 2 FT. OR LESS
SLOPE FT/MILE
5
4
3
2
1
0.5

Figure D-3

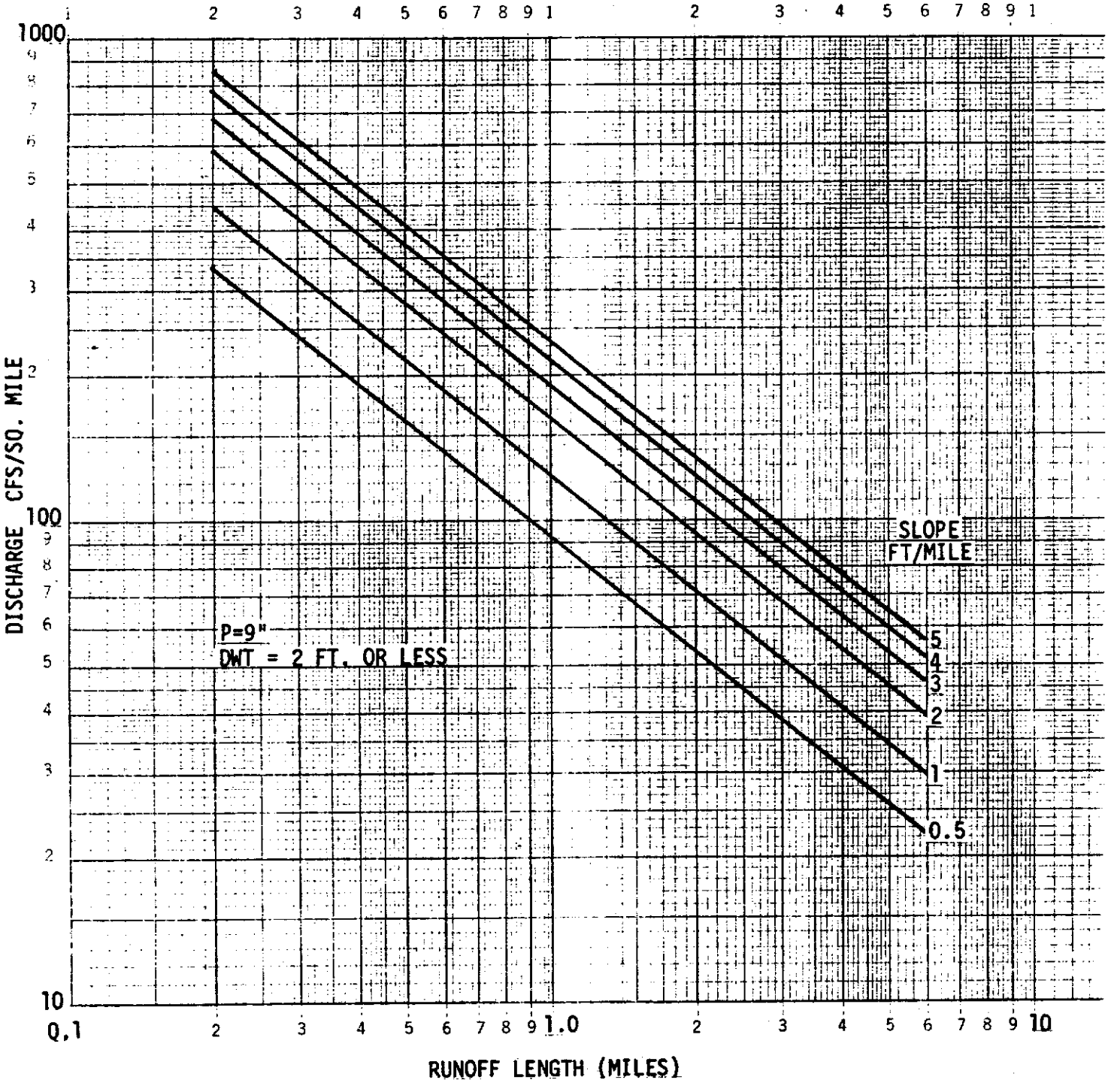

DISCHARGE CFS/SQ. MILE
1000
100
10
0.1
1.0
10
RUNOFF LENGTH (MILES)
P=9"
DWT = 2 FT. OR LESS
SLOPE
FT/MILE
5
4
3
2
1
0.5

Figure D-4

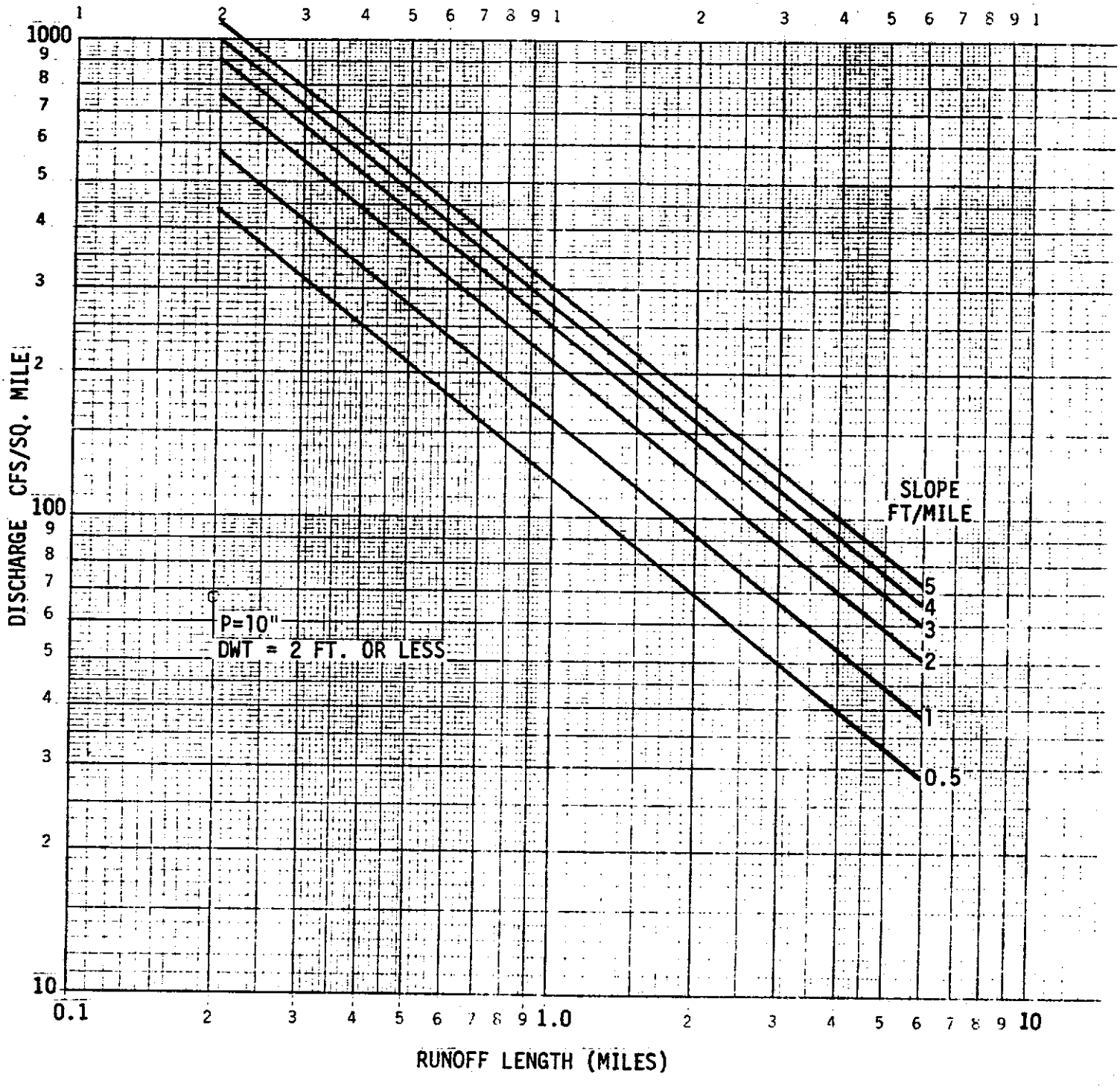

DISCHARGE CFS/SQ. MILE
1000
100
10
0.1
1.0
10
RUNOFF LENGTH (MILES)
SLOPE FT/MILE
5
4
3
2
1
0.5
P=10"
DWT = 2 FT. OR LESS

Figure D-5

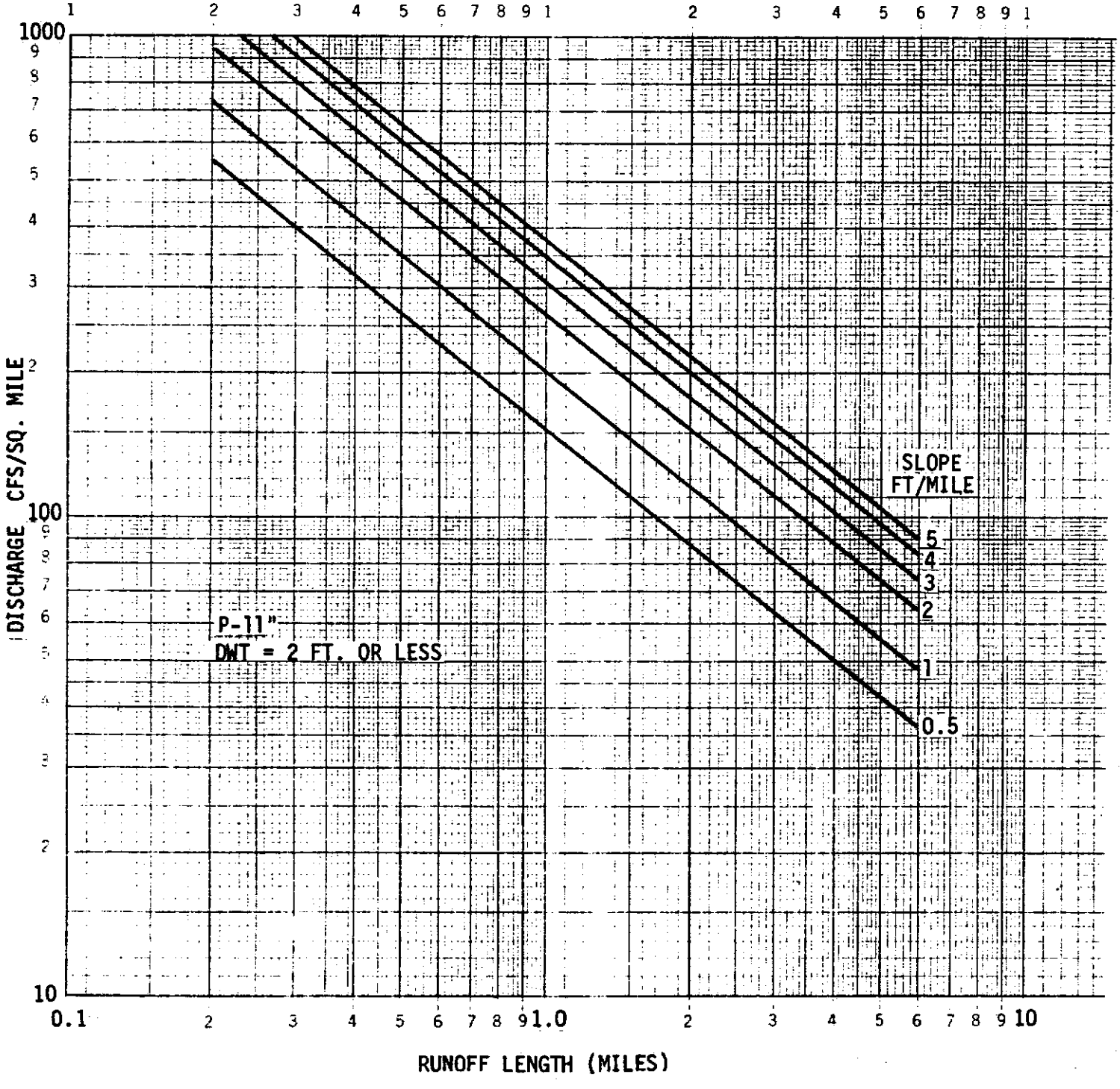

DISCHARGE CFS/SQ. MILE
1000
100
10
0.1
1.0
10
RUNOFF LENGTH (MILES)
SLOPE FT/MILE
5
4
3
2
1
0.5
P-11"
DWT = 2 FT. OR LESS

Figure D-6

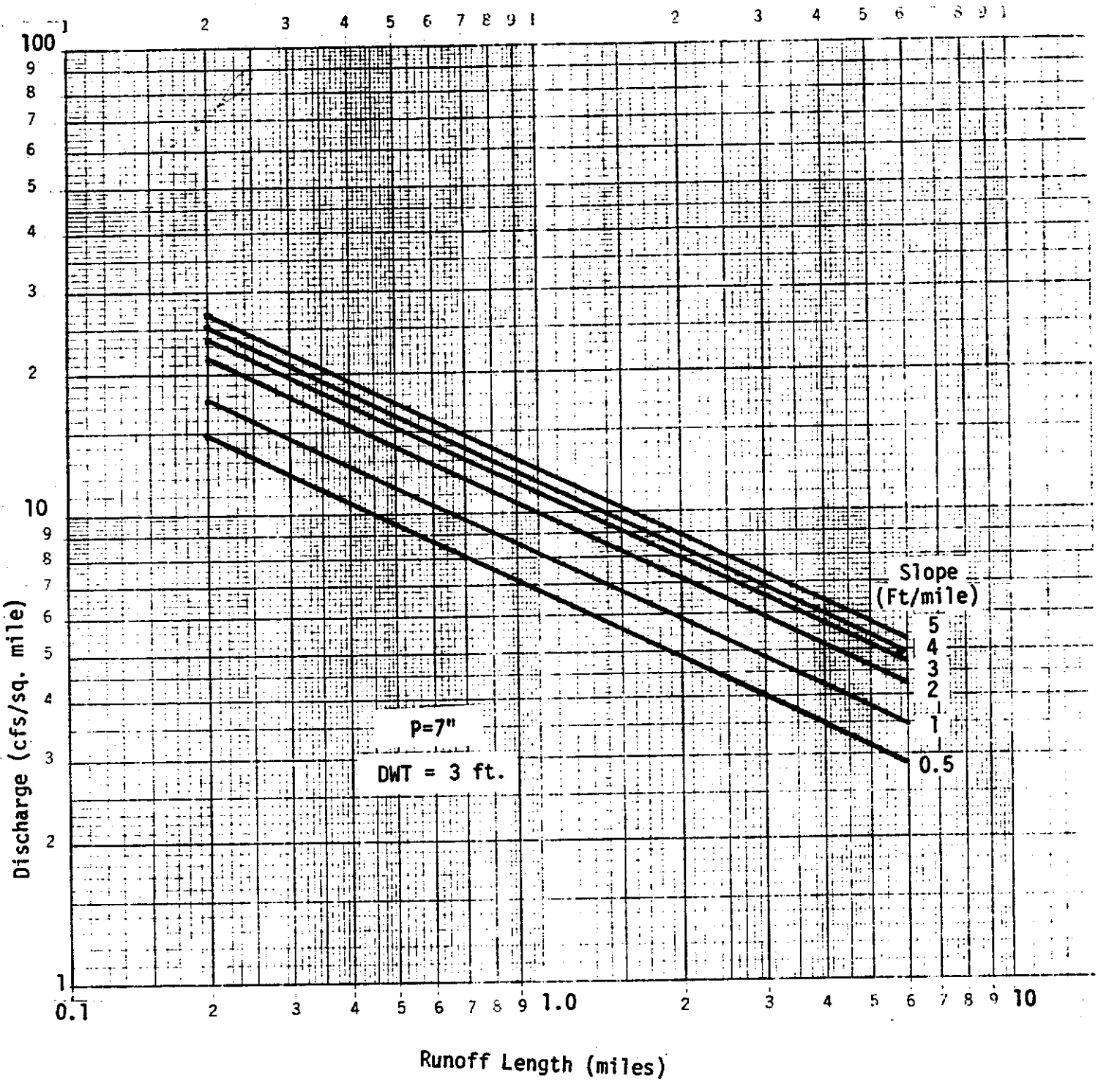

Discharge (cfs/sq. mile)
Runoff Length (miles)
Slope (Ft/mile)
5
4
3
2
1
0.5
p=7"
DWT = 3 ft.
100
10
1
0.1
1.0
10

Figure D-7

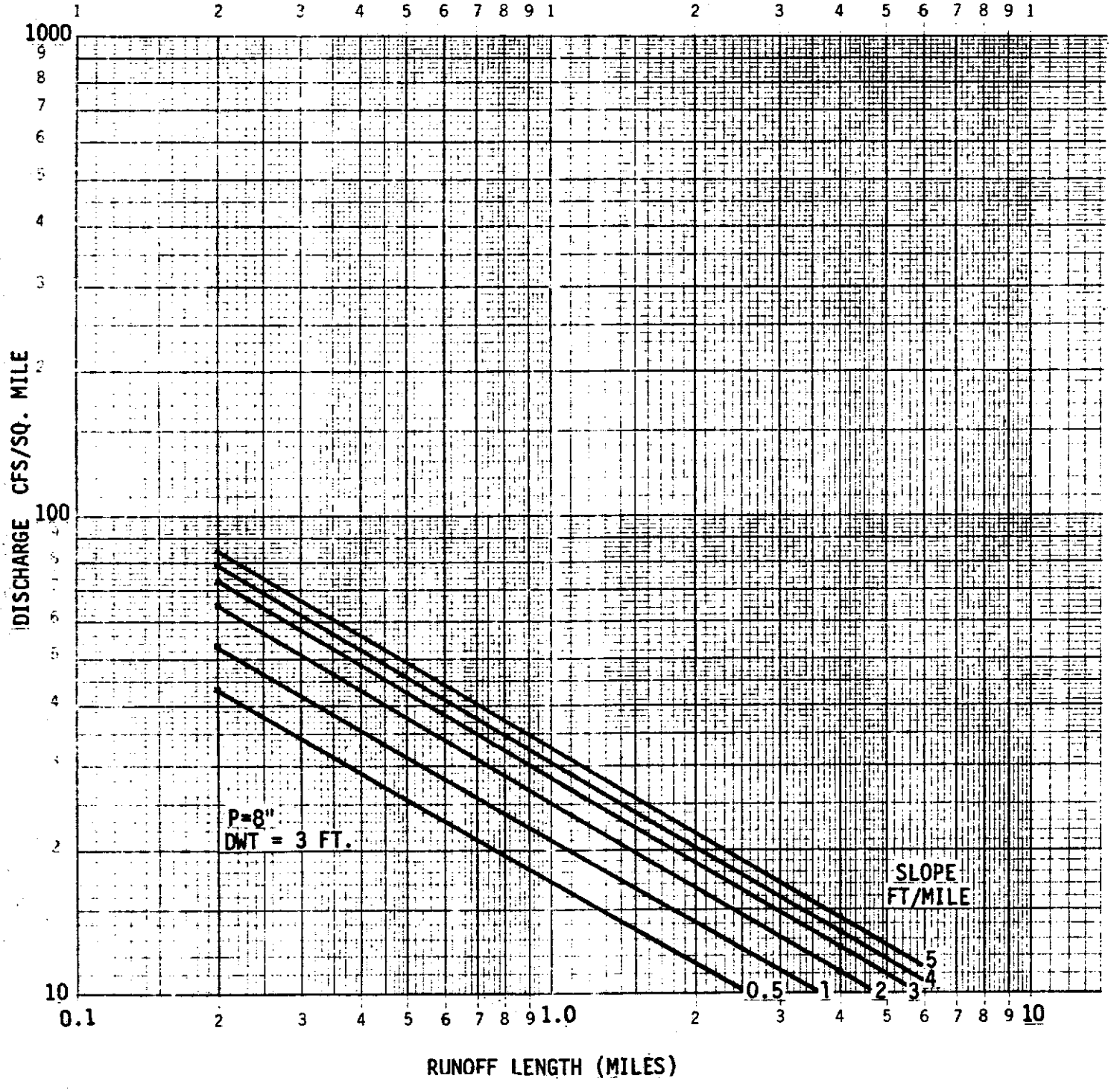

DISCHARGE CFS/SQ. MILE
1000
100
10
0.1
1.0
10
RUNOFF LENGTH (MILES)
P=8"
DWT = 3 FT.
SLOPE
FT/MILE
0.5
1
2
3
4
5

Figure D-8

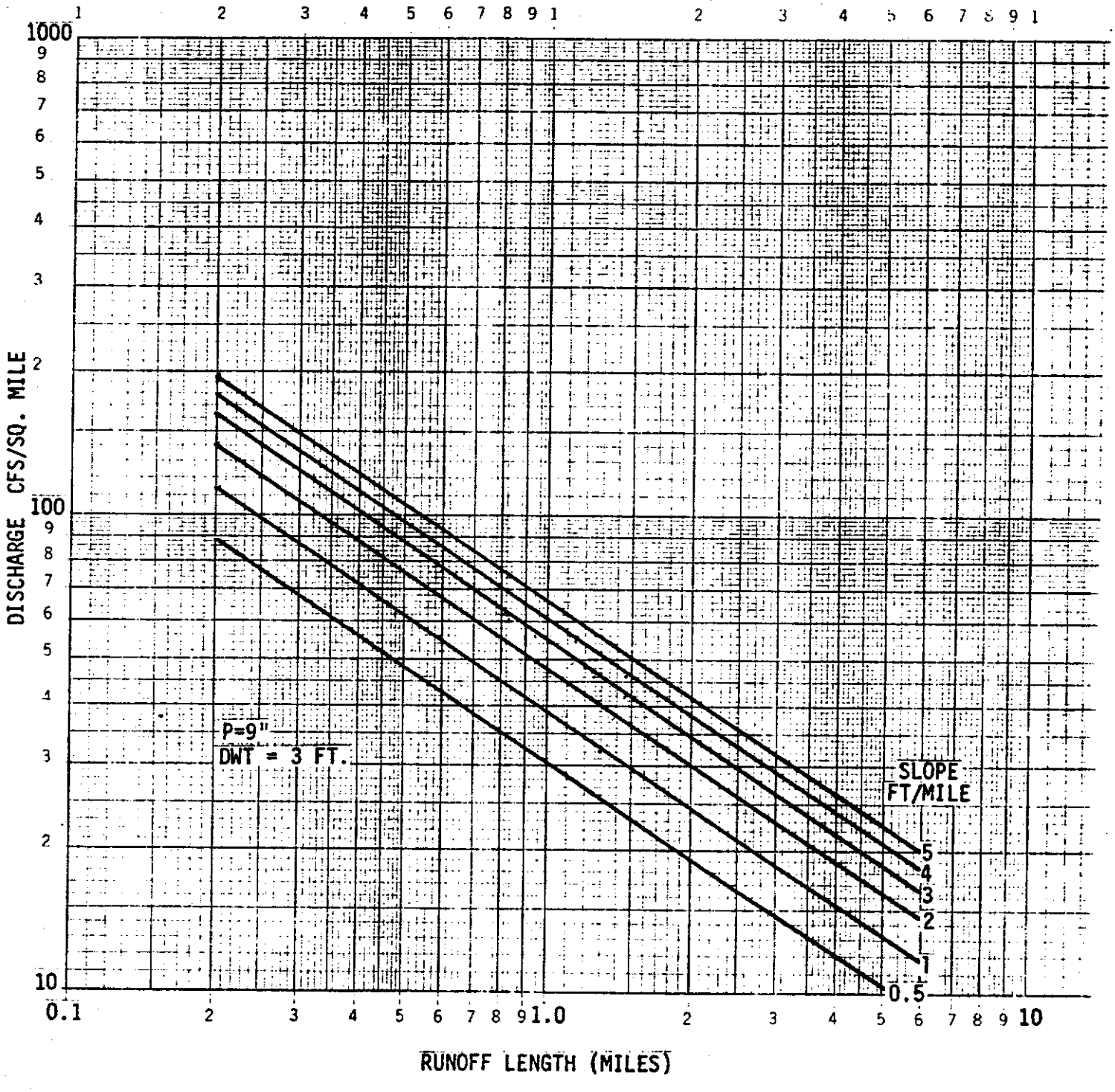

DISCHARGE CFS/SQ. MILE
1000
100
10
0.1
1.0
10
RUNOFF LENGTH (MILES)
P=9"
DWT = 3 FT.
SLOPE FT/MILE
5
4
3
2
1
0.5

Figure D-9

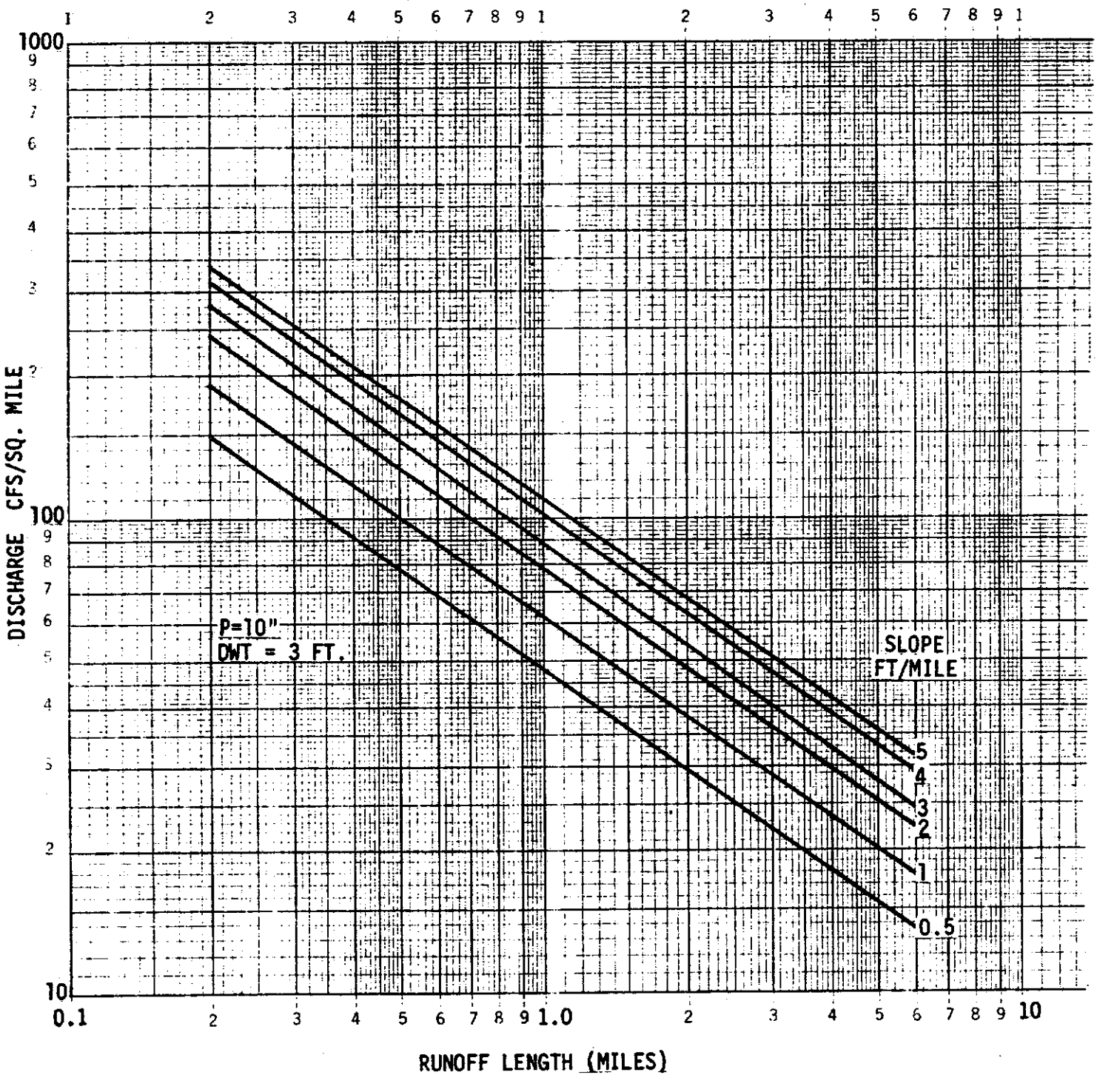

DISCHARGE CFS/SQ. MILE
1000
100
10
P=10"
DWT = 3 FT.
SLOPE
FT/MILE
5
4
3
2
1
0.5
0.1
1.0
10
RUNOFF LENGTH (MILES)

Figure D-10

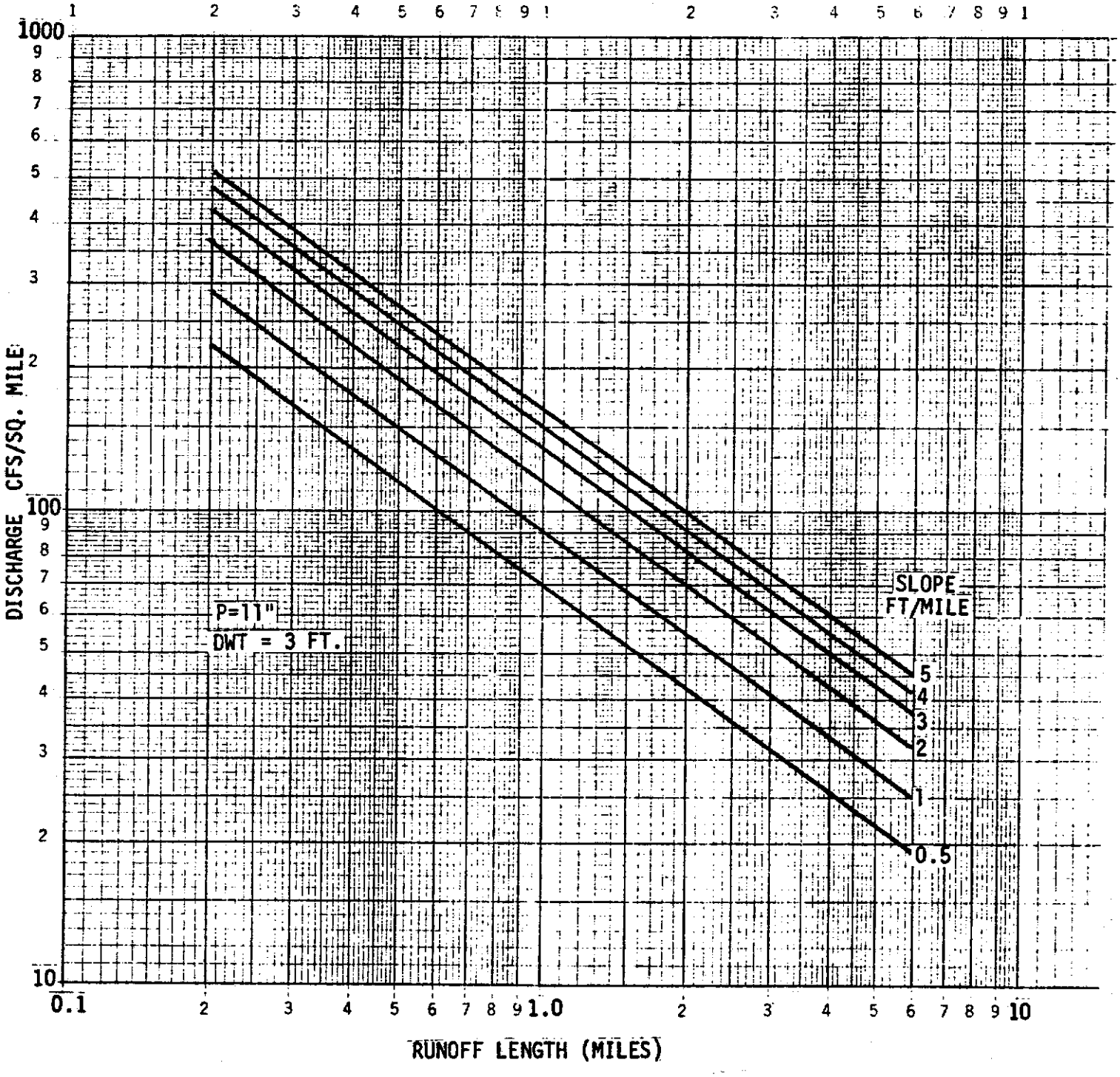

DISCHARGE CFS/SQ. MILE
1000
100
10
P=11"
DWT = 3 FT.
SLOPE
FT/MILE
5
4
3
2
1
0.5
0.1
1.0
10
RUNOFF LENGTH (MILES)

Figure D-11

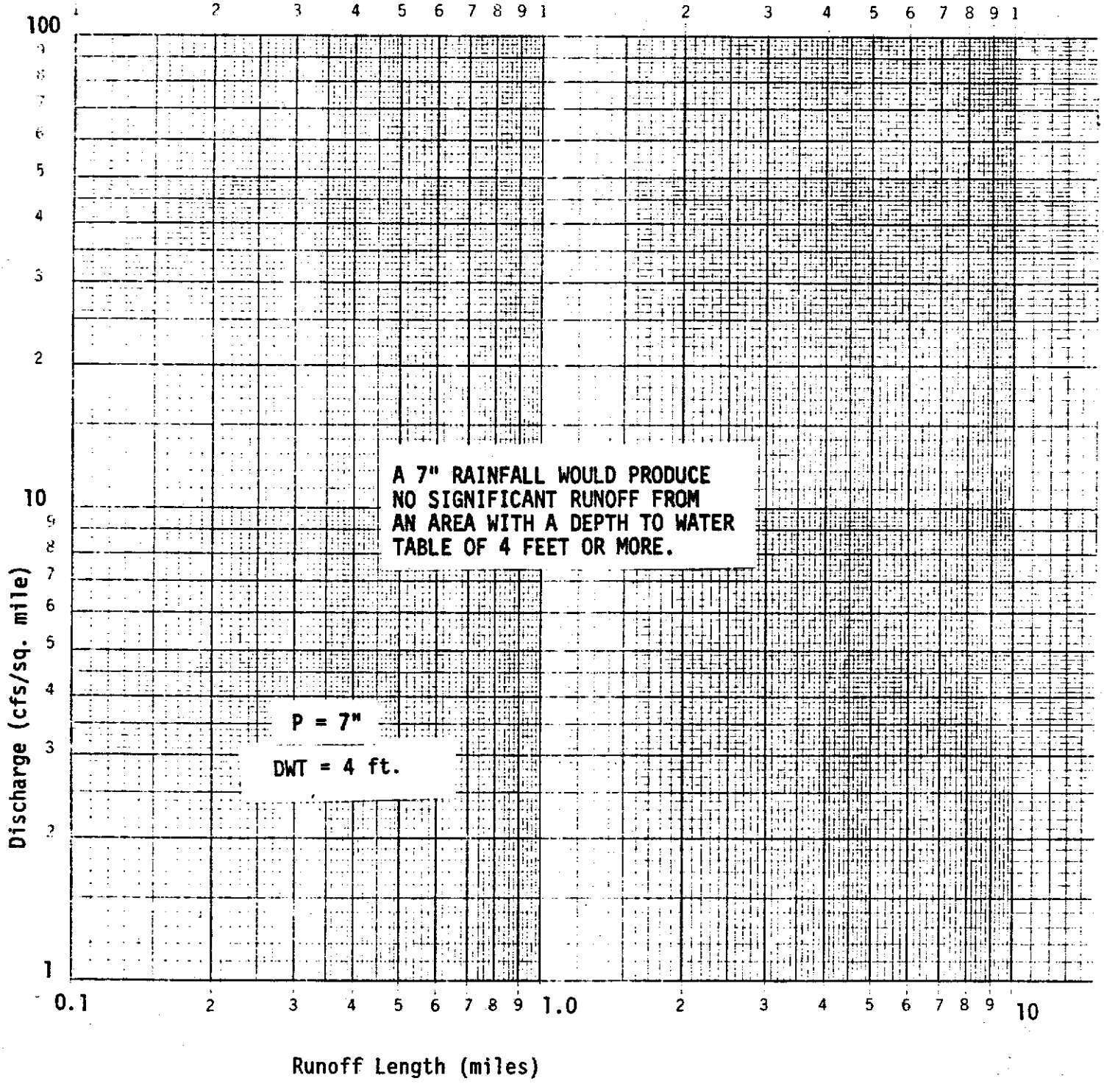

A 7" RAINFALL WOULD PRODUCE NO SIGNIFICANT RUNOFF FROM AN AREA WITH A DEPTH TO WATER TABLE OF 4 FEET OR MORE.
P = 7"
DWT = 4 ft.
Discharge (cfs/sq. mile)
Runoff Length (miles)
100
10
1
0.1
1.0
10

Figure D-12

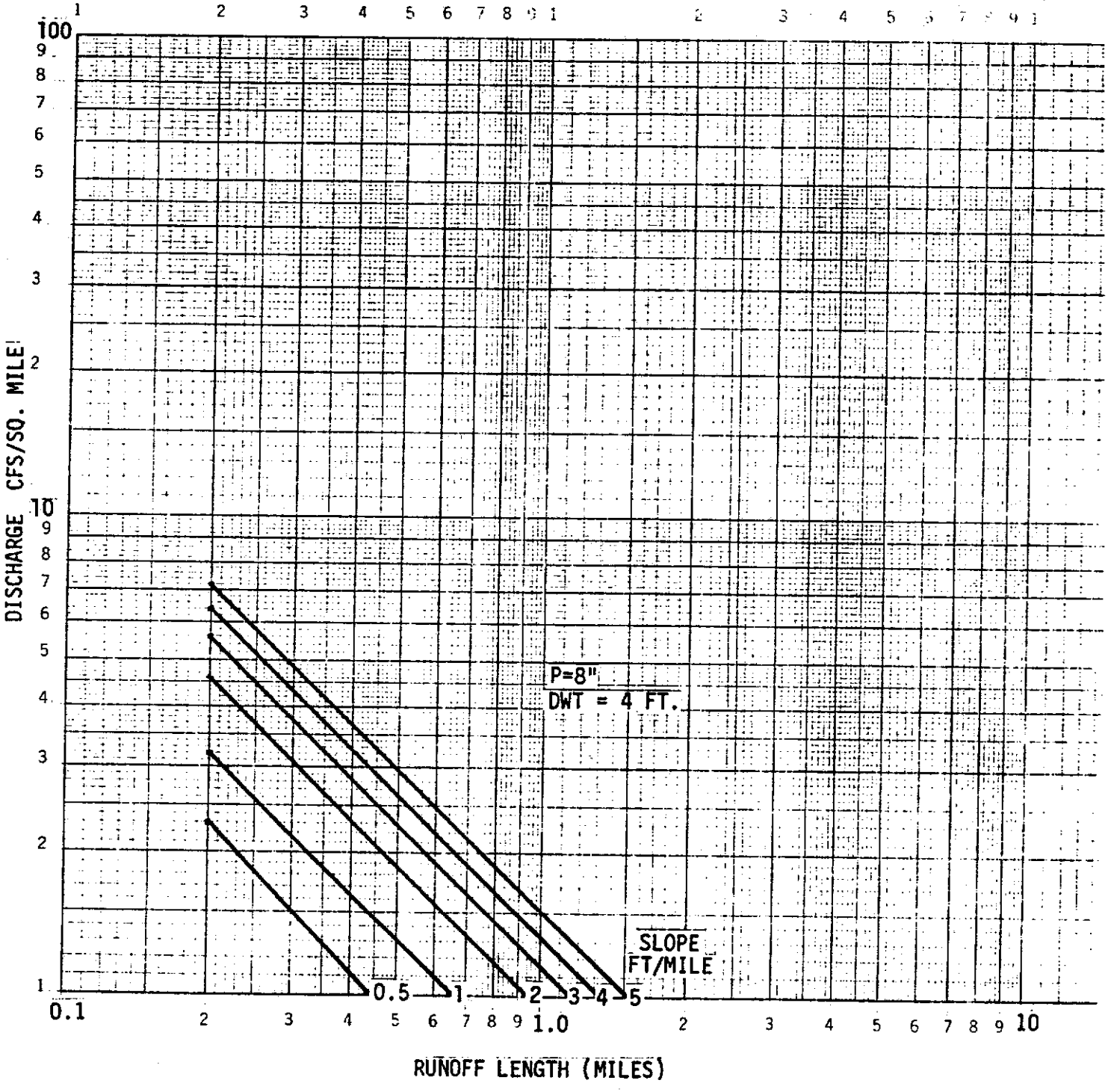

DISCHARGE CFS/SQ. MILE
RUNOFF LENGTH (MILES)
P=8"
DWT = 4 FT.
SLOPE
FT/MILE
0.5
1
2
3
4
5
0.1
1.0
10
100

Figure D-13

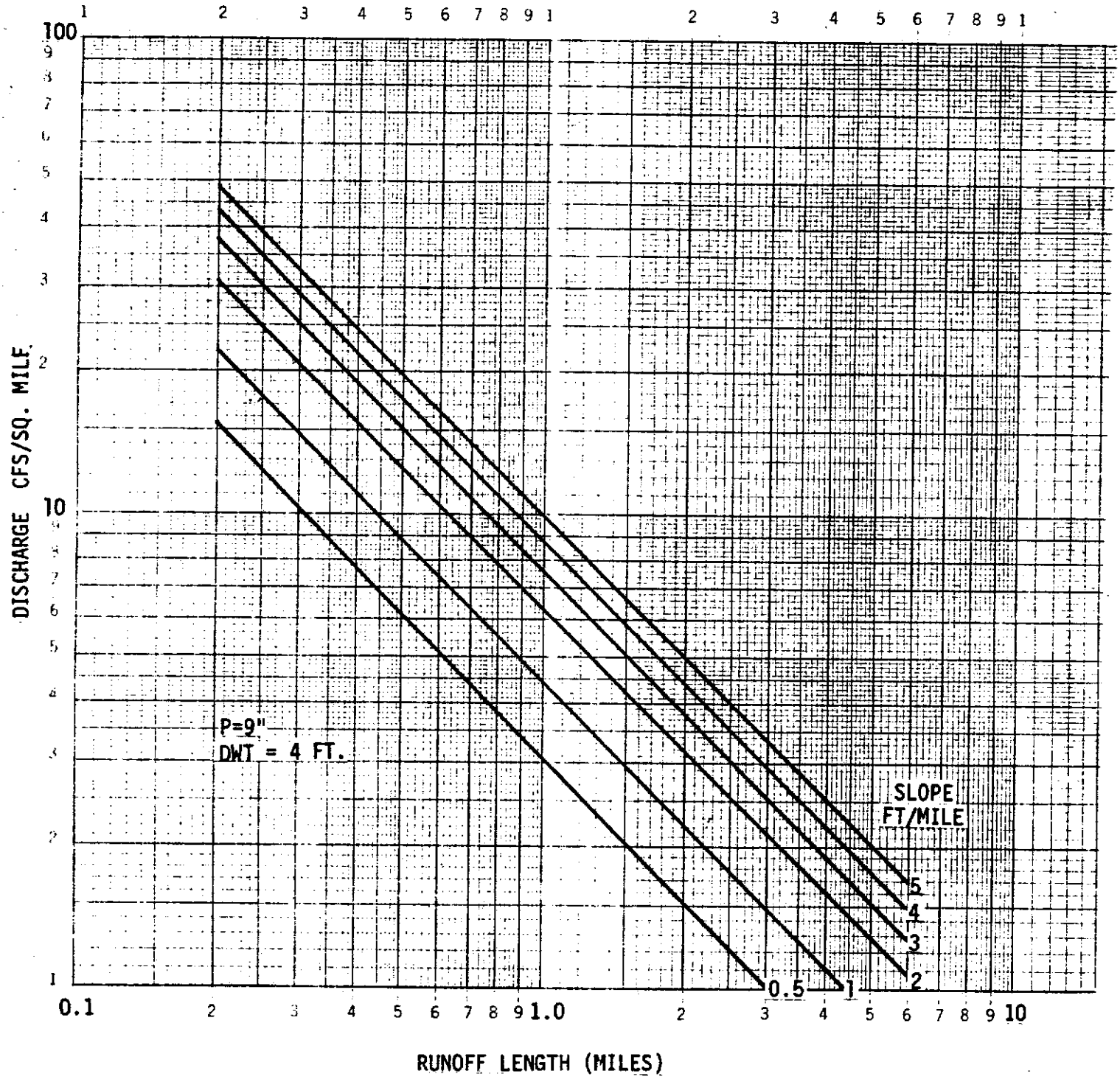

DISCHARGE CFS/SQ. MILE
100
10
1
0.1
1.0
10
P=9"
DWT = 4 FT.
SLOPE
FT/MILE
0.5
1
2
3
4
5
RUNOFF LENGTH (MILES)

Figure D-14

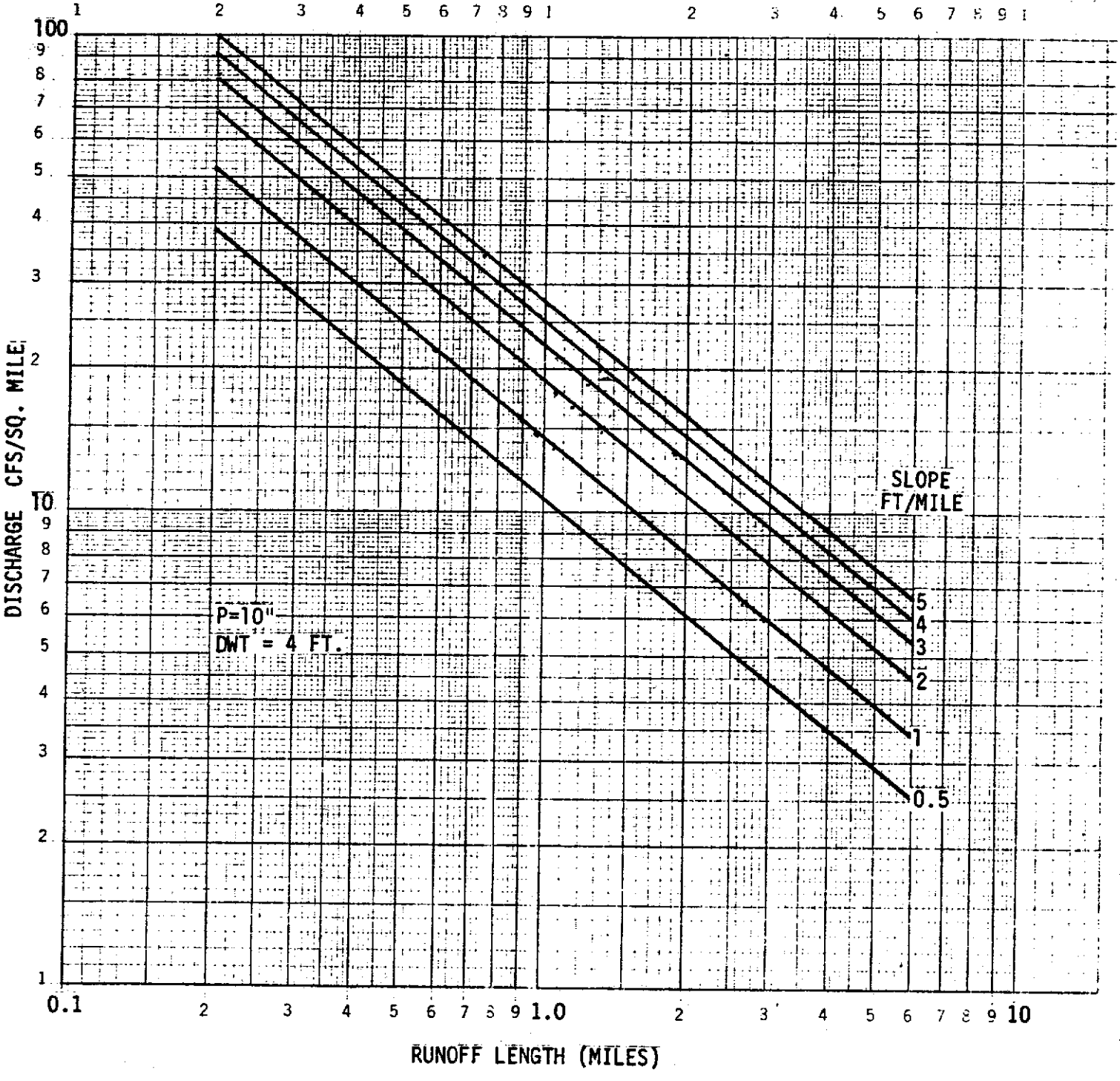

DISCHARGE CFS/SQ. MILE
RUNOFF LENGTH (MILES)
SLOPE FT/MILE
5
4
3
2
1
0.5
P=10"
DWT = 4 FT.
100
10
1
0.1
1.0
10

Figure D-15

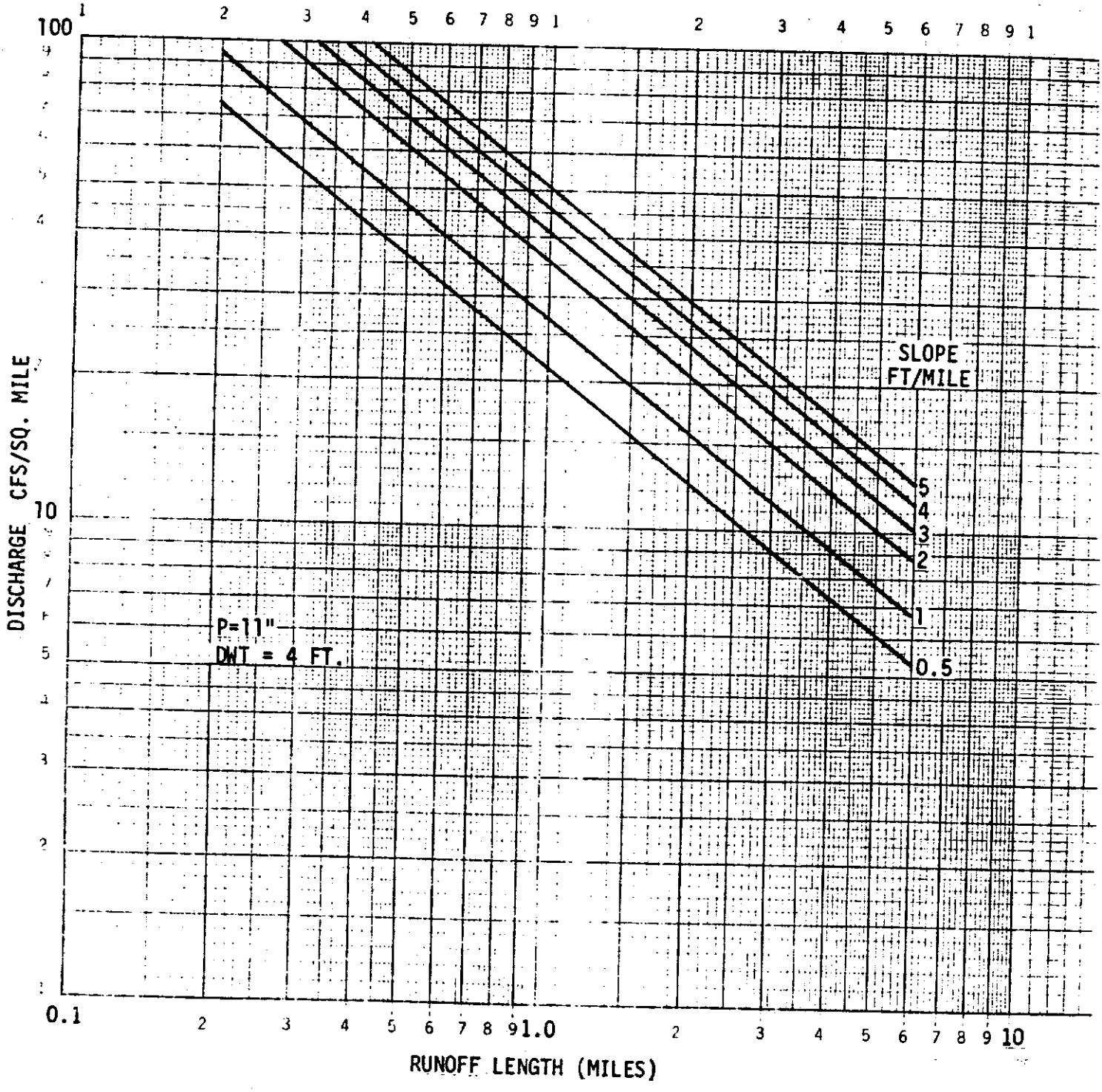

100
10
1
0.1
DISCHARGE CFS/SQ. MILE
RUNOFF LENGTH (MILES)
1.0
10
SLOPE
FT/MILE
5
4
3
2
1
0.5
P=11"
DWT = 4 FT.

Figure D-16

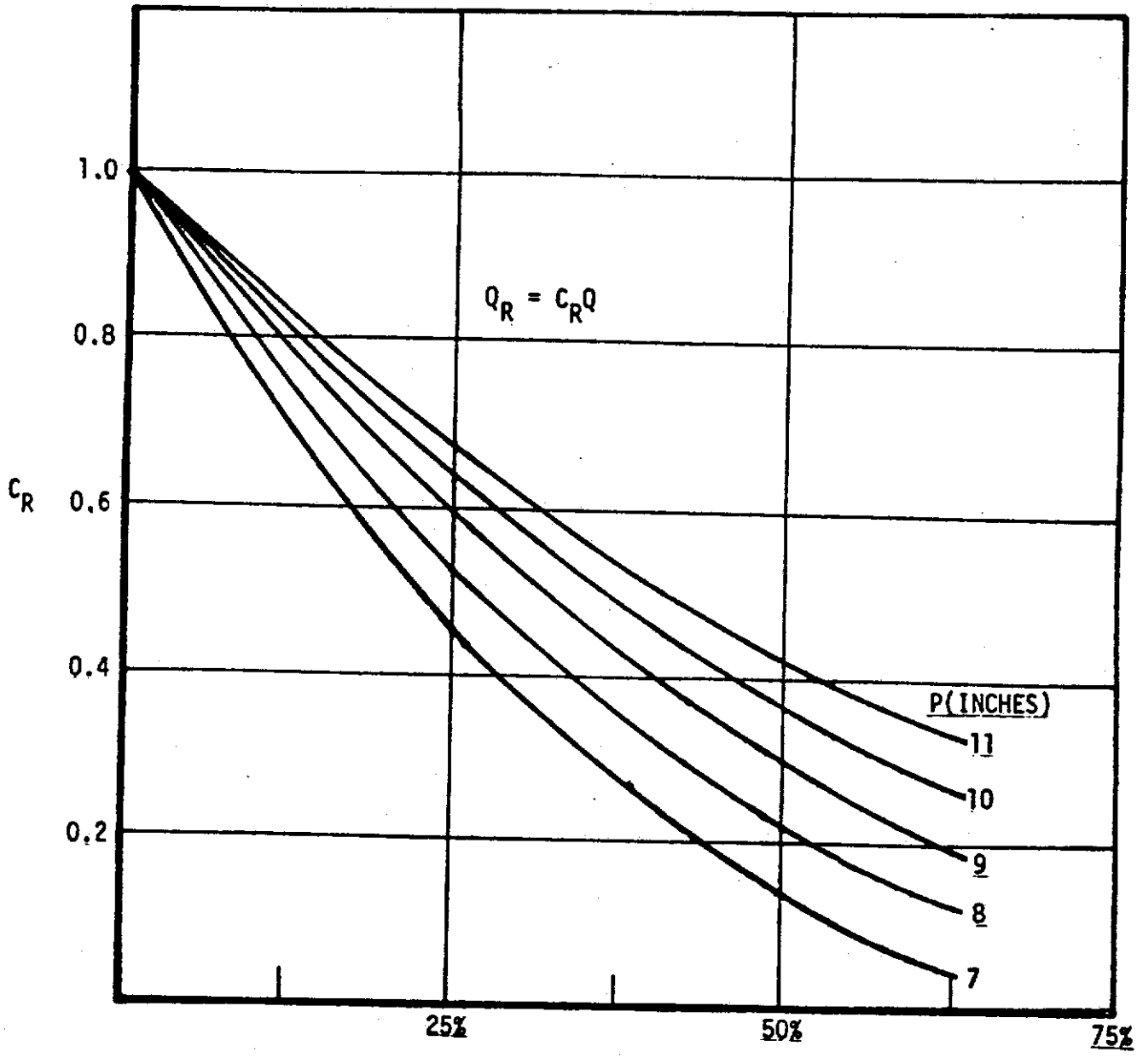


Figure D-17

Water Storage

A. Ground Storage

1. One of the requirements for dry retention/detention flood protection areas is that each shall have a "mechanism" for returning the water level to control elevation. In such situations, the term "mechanism" is normally interpreted to mean something designed, fabricated, and installed in or on the site. As a result, almost every such project will have something - a V-notch weir, exfiltration trench, key/mosquito ditch, sump, etc. - to provide the required drawdown.

   Such devices may not always be necessary. If it can be shown that the soil itself allows the water table to subside in an acceptable length of time, then no "artificial" mechanism need be installed. The burden of proof is on the applicant, and District staff will not approve, or recommend for approval, a dry system which does not provide such mechanisms, be they natural or fabricated.

2. The moisture storage capability of the soil profile has been estimated by the Soil Conservation Service for the normal sandy soils found within the South Florida Water Management District boundaries. The total amount of water which can be stored in the soil profile expressed as a function of the depth to the water table* for these soils is:

Depth to Water Table* (Feet)	Cumulative Water Storage (Inches)	Compacted Water Storage (Inches)
1	0.60	0.45
2	2.50	1.88
3	6.60	4.95
4	10.90	8.18

   The values in the third column represent the estimated amount of water which can be stored under pervious areas after development. These values represent the cumulative water storage values reduced by 25 percent to account for the reduction in void spaces due to the compaction which occurs incidental to earthwork operations. An example of the use of this information is:

   Assume the following:

   Average Finished Grade = 17.0 feet NGVD
   Average Ground Water* Level = 14.0 feet NGVD
   Percent of Project in Lakes = 15%
   Percent of Project Impervious = 35%

   *Typically, the Seasonal High Water Table. Consult with District staff regarding site-specific situations and questions.

The next step is to compute the project-specific S-value to use for determining the runoff volume which will be discharged from the site. The depth to the water table will be 3 feet (17.0 - 14.0 = 3.0), consequently the total amount of water which can be stored under pervious surfaces will be 4.95 inches. If 15% of the project will be in lakes and 35% will be covered by impervious surfaces, then the remainder, or 50% will be pervious areas and the appropriate weighted S-value will be:

$$4.95" \times (1 - (.15 + .35)) = 2.48" = S$$

Figure E-1 is a graphical representation of the cumulative water storage capabilities of the soil profile for the developed and undisturbed conditions versus the depth to the average wet season water table for the typical sandy soils found within the South Florida Water Management District boundaries.

In about April, 1993, the US SCS furnished the District test data for Immokalee and Riviera soils which show less soil storage than the typical soils described above. The following table shows the average values as compared to the typical values (Coastal). Although the lesser storage values result in higher SCS runoff curve numbers, the depressional and flatwoods soils typically are in flat and depressed areas with standing water, thus the areas have low runoff potential.

SOIL STORAGE

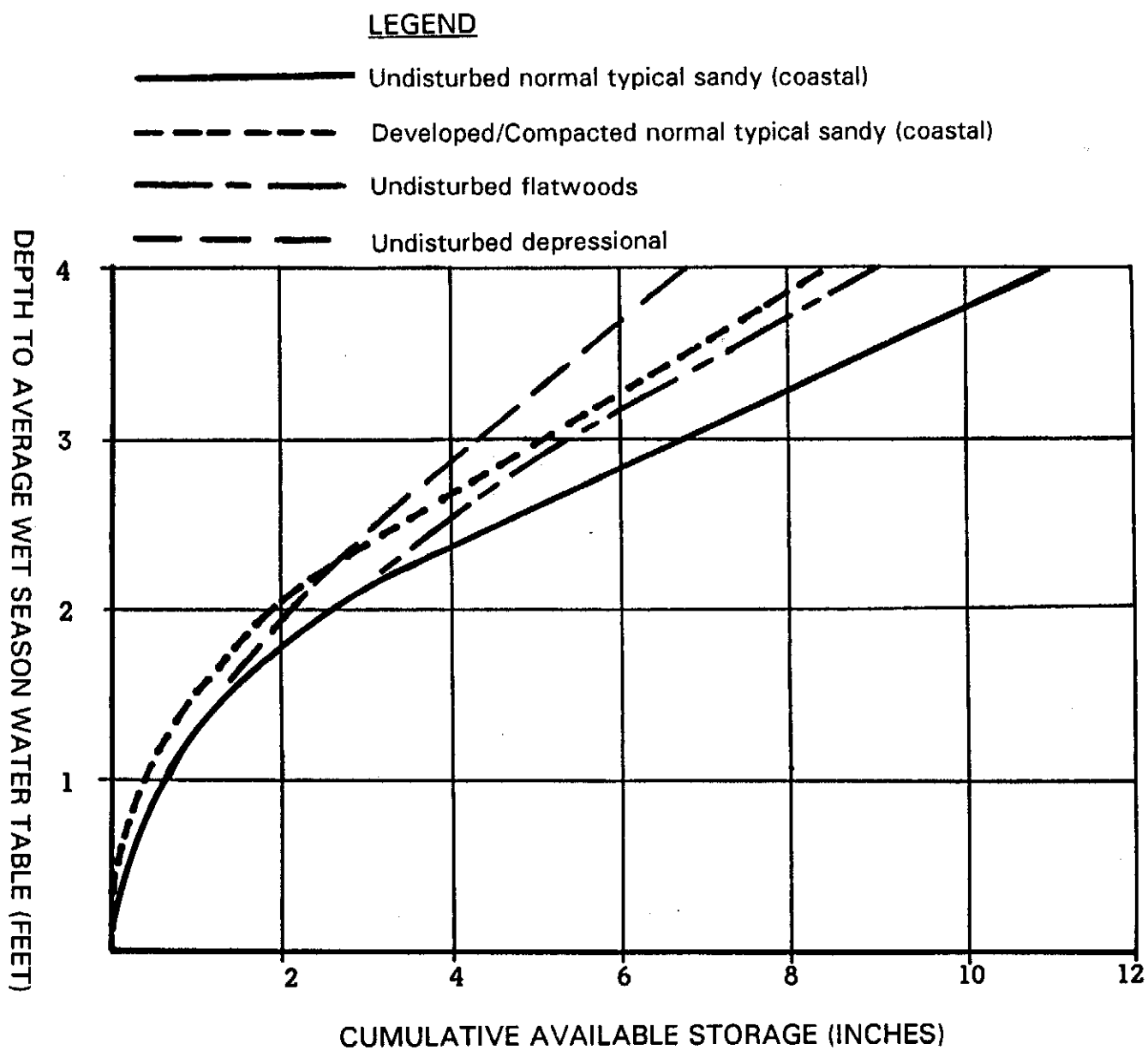
Depth to W.T.	Coastal (1) Stor. (In.)	CN	Flatwoods (2) Stor. (In.)	CN	Depressional (3) Stor. (In.)	CN
1'	0.6	94	0.6	94	0.6	94
2'	2.5	80	2.5	80	2.1	83
3'	6.6	60	5.4	65	4.4	69
4'	10.9	48	9.0	53	6.8	60

(1) Sandy soils 0-40" thick with water tables dropping below 40" - St. Lucie series is representative

(2) Water tables 15"-40" - Immokalee series is representative

(3) Water tables above ground - 15" - Riviera and Pompano series are representative

Figure E-1 is also a graphical comparison of the cumulative water storage capabilities of the soil profile for flatwoods and depressional storage.



CUMULATIVE SOIL MOISTURE STORAGE

Figure E-1

B. Surface Storage

1. Storage in Lakes and Canals

For small projects the amount of water which can be stored within a developed project's lakes and canals can be assumed to extend vertically without variation of surface area. For a project with 5 acres of lakes and canals and an average top of bank elevation 3 feet above the maintained water level within the project, the estimated "bank-full" storage capability is (5 ac x 3 ft) = 15 ac-ft of water storage without overflowing the canal or lake banks. The actual storage volume will be somewhat different due to side slopes and the changing surface area versus elevation; however, it is not felt to be significant enough to substantially affect the calculated values for small projects. It should be noted that in certain projects that have a large number of lakes that compose the total lake acreage, thus creating a high ratio of shoreline to lake acreage, the side slopes may have to be considered when the volume of lake storage is computed.

2. Storage on the Land

The amount of water which can be stored above the land surface in the developed areas can be estimated as shown on Figure E-2. The project used for Figure E-2 has 360 acres of graded property below the house pad elevation of 17.5' NGVD and above the top of bank of lake elevation of 14.5' NGVD. The calculation is based upon the assumption that the total area with standing water varies linearly with the stage on-site. Based upon 360 acres of landscaped property with a 3 foot difference in grade, the rate of submergence versus rising stage is 360 ac/3 ft or 120 acres of land submerged per foot of rise.

As an example, at elevation 16.0' NGVD, a total of 180 acres has some standing water on it and the depth of standing water varies from 1.5 foot for property at 14.5' NGVD to 0 for property at 16.0' NGVD. Hence, the total volume of water stored on the land is equal to the total acreage with water on it times the average depth of standing water:

180 ac x (1.5 ft + 0 ft)/2 = <u>135 ac-ft stored</u>

3. Stage-Storage Graph

The above calculations can then be represented visually by the construction of a stage-storage curve as shown on Figure E-3.

STAGE	STORAGE
14.5	0
16.0	0.75' X 180 = 135 AF
17.0	1.25' X 300 = 375 AF
17.5	1.50' X 360 = 540 AF

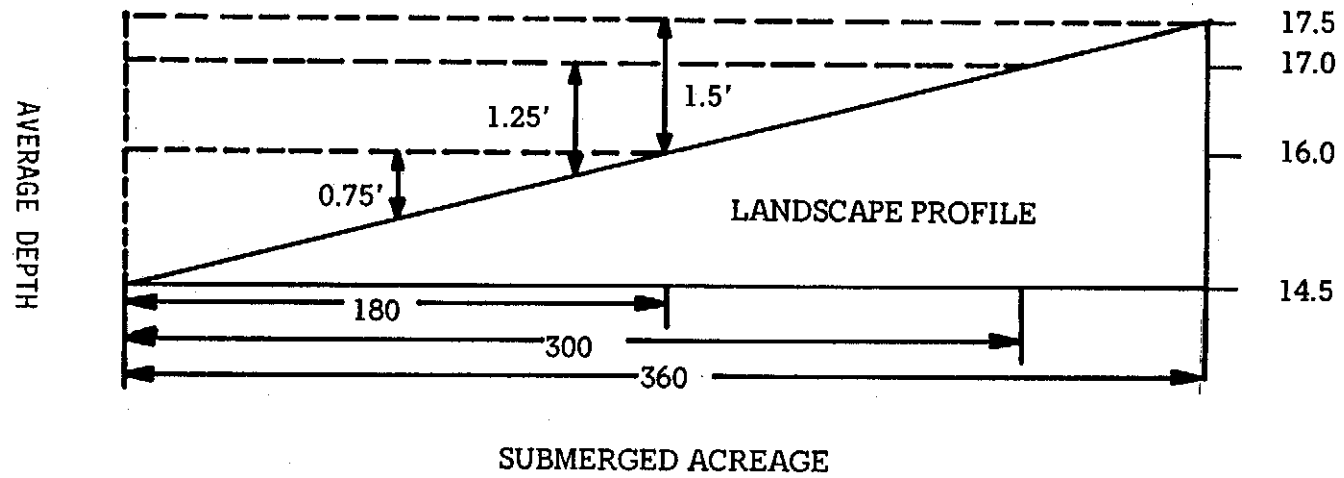


Figure E-2

SURFACE STORAGE COMPUTATION SCHEME

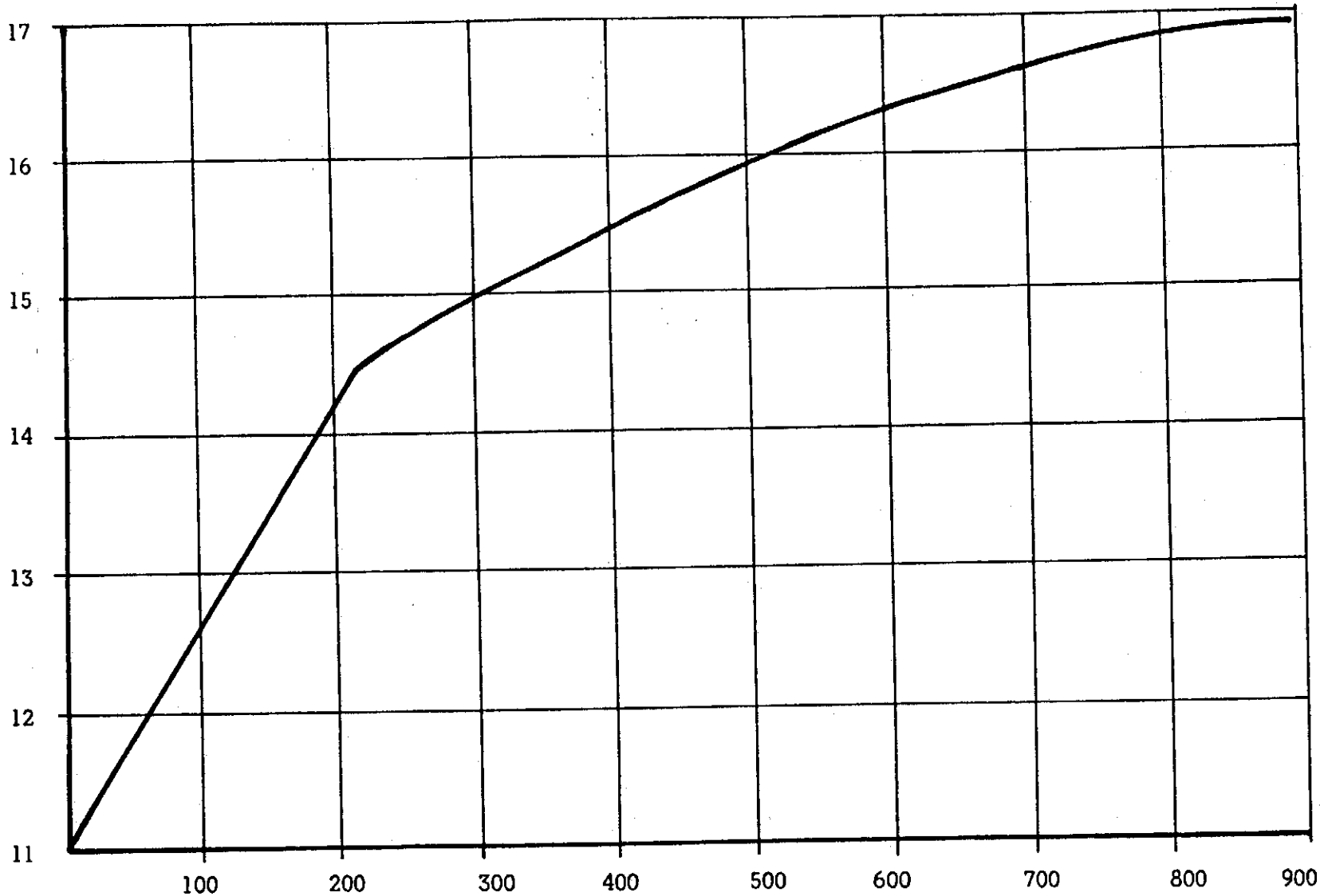


Figure E-3

TYPICAL STAGE - STORAGE GRAPH

Exfiltration Trenches

A. From Paragraph 5.4 of the *Basis of Review*:

"5.4 Underground Exfiltration Systems -

(a) Systems shall be designed for the retention volumes specified in Section 5.2.1 for retention systems, exfiltrated over one hour for retention purposes, prior to overflow, and based on test data for the site. (Note: such systems should not be proposed for projects to be operated by entities other than single owners or entities with full time maintenance staff.)

(b) A safety factor of two or more shall be applied to the design to allow for geological uncertainties.

(c) A dry system is one with the pipe invert at or above the average wet season water table."

Paragraph 5.2.2(a) is the requirement that projects with commercial or industrial zoning must provide dry pretreatment. Obviously, a project which falls into this category and is being designed to meet the criteria by using trench must have the pipe invert at or above the average wet season water table. It is also a requirement that no gravity discharge from the trench system be allowed below the elevation of the top of the perforated pipe.

B. Three field test procedures for determining hydraulic conductivity will be described next. The first is the usual constant head test. The second is the falling-head test, which may be utilized in areas of excellent percolation, and when difficulty "keeping the hole filled" is encountered. The third is a standard test used by the Florida Department of Transportation.

The engineer is cautioned that, when tests are conducted, site-specific characteristics, such as soil type, geology and hydrologic conditions must be factored into the field test methodology. Actual hydrologic conditions under which the exfiltration trench would be expected to perform must also be considered.

1. Usual Condition Test

The usual test performed is an open-hole test which is either uncased or cased with fully perforated casing. The procedure is described as follows:

a. Auger a 6 to 9 inch diameter hole to a depth below the ground surface equivalent to the design depth of trench (usually 4 to 6 feet).

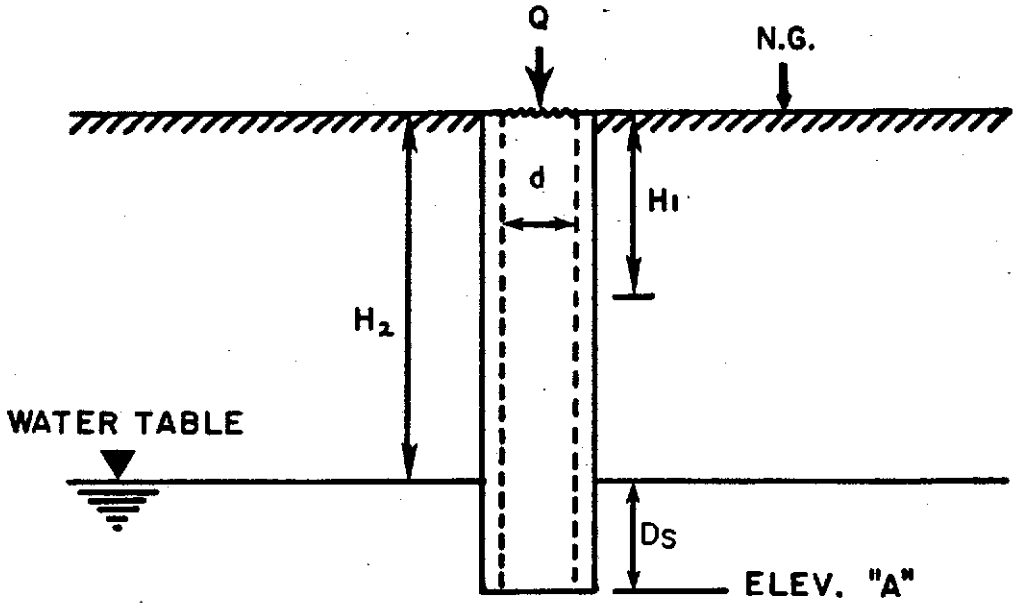
Record the distance from the ground surface to the water table prior to the addition of test water.

c. If hole walls are unstable lower screen or fully-perforated casing into the hole.

d. Fill hole with water and maintain water level at ground surface. Record rate of pumping in g.p.m., giving direct readings from water meter at fixed intervals of one minute or greater. Continue recording rate of pumping for 10 minutes following the stabilization of the recorded pumping rate.

Figure F-1 shows a cross section of the test hole with a formula relating the hydraulic conductivity to the field information. The hydraulic conductivity obtained by this method may be either greater or less than the effective trench hydraulic conductivity depending upon the relative hydraulic conductivity of the surface layers.

USUAL OPEN - HOLE TEST



$$K = \frac{4Q}{\pi d(2H_2^2 + 4H_2 D_S + H_2 d)}$$

K = HYDRAULIC CONDUCTIVITY (CFS/FT.^{2} - FT. HEAD)

Q = "STABILIZED" FLOW RATE (CFS)

d = DIAMETER OF TEST HOLE (FEET)

H_2 = DEPTH TO WATER TABLE (FEET)

D_S = SATURATED HOLE DEPTH (FEET)

ELEV. "A" = PROPOSED TRENCH BOTTOM ELEV.

H_1 = AVERAGE HEAD ON UNSATURATED HOLE SURFACE (FT. HEAD)

Figure F-1

2. Falling-head Test

The falling-head test is an open-hole test which is either uncased or cased with fully-perforated casing. The procedure is described as follows:

a. Auger a 6 to 9 inch diameter hole to a depth below the ground surface equivalent to the design depth of the trench (usually 4 to 6 feet).

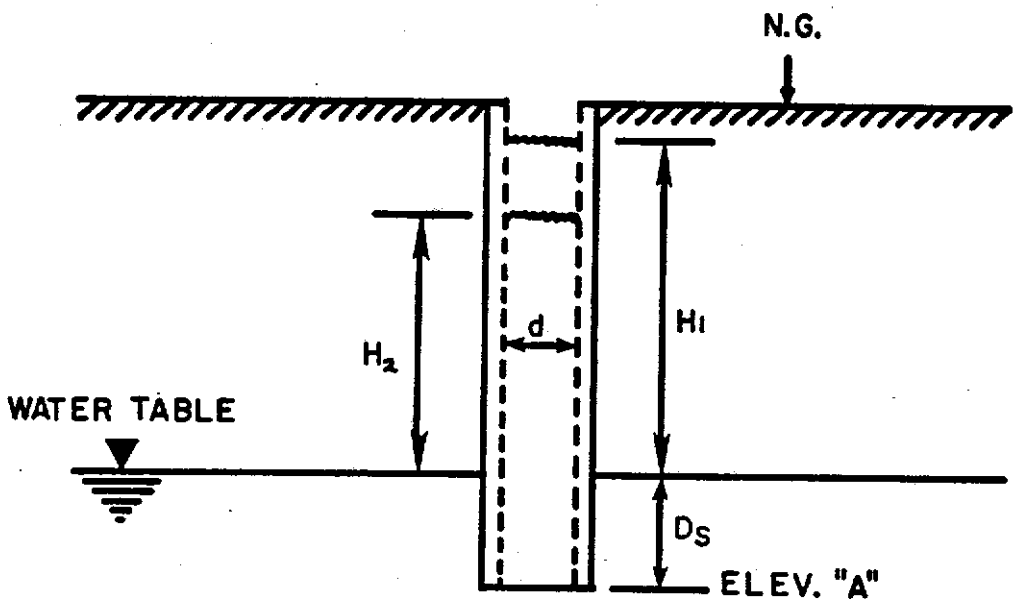
b. Record the distance from the ground surface to the water table prior to the addition of test water.

c. If hole walls are unstable, lower screen or fully-perforated casing into the hole.

d. Fill hole with water and maintain water level at ground surface. Cease adding water and measure the water level versus elapsed time in equal time increments, usually in 15-second increments. Continue measuring water level until it has dropped at least half the distance to the water table.

Figure F-2 shows a cross section of the test hole with a formula relating the hydraulic conductivity to the field information.

FALLING - HEAD OPEN - HOLE TEST



$$K = \frac{d \ln (H_1/H_2)}{(2H_1+2H_2+4D_S+d)(t_2-t_1)}$$

K = HYDRAULIC CONDUCTIVITY (CFS/FT.^{2}-FT. HEAD)

d = DIAMETER OF TEST HOLE (FEET)

H_1 = HEIGHT OF WATER IN HOLE ABOVE WATER TABLE AT TIME, t_1

H_2 = HEIGHT OF WATER IN HOLE ABOVE WATER TABLE AT TIME, t_2

D_S = SATURATED HOLE DEPTH (FEET)

ELEV. "A" = PROPOSED TRENCH BOTTOM ELEV. (FT. - NGVD)

t_1, t_2 = TIME, SECONDS

Figure F-2

3. D.O.T. Standard Test

The Florida Department of Transportation utilizes a standard test for design of seepage trenches in conjunction with highway projects. The D.O.T. test procedure is as follows:

Auger a 7 inch diameter hole to a depth of 10 feet below normal ground surface.

Record distance from ground surface to water table prior to addition of test water.

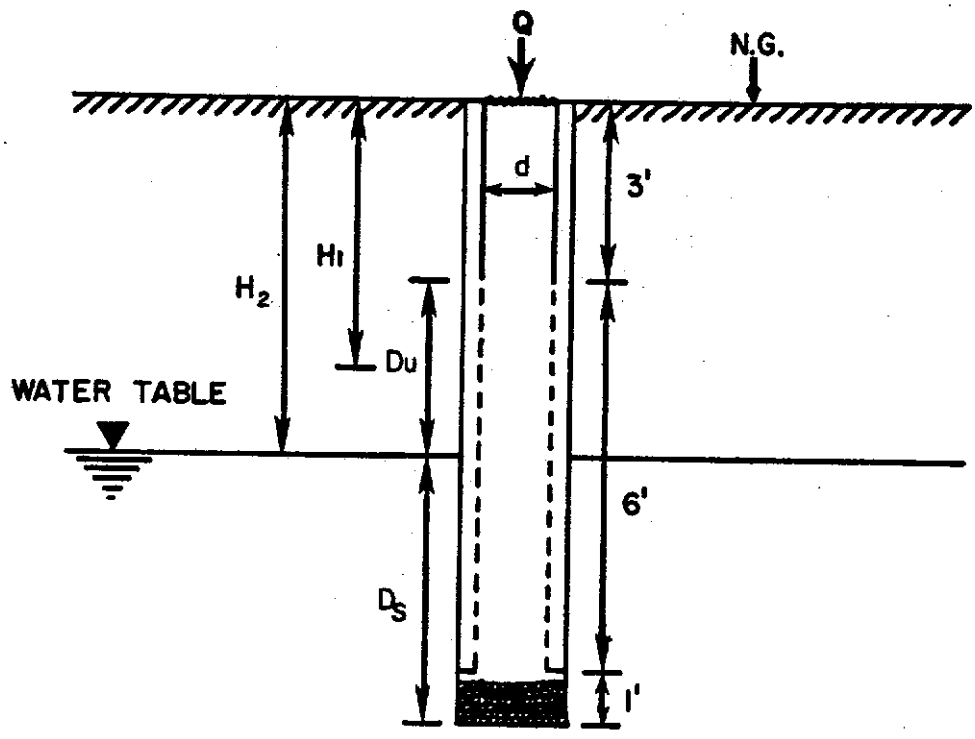
Pour 1/8 cubic foot of 1/2 inch diameter gravel in hole to prevent scouring.

Lower a 6 inch diameter perforated 10 gauge aluminum casing into hole. Casing to be 9 feet in length with perforations in the bottom 6 feet of the casing.

5. Fill hole with water and maintain water level at ground surface. Record rate of pumping in g.p.m. giving direct readings from water meter at fixed intervals. Use one minute intervals or greater, depending on the hydraulic conductivity of the soil. Continue recording rate of pumping for 10 minutes following the stabilization of the recorded pumping rate.

A schematic cross section of the D.O.T. test hole is shown in Figure F-3 with a formula which relates the hydraulic conductivity to the field data. The D.O.T. does not recommend utilization of seepage trenches in areas where this test yields less than 6 g.p.m.

D.O.T. STANDARD TEST



FOR $H_2 > 3.0$ FEET:

$$K = \frac{4Q}{\pi(20.25H_2 - H_2^2 - 9)}$$

K = HYDRAULIC CONDUCTIVITY (CFS/FT.^{2} - FT. HEAD)
Q = "STABILIZED" FLOW RATE (CFS)
d = DIAMETER OF TEST HOLE (FEET)
Du = UNSATURATED HOLE DEPTH (FEET)
D_S = SATURATED HOLE DEPTH (FEET)
H_1 = AVERAGE HEAD ON UNSATURATED HOLE SURFACE (FT. HEAD)
H_2 = DEPTH TO WATER TABLE (FEET).

FOR $H_2 \leq 3.0$ FEET:

$$K = \frac{Q}{11.192H_2}$$

Figure F-3

4. Analysis of Test Data

In this section actual test data which was compiled during a field test of the "usual" case will be described and the soil permeability calculated. The test was performed on a piece of property in Broward County, Florida. The test hole was 9 inches in diameter augered to a depth of 6 feet. A 9 inch diameter by 72 inch long perforated casing was set in the hole. The depth to the water table prior to introduction of test water was 5.3 feet below the ground. The field data collected during the test are shown in Table F-1.

Taking the total flow into the test hole during the 75 minute test period and dividing by 75 minutes, since there was no significant variation in flow during the test, yields an average flow rate, Q, of 3.46 g.p.m., which is equivalent to 7.71×10^{-3} cfs. The diameter of the test hole, D, was 0.75 foot. The saturated hole depth, Ds, was equal to the depth of the hole, 6 feet, minus the depth to the water table, 5.3 feet, which is equal to 0.7 foot.

Utilizing the formula from Figure F-1:

$$K = \frac{4Q}{\pi\ d\ (2H_2^2 + 4H_2D_s + H_2d)}$$

$$K = \frac{4(7.71 \times 10^{-3})}{\pi\ (0.75)\ (2(5.3)^2 + 4(5.3)\ (0.7) + (5.3)\ (0.75))}$$

$$K = 1.75 \times 10^{-4}\ \text{cfs/ft}^2\text{-ft. head}$$

TABLE F-1

BROWARD COUNTY - USUAL OPEN-HOLE TEST

Elapsed Time (Minutes)	Begin Meter Reading	End Meter Reading	Flow Gallons	Q (G.P.M.)
1	0.0	5.5	5.5	5.5
2	5.5	11.0	5.5	5.5
3	11.0	16.0	5.0	5.0
4	16.0	19.0	3.0	3.0
5	19.0	22.5	3.5	3.5
6	22.5	26.5	4.0	4.0
7	26.5	30.0	3.5	3.5
8	30.0	33.5	3.5	3.5
9	33.5	37.5	4.0	4.0
10	37.5	40.5	3.0	3.0
11	40.5	44.5	4.0	4.0
12	44.5	48.5	4.0	4.0
13	48.5	51.5	3.0	3.0
14	51.5	55.5	4.0	4.0
15	55.5	59.5	4.0	4.0
16	59.5	63.0	3.5	3.5
17	63.0	67.0	4.0	4.0
18	67.0	70.0	3.0	3.0
19	70.0	73.5	3.5	3.5
20	73.5	77.5	4.0	4.0
25	77.5	96.0	18.5	3.7
30	96.0	114.5	18.5	3.7
35	114.5	132.0	17.5	3.5
40	132.0	154.0	22.0	4.4
45	154.0	172.5	18.5	3.7
50	172.5	190.5	18.0	3.6
55	190.5	208.5	18.0	3.6
60	208.5	220.0	11.5	2.3
65	220.0	235.0	15.0	3.0
70	235.0	247.0	12.0	2.4
75	247.0	259.5	12.5	2.5

5. Design of Trenches

Since the first publication of *Volume IV, Permit Information Manual,* additional consideration has been given to the derivation of an acceptable exfiltration trench design formula. The latest development is shown on Figure F-4 along with the description of the appropriate parameters.

An example of the use of this formula with the data from the Broward County test site follows:

$$* L = \frac{V}{K(H_2W + 2H_2Du - Du^2 + 2H_2D_s) + (1.39 \times 10^{-4})WDu}$$

V = 15 Ac-In. **[Given]**

$K = 1.75 \times 10^{-4}$ CFS/FT^2 + FT HEAD

H_2 = 5.0 Feet (Design Condition)

W = 4.0 Feet

Du = 2.5 Feet

D_s = 1.5 Feet

$H = Du + D_s$ = 4.0 Feet

Solving for L gives,

L = 1389 feet of 4' x 4' exfiltration trench.

Users of the formula should use as "V" the actual volume (in acre-inches) of water to be treated. Typical volumes are either 1" times the project area for water quality, **or** 2.5" times the percent impervious times the project area for water quality, **or** a volume necessary to provide dry pretreatment at certain commercial or industrial sites. "V" should not be adjusted by the user to account for either that exfiltration trench is a retention system (50% credit on volume to be treated) or that the formula has a safety factor of 2. Both those factors are already incorporated into the formula.

For those situations when either: (1) the saturated depth of trench is greater than the non-saturated depth of trench; or (2) the trench width is greater than two times the total trench depth, the proportional assumptions for flow out the trench bottom are probably not valid. A conservative design formula for use in these cases would be:

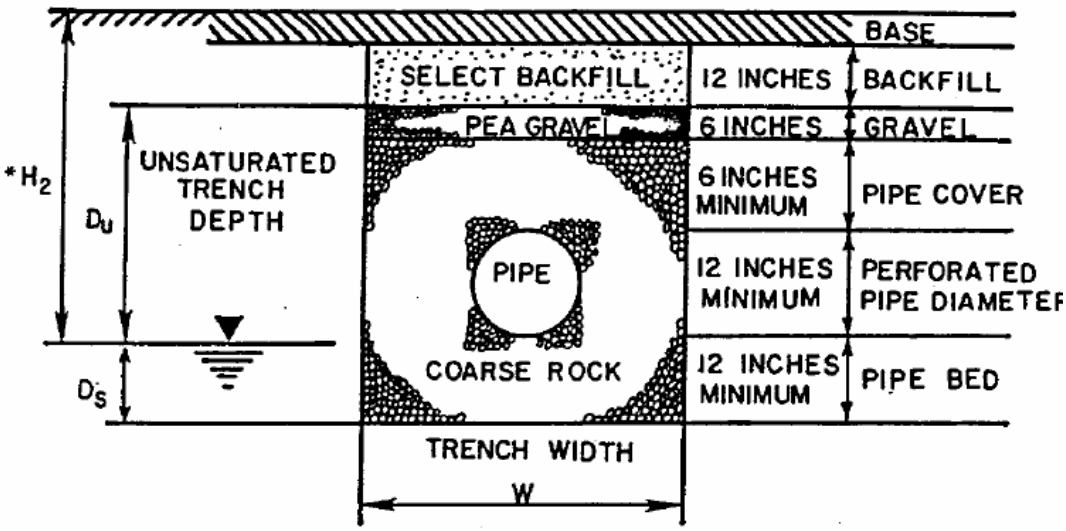
$$* L = \frac{V}{K(2H_2Du - Du^2 + 2H_2D_s) + (1.39 \times 10^{-4})WDu}$$

As with any design method, a good amount of engineering judgement must be applied for use on site-specific cases.

*** NOTE:**

The formulas derived to calculate exfiltration trench length are based on a one-hour time of exfiltration. This is representative of the majority of rainfall events being of small magnitude and short duration. Larger-magnitude and longer-duration storm events can affect the design by significantly changing the water table conditions assumed in the equation.

TYPICAL EXFILTRATION TRENCH



$$L = \frac{V}{K(H_2W + 2H_2Du - Du^2 + 2H_2Ds) + (1.39 \times 10^{-4})WDu}$$

L = LENGTH OF TRENCH REQUIRED (FEET)

V = VOLUME TREATED (ACRE-INCHES)

W = TRENCH WIDTH (FEET)

K = HYDRAULIC CONDUCTIVITY (CFS/FT.^{2}-FT.HEAD)

*H_2 = DEPTH TO WATER TABLE (FEET)

Du = NON-SATURATED TRENCH DEPTH (FEET)

D_S = SATURATED TRENCH DEPTH (FEET)

*** The value of H_2 to be used in the equation is the effective head on the saturated surface. A weir must be installed at the downstream end of the trench, to create true retention and to establish H_2. To achieve the design retention and exfiltration, the crest of the weir must be no lower than the top of the trench pipe.**

Figure F-4

Water Quality

Section 5.0 of the *Basis of Review* (BOR) contains retention/detention criteria which are typically applied in the design of a surface water management system; however, sections 4.1.1 and 4.2.4 of the BOR point out that additional water quality requirements also may be required. Systems which discharge to Outstanding Florida Waters (OFW) must be designed to meet more that just the Section 5.0 requirements.

Anti-degradation requirements - which state that any proposed activity or discharge within an OFW not degrade it - have been established in chapters 62-4 and 62-302, F.A.C. Subsections 62-4.242(1) and (2), and Section 62-302.300, F.A.C., on the pages which follow, are included for reference in designing a system to meet the State anti-degradation policy for discharges to OFW.

(Taken from Section 62-4.242, F.A.C., with amendments through and including those of May 15, 2002.)

62-4.242 Antidegradation Permitting Requirements; Outstanding Florida Waters; Outstanding National Resource Waters; Equitable Abatement.

(1) Antidegradation Permitting Requirements.

(a) Permits shall be issued when consistent with the antidegradation policy set forth in Rule 62-302.300, F.A.C., and, if applicable, Rule 62-302.700, F.A.C.

(b) In determining whether a proposed discharge which results in water quality degradation is necessary or desirable under federal standards and under circumstances which are clearly in the public interest, the department shall consider and balance the following factors:

1. Whether the proposed project is important to and is beneficial to the public health, safety, or welfare (taking into account the policies set forth in Rule 62-302.300, F.A.C., and, if applicable, Rule 62-302.700, F.A.C.); and

2. Whether the proposed discharge will adversely affect conservation of fish and wildlife, including endangered or threatened species, or their habitats; and

3. Whether the proposed discharge will adversely affect the fishing or water-based recreational values or marine productivity in the vicinity of the proposed discharge; and

4. Whether the proposed discharge is consistent with any applicable Surface Water Improvement and Management Plan that has been adopted by a Water Management District and approved by the Department.

(c) For domestic wastewater facilities, in addition to paragraph (b) above, in order for a proposed discharge to be necessary or desirable under federal standards and under circumstances which are clearly in the public interest, the permit applicant must demonstrate that none of the following is economically and technologically reasonable:

1. Implementation of water conservation measures to reduce the flow of domestic wastewater. The engineering report shall include an assessment of the feasibility of implementation of water conservation programs within the area served by the collection system. This paragraph shall apply only to utilities, municipalities, or other entities that have responsibility for both wastewater and water supply;

2. Implementation of infiltration/inflow reduction measures for expansions of domestic wastewater facilities. The engineering report shall include an assessment of an infiltration/inflow reduction program within the area served by the collection system;

3. Reuse of reclaimed water; and

4. Use of other discharge locations, which would reduce adverse impacts on water quality.

(d) For industrial wastewater facilities proposing new or expanded surface water discharges, in addition to paragraph (b) above, in order for the new or expanded industrial wastewater discharge to be necessary or desirable under federal standards and under circumstances which are clearly in the public interest, the permit applicant:

1. Must demonstrate that use of other discharge locations, land application, or recycling at offsite locations that would avoid the degradation of water quality is not economically and technologically reasonable; and

2. Shall submit a signed statement under penalty of law that a waste minimization and source reduction analysis was completed consistent with best management practices appropriate for the type of facility or discharge proposed, as identified in paragraph 62-620.100(3)(m), F.A.C., 40 CFR 122.44(k), and Guidance Manual for Developing Best Management Practices (BMP), U.S. Environmental Protection Agency, Office of Water, Washington, DC, EPA 833-B-93-004, October, 1993.

(2) Standards Applying to Outstanding Florida Waters.

(a) No Department permit or water quality certification shall be issued for any proposed activity or discharge within an Outstanding Florida Waters, or which significantly degrades, either alone or in combination with other stationary installations, any Outstanding Florida Waters, unless the applicant affirmatively demonstrates that:

1. With respect to blowdown from a recirculated cooling water system of a steam electrical generating plant, that the discharge:

a. Meets the applicable limitations of subsection 62-302.520(4), F.A.C., at the point of discharge; or

b. Has a mixing zone established pursuant to paragraph 62-302.520(6)(b), F.A.C., which assures the protection and propagation of a balanced indigenous population of shellfish, fish and wildlife in and on the Outstanding Florida Water, and which is established taking into account the recreational or ecological significance of such water; and

c. Meets the temperature limits of subsection 62-302.520(4), F.A.C., at the boundary of the mixing zone established pursuant to paragraph 62-302.520(6)(b), F.A.C.; or

2. The proposed activity of discharge is clearly in the public interest, and either

a. A Department permit for the activity has been issued or an application for such permit was complete on the effective date of the Outstanding Florida Water designation; or

b. The existing ambient water quality within Outstanding Florida Waters will not be lowered as a result of the proposed activity or discharge, except on a temporary basis during construction for a period not to exceed thirty days; lowered water quality would occur only within a restricted mixing zone approved by the Department; and, water quality criteria would not be violated outside the restricted mixing zone. The Department may allow an extension of the thirty-day time limit on a construction-caused degradation for a period demonstrated by the applicant to be unavoidable and where suitable management practices and technology approved by the Department are employed to minimize any degradation of water quality.

(b) The Department recognizes that it may be necessary to permit limited activities or discharges in Outstanding Florida Waters to allow for or enhance public use or to maintain facilities that existed prior to the effective date of the Outstanding Florida Water designation, or facilities permitted after adoption of the Outstanding Florida Water designation. However, such activities or discharges will only be permitted if:

1. The discharge or activity is in compliance with the provisions specified in subparagraph (2)(a)2. of this section; or

2. Management practices and suitable technology approved by the Department are implemented for all stationary installations including those created for drainage, flood control, or by dredging or filling; and

3. There is no alternative to the proposed activity, including the alternative of not undertaking any change, except at an unreasonably higher cost.

(c) For the purpose of this section the term "existing ambient water quality" shall mean (based on the best scientific information available) the better water quality of either (1) that which could reasonably be expected to have existed for the baseline year of an Outstanding Florida Water designation or (2) that which existed during the year prior to the date of a permit application. It shall include daily, seasonal, and other cyclic fluctuations, taking into consideration the effects of allowable discharges for which Department permits were issued or applications for such permits were filed and complete on the effective date of designation.

(d) Subsection 62-4.242(2), F.A.C., shall not apply to any dredge or fill activity or any discharge to an Outstanding Florida Water permitted by the Department on, or for which a complete permit application was filed on, the effective date of an Outstanding Florida Water designation; nor shall it apply to any renewal of a Department permit where there is no modification in the dredge or fill activity or discharge which would necessitate a permit review.

(e) Any activity that is exempted from permit programs administered by the Department is not subject to the requirements of Rule 62-4.242, F.A.C.

(f) For the Apalachicola River north of Gulf County, this section shall not apply in the federally-authorized nine-foot navigation project, as follows:

1. Maintenance dredging and disposal and snag removal by the Army Corps of Engineers as presently performed pursuant to existing permits and its continuation under renewals thereof; or

2. Class A and B emergencies as defined in subsection 62-312.150(5), F.A.C.; or

3. Exemptions to permitting specified in Section 403.813, F.S., and Department rules; or

4. Any other permittable project of the Army Corps of Engineers deemed necessary by the Department pursuant to the considerations referenced in paragraph 62-302.100(10)(c), F.A.C.

62-302.300 Findings, Intent, and Antidegradation Policy for Surface Water Quality.

(1) Article II, Section 7 of the Florida Constitution requires abatement of water pollution and conservation and protection of Florida's natural resources and scenic beauty.

(2) Congress, in Section 101(a)(2) of the Federal Water Pollution Control Act, as amended, declares that achievement by July 1, 1983, of water quality sufficient for the protection and propogation of fish, shellfish, and wildlife, as well as for recreation in and on the water, is an interim goal to be sought whenever attainable. Congress further states in Section 101(a)(3), that it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited.

(3) The present and future most beneficial uses of all waters of the State have been designated by the Department by means of the classification system set forth in this Chapter pursuant to Section 403.061(10), F.S. Water quality standards are established by the Department to protect these designated uses.

(4) Because activities outside the State sometimes cause pollution of Florida's waters, the Department will make every reasonable effort to have such pollution abated.

(5) Water quality standards apply equally to and shall be uniformly enforced in both the public and private sector.

(6) Public interest shall not be construed to mean only those activities conducted solely to provide facilities or benefits to the general public. Private activities conducted for private purposes may also be in the public interest.

(7) The Commission, recognizing the complexity of water quality management and the necessity to temper regulatory actions with the technological progress and the social and economic well-being of people, urges, however, that there be no compromise where discharges of pollutants constitute a valid hazard to human health.

(8) The Commission requests that the Secretary seek and use the best environmental information available when making decisions on the effects of chronically and acutely toxic substances and carcinogenic, mutagenic, and teratogenic substances. Additionally, the Secretary is requested to seek and encourage innovative research and developments in waste treatment alternatives that might better preserve environmental quality or at the same time reduce the energy and dollar costs of operation.

(9) The criteria set forth in this Chapter are minimum levels which are necessary to protect the designated uses of a water body. It is the intent of this Commission that permit applicants should not be penalized due to a low detection limit associated with any specific criteria.

(10)(a) The Department's rules that were adopted on March 1, 1979, regarding water quality standards are designed to protect the public health or welfare and to enhance the quality of waters of the State. They have been established taking into consideration the use and value of waters of the State for public water supplies, propogation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.

(b) Under the approach taken in the formulation of the rules adopted in this proceeding:

1. The Department's rules that were adopted on March 1, 1979, regarding water quality standards are based upon the best scientific knowledge related to the protection of the various designated uses of waters of the State; and

2. The mixing zone, zone of discharge, site specific alternative criteria, exemption, and equitable allocation provisions are designed to provide an opportunity for the future consideration of factors relating to localized situations which could not adequately be addressed in this proceeding, including economic and social consequences, attainability, irretrievable conditions, natural background, and detectability.

(c) This is an even-handed and balanced approach to attainment of water quality objectives. The Commission has specifically recognized that the social, economic and environmental costs may, under certain special circumstances, outweigh the social, economic and environmental benefits if the numerical criteria are enforced statewide. It is for that reason that the Commission has provided for mixing zones, zones of discharge, site specific alternative criteria, exemptions and other provisions in Chapters 62-302, 62-4, and 62-6, F.A.C. Furthermore, the continued availability of the moderating provisions is a vital factor providing a basis for the Commission's determination that water quality standards applicable to water classes in the rule are attainable taking into consideration environmental, technological, social, economic and institutional factors. The companion provisions of Chapters 62-4 and 62-6, F.A.C., approved simultaneously with these Water Quality Standards are incorporated herein by reference as a substantive part of the State's comprehensive program for the control, abatement and prevention of water pollution.

(d) Without the moderating provisions described in (b)2. above, the Commission would not have adopted the revisions described in (b)1. above nor determined that they are attainable as generally applicable water quality standards.

(11) Section 403.021, Florida Statutes, declares that the public policy of the State is to conserve the waters of the State to protect, maintain, and improve the quality thereof for public water supplies, for the propagation of wildlife, fish and other aquatic life, and for domestic, agricultural, industrial, recreational, and other beneficial uses. It also prohibits the discharge of wastes into Florida waters without treatment necessary to protect those beneficial uses of the waters.

(12) The Department shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources, and all cost-effective and reasonable best management practices for nonpoint source control. For the purposes of this rule, highest statutory and regulatory requirements for new and existing point sources are those which can be achieved through imposition of effluent limits required under Sections 301(b) and 306 of the Federal Clean Water Act (as amended in 1987) and Chapter 403, F.S. For the purposes of this rule, cost-effective and reasonable best management practices for nonpoint source control are those nonpoint source controls authorized under Chapters 373 and 403, F.S., and Department rules.

(13) The Department finds that excessive nutrients (total nitrogen and total phosphorus) constitute one of the most severe water quality problems facing the State. It shall be the Department's policy to limit the introduction of man-induced nutrients into waters of the State. Particular consideration shall be given to the protection from further nutrient enrichment of waters which are presently high in nutrient concentrations or sensitive to further nutrient concentrations and sensitive to further nutrient loadings. Also, particular consideration shall be given to the protection from nutrient enrichment of those waters presently containing very low nutrient concentrations: less than 0.3 milligrams per liter total nitrogen or less than 0.04 milligrams per liter total phosphorus.

(14) Existing uses and the level of water quality necessary to protect the existing uses shall be fully maintained and protected. Such uses may be different or more extensive than the designated use.

(15) Pollution which causes or contributes to new violations of water quality standards or to continuation of existing violations is harmful to the waters of this State and shall not be allowed. Waters having water quality below the criteria established for them shall be protected and enhanced. However, the Department shall not strive to abate natural conditions.

(16) If the Department finds that a new or existing discharge will reduce the quality of the receiving waters below the classification established for them or violate any Department rule or standard, it shall refuse to permit the discharge.

(17) If the Department finds that a proposed new discharge or expansion of an existing discharge will not reduce the quality of the receiving waters below the classification established for them, it shall permit the discharge if such degradation is necessary or desirable under federal standards and under circumstances which are clearly in the public interest, and if all other Department requirements are met. Projects permitted under Part IV of Chapter 373, F.S., shall be considered in compliance with this subsection if those projects comply with the requirements of subsection 373.414(1), F.S.; also projects permitted under the grandfather provisions of Sections 373.414(11) through (16), F.S., or permitted under Section 373.4145, F.S., shall be considered in compliance with this subsection if those projects comply with the requirements of subsection 62-312.080(2), F.A.C.

(18)(a) Except as provided in subparagraphs (b) and (c) of this paragraph, an applicant for either a general or generic permit or renewal of an existing permit for which no expansion of the discharge is proposed is not required to show that any degradation from the discharge is necessary or desirable under federal standards and under circumstances which are clearly in the public interest.

(b) If the Department determines that the applicant has caused degradation of water quality over and above that allowed through previous permits issued to the applicant, then the applicant shall demonstrate that this lowering of water quality is necessary or desirable under federal standards and under circumstances which are clearly in the public interest. These circumstances are limited to cases where it has been demonstrated that degradation of water quality is occurring due to the discharge.

(c) If the new or expanded discharge was initially permitted by the Department on or after October 4, 1989, and the Department determines that an antidegradation analysis was not conducted, then the applicant seeking renewal of the existing permit shall demonstrate that degradation from the discharge is necessary or desirable under federal standards and under circumstances which are clearly in the public interest.

Specific Authority 403.061, 403.062, 403.087, 403.088, 403.504, 403.704, 403.804, 403.805 FS. Law Implemented 373.414, 403.021, 403.061, 403.085, 403.086, 403.087, 403.088, 403.101, 403.141, 403.161, 403.182, 403.502, 403.702, 403.708, 403.802 FS. History--Formerly 17-3.041, Amended 1-28-90, Formerly 17-3.042, 17-302.300, Amended 12-19-94, 1-23-95, 12-26-96, 5-15-02.

A. Weir Flow

1. Free Discharge

The equation normally used in computing discharge over a rectangular sharp-crested weir is:

$$Q = CLH^{1.5}$$

where Q = discharge, cfs
C = weir coefficient
L = weir length, ft
H = head on weir, ft

From experimental work done by Kindsvater and Carter[1] at Georgia Tech, the value of C can be determined from Figure G-1. In this figure, the following nomenclature is used:

h = head on weir
p = weir height above channel bottom
L = weir length
B = channel width
C = weir coefficient

However, for virtually all weirs encountered in the design of surface water management systems, the value of C will be 3.13. The primary exception to this would be for weirs located in narrow channels with the crest elevation near the channel bottom. Therefore, for normal applications, the weir equation will be:

$$Q = 3.13LH^{1.5}$$

2. Submerged Discharge

When the tailwater rises above the weir crest elevation, the actual discharge over the weir is inhibited by the backwater conditions. The above calculated "free" discharge value is multiplied by the following reduction factor to account for the submergence effect:

$$Q_S = Q_F \left[1 - \left(\frac{H_2}{H_1}\right)^{1.5}\right]^{0.385}$$

where, Q_S = submerged flow, cfs

Q_F = free flow, cfs

H_1 = upstream head above crest, feet-head

H_2 = downstream head above crest, feet-head

[1]-Kindsvater, C.E. and R.W. Carter, "Discharge Characteristics of Rectangular Thin-Plate Weirs", *ASCE Transactions*, 1959 pp. 772-822.

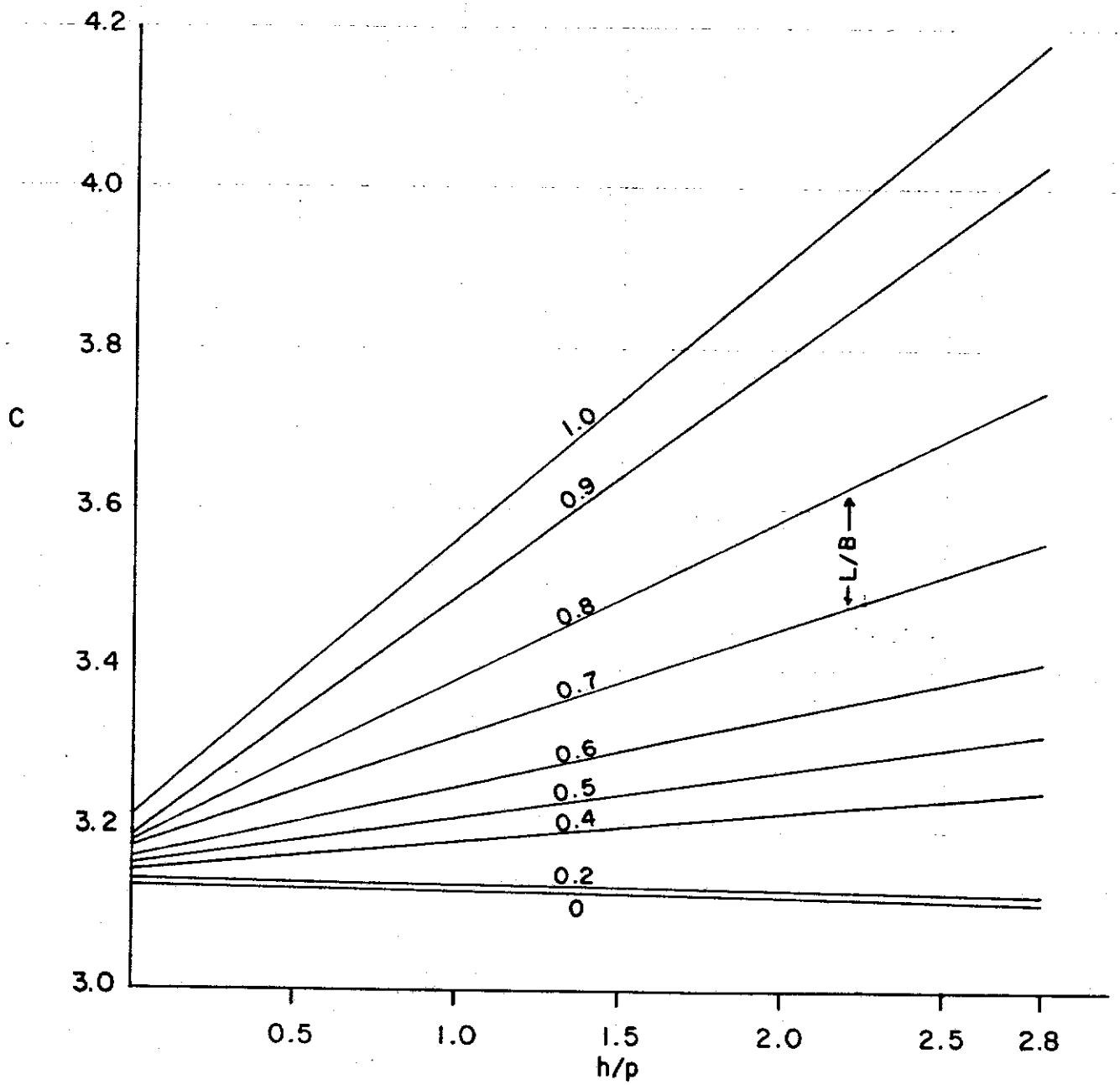


Figure G-1

Coefficient for Weirs

B. V-Notch Flow

The *Basis of Review* requires that bleed-down mechanisms be V-notches for wet detention systems. The discharge through a V-notch opening in a weir can be estimated by:

$$Q = 2.5 \tan\left(\frac{\theta}{2}\right) H^{2.5}$$

where, Q = discharge, cfs
θ = angle of V-notch, degrees
H = head on vertex of notch, feet

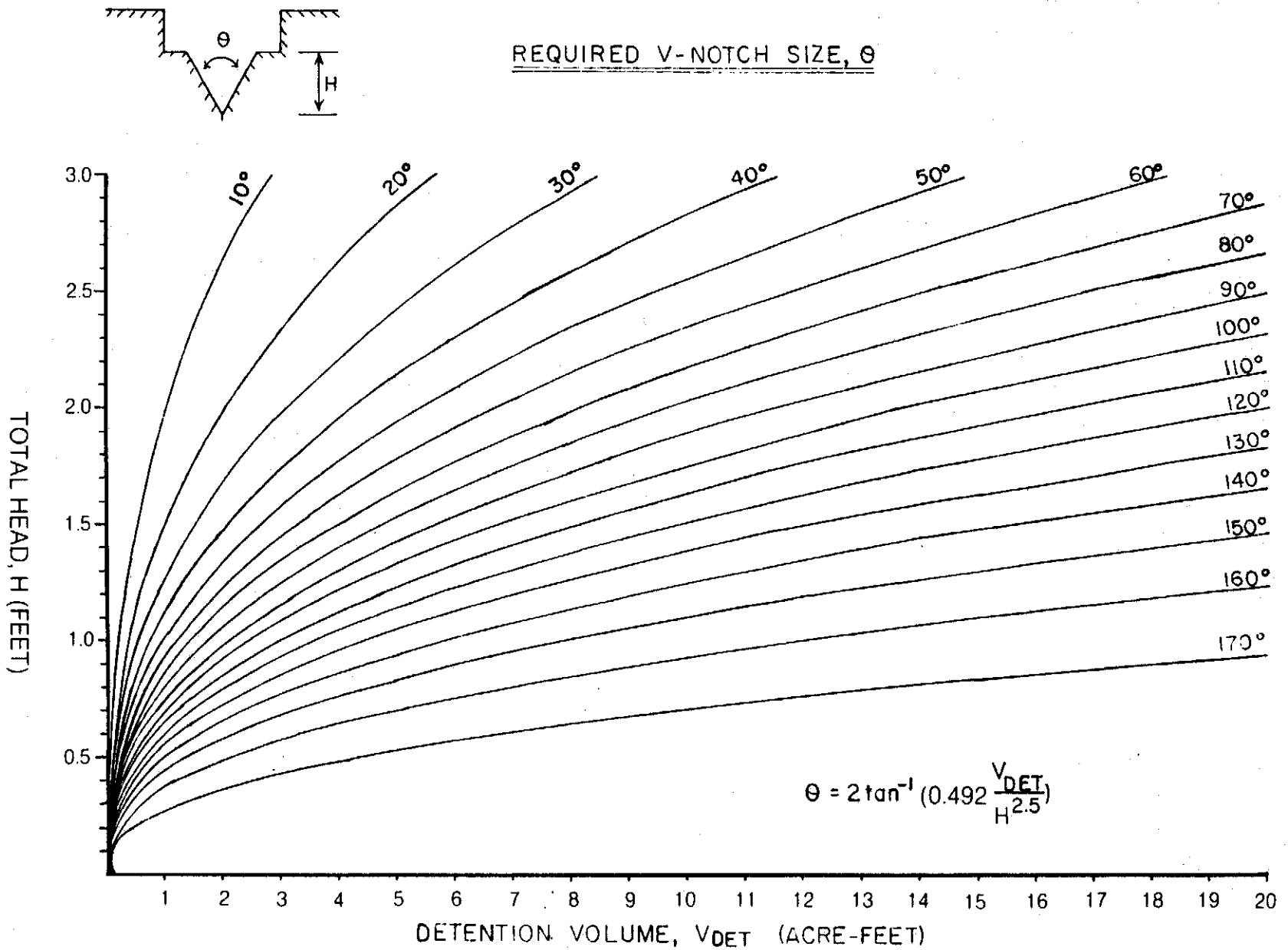
Since District criteria specifies that this bleed-down mechanism be sized to discharge one-half inch of detention volume in 24 hours, the following formula provides the required size:

$$\theta = 2 \tan^{-1}\left(0.492 \frac{V_{DET}}{H^{2.5}}\right)$$

where, θ = V-notch angle, degrees
V_{DET} = one-half inch of detention volume, acre-feet
H = vertical distance from weir crest to vertex of angle, feet

A graph is provided as Figure G-2 for quick solution to this equation. Narrow orifices or those with an area of 6 square inches or less are difficult to build and are year-round maintenance problems because they can be easily clogged by even small clumps of vegetation or debris. The opportunities for clogging during runoff events can be many, even if the outfall structure has a baffle.

Therefore, anyone proposing a triangular orifice with an invert angle of less than 20° and either a height or topwidth of less than 2 inches, or a circular orifice with a diameter of less than 3 inches, or any other orifice of less than 6 square inches in size, should first discuss the proposed orifice size and shape with District staff, and be prepared to provide assurances that the orifice could reasonably be expected to be built properly if permitted, and that it could reasonably be expected not to fail frequently (and particularly during runoff events) due to clogging.



NOTE: V-NOTCH SIZE REQUIRED TO BLEED-DOWN 0.5 INCH OF DETENTION VOLUME IN 24 HOURS

Figure G-2

C. Orifice Flow

When stages exceed the crest elevation of the weir, discharges through the bleeder notch should be calculated using the orifice equation. In its basic form, the equation is:

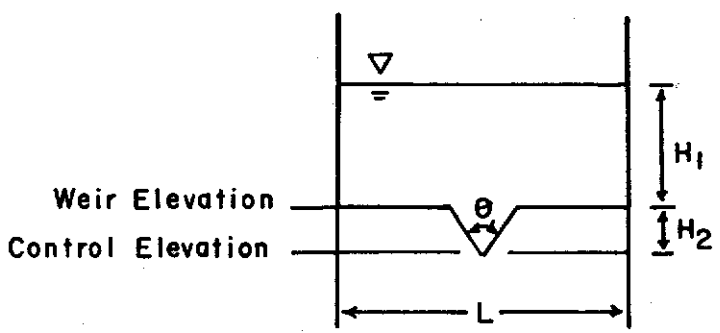
$$Q = 4.8AH^{1/2}$$

where, Q = flow, cfs
A = area of the notch, sq ft
H = head above notch centroid, ft

For triangular orifices the equation converts to:

$$Q = 4.8 \left(H_2^2 \tan \frac{\theta}{2}\right) \left(H_1 + \frac{H_2}{3}\right)^{1/2}$$

where the variables are as follows:



The orifice flow values should be added to the weir discharge values. Therefore, the total flow over a rectangular sharp-crested weir with a V-notch bleeder slot would be approximated by:

$$Q = 3.13LH_1^{1.5} + 4.8\left(H_2^2 \tan\frac{\theta}{2}\right)\left(H_1 + \frac{H_2}{3}\right)^{1/2}$$

Hydrographs

There are numerous methods available to designers for estimating the shape of runoff hydrographs. A commonly used method is the Soil Conservation Services Unit Hydrograph technique. The Unit Hydrograph procedure is cumbersome to calculate by hand and is not normally used except with computer programs. It is the staff's desire to provide as many time-saving design techniques to the designers as possible. A relatively recent hydrograph development procedure known as the Santa Barbara Urban Hydrograph Method (SBUH) has been modified by the staff for consistent use with other procedures for stormwater system analysis presented herein. The SBUH has been found to produce results which correlate well with gauged watersheds in south Florida.

An example of the use of the SBUH procedure will serve as a description of the method much better than any discussion on its theoretical development.

SBUH EXAMPLE

The given data are: a 640-acre project with a calculated S-value of 3.5 inches, and an estimated Time of Concentration of 2.0 hours. The desired end product is to calculate the 10-year, 24-hour runoff hydrograph for a storm with a 24-hour rainfall depth of 8.5 inches.

It is desirable to select a time interval, Δt, equivalent to one-half of the Time of Concentration. Therefore, Δt will be one hour.

Terminology as follows:

I_1 = instantaneous runoff rate at time t-1, cfs

I_2 = instantaneous runoff rate at time t, cfs

Q_1 = hydrograph rate at time t-1, cfs

Q_2 = hydrograph rate at time t, cfs

K = routing coefficient, dimensionless

Δt = routing intervals, hours

Tc = time of concentration, hours

In the SBUH method:

$$K = \frac{\Delta t}{2Tc + \Delta t}$$

and $Q_2 = Q_1 + K (I_1 + I_2 - 2Q_1)$

It is necessary to set up a table as shown on Table H-1. The first four columns are calculated as described in the section entitled Runoff. The fifth column represents the instantaneous runoff rate, I, ignoring the effect of the Time of Concentration on the attenuation of peaks. The conversion of the runoff, R, in inches to the instantaneous rate, I, in CFS is based on the following approximation:

$$I_2 = \frac{(R_2 - R_1)\ A}{T} \quad \text{(since 1 acre-inch/hr} = 1 \text{ cfs)}$$

By utilizing the relationships for K, Δt, Tc, I_1, I_2, Q_1 and Q_2 calculate the hydrograph points in the sixth column. A graphical plot of the computed hydrograph is shown on Figure H-1.

TABLE H-1

S B U H M E T H O D

Time (Hours) T	Rainfall Ratio P/P24	Rainfall (Inches) P	Runoff (Inches) R	Instant Runoff (cfs)	Runoff Hydrograph Q
0	.000	0	0	0	0
1	.010	.085	0	0	0
2	.020	.170	0	0	0
3	.032	.272	0	0	0
4	.045	.383	0	0	0
5	.062	.527	0	0	0
6	.083	.706	0	0	0
7	.108	.918	.013	8	2
8	.137	1.165	.054	26	8
9	.171	1.454	.134	51	20
10	.213	1.811	.268	86	39
11	.269	2.287	.495	145	70
12	.656	5.576	2.839	1500	371
13	.767	6.520	3.634	509	624
14	.818	6.953	4.009	240	524
15	.850	7.225	4.247	152	393
16	.880	7.480	4.472	144	295
17	.898	7.633	4.607	87	223
18	.916	7.786	4.743	87	169
19	.934	7.939	4.880	87	136
20	.952	8.092	5.017	87	116
21	.964	8.194	5.108	59	99
22	.976	8.296	5.200	59	83
23	.988	8.398	5.292	59	73
24	1.000	8.500	5.384	59	67

A = 640 Acres S = 3.5 inches Tc = 2.0 hours P_{24} = 8.5 inches

$$K = \frac{\Delta t}{2T_C + \Delta t} = 0.20$$

EXAMPLE HYDROGRAPH

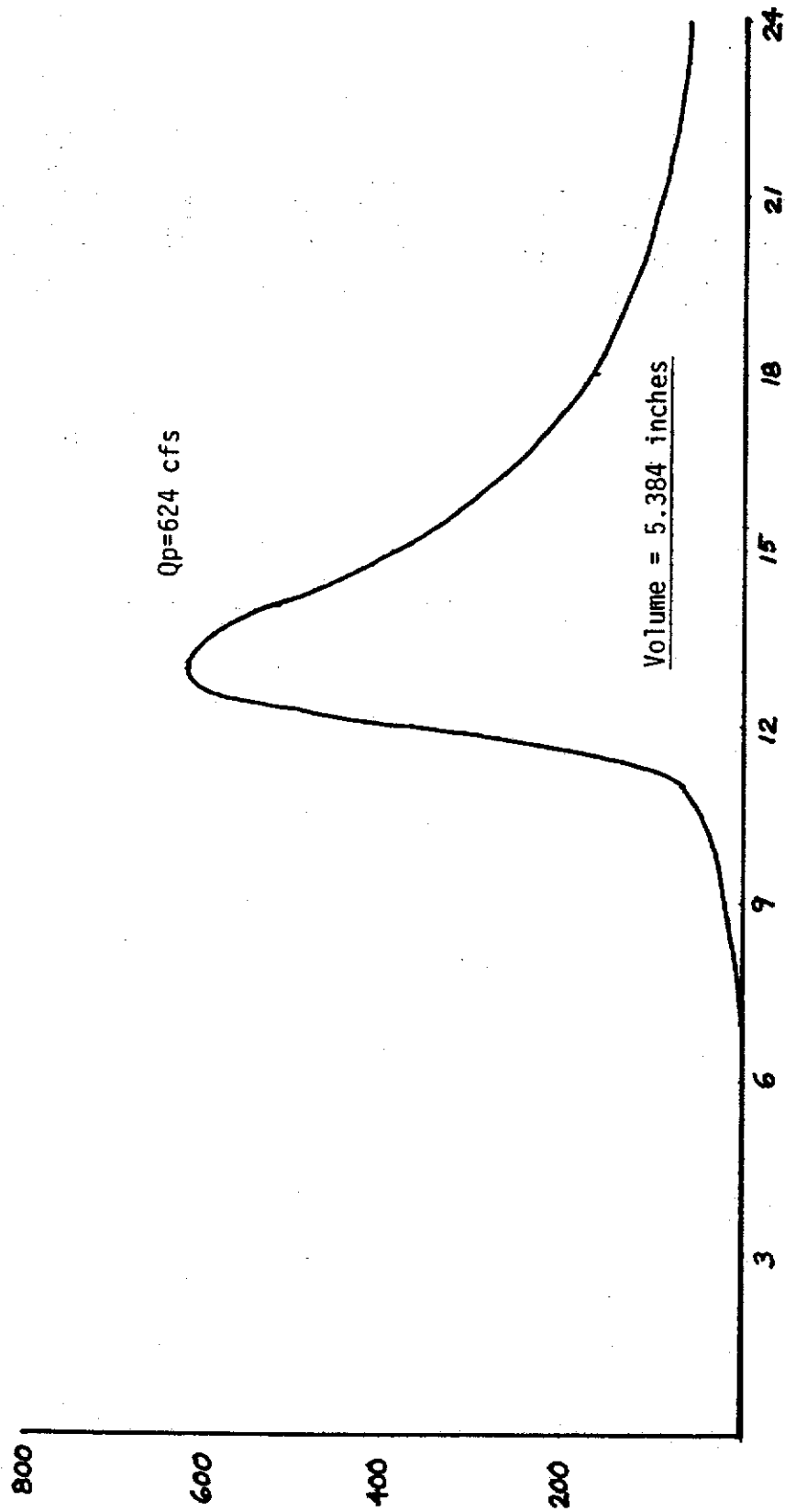


Figure H-1

Flood Routing

Flood routing is either a graphical or mathematical procedure for the determination of stages, flows and storage volumes at specific points in time during a storm event. Figure I-1 is a graphical example of exactly what a flood routing procedure will tell the designer. The solid line is the runoff or inflow hydrograph which can be calculated as described in the previous section. The dotted line is the outflow hydrograph and represents the time variation of discharge off-site through the control structure.

The point where the inflow and outflow hydrographs cross is called the point of dynamic equilibrium. The dynamic variable that is in equilibrium, i.e., stopped, at this point is the on-site water level. To the left of this point the inflow rate is greater than the outflow rate and, therefore, the water level rises. To the right of this point the inflow rate is less than the outflow rate and the water level drops. Therefore, this is the point in time when the on-site water level ceases to rise and begins to drop and it is hence the peak stage coincident with the frequency of the storm event analyzed.

It is interesting to note that it is at this point that the control structure is discharging at its peak rate also (assuming a gravity controlled structure). The area to the left of this point under the inflow hydrograph and above the outflow hydrograph is equivalent to the peak storage volume on-site.

The question of how much larger a flood-routed peak discharge may be, compared to the allowable value, arises frequently. As an example, small (say, 20 acres or less) sites which were formerly undeveloped but are proposed to be highly impervious often can meet design requirements only by utilizing a water quality control structure with near-minimum dimensions, because the total volume of water to be stored and then discharged to meet the "2.5 inches times percent impervious" is rather small.

However, if the project is in a basin where an extremely restrictive allowable discharge equation (say, a peak of 1 cfs or less), is in effect, the only way that criteria can be met would be to devote a very sizeable portion of the project site to water management.

Review of allowable design discharges may include consideration of site-specific circumstances, such as: the project is small enough so that even if the actual design storm discharge is slightly larger than the allowable, the effect on the receiving body is negligible; or cases where the computed discharge is so small (in the range of a few tenths of a cfs), that even slight differences in the selection of design parameters can yield peak discharge values which are substantially different, based on a percentage of the true amount, but still give very small values.

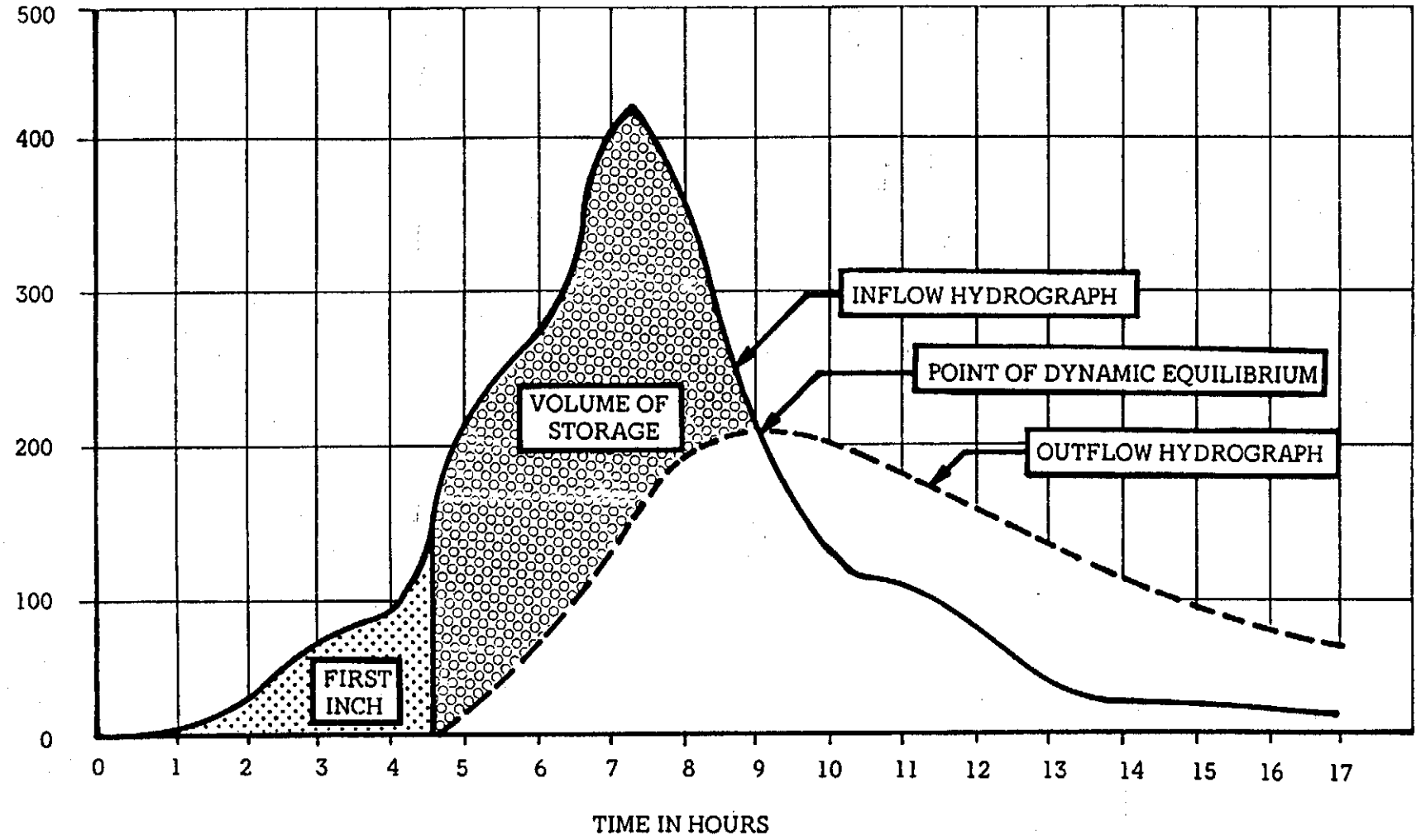


Figure I-1

INFLOW AND OUTFLOW HYDROGRAPHS

Environmental Design Aids

ENVIRONMENTAL DESIGN AIDS

This part of "Design Aids" is a compilation of materials and methods that can be used to evaluate the environmental aspects of a surface water management system. Included is information about wetland boundary determinations, elimination or reduction of wetland impacts, separation of lakes from wetlands, protecting wetland hydroperiods, and water quality considerations for wetlands. These sections are entirely new to this manual and are intended to assist the applicant in complying with the criteria in the *Basis of Review for Environmental Resource Permits* section 4.0.

The information is intended to help the reader understand the environmental resource permitting program and associated principles of project design and permitting. This part does not constitute additional rule criteria nor will it be used in lieu of adopted rule criteria or in a manner which is inconsistent with such duly adopted rules.

The **Wetland Boundary Determinations** section includes information on both formal and informal wetland determinations, and a discussion on the application procedure for obtaining a formal wetland determination. This section includes a discussion of the differences between formal wetland determinations using global positioning systems (GPS) and traditional land surveys.

The section on **Elimination or Reduction of Wetland Impacts** provides narrative and graphic examples to illustrate the main points of the criteria summarized in this section. The emphasis here is on project designs that avoid adverse impacts to wetlands, thus avoiding adverse impacts to fish, wildlife and listed species.

The section on **Separation of Excavations from Wetlands** is intended to provide applicants with an understanding of the District's criteria on lake-wetland separation and to clarify the issues that may arise during the application review process. Examples are provided to assist the user in complying with the lake-wetland separation criteria.

Protection of Wetland Hydroperiods is a discussion of the considerations involved in evaluating projects which propose to include wetland preservation areas within or adjacent to the site. Definitions are provided for wetland water level zones and a methodology is provided for establishing the normal pool or control elevation of a wetland to ensure the long term viability of the hydrologic regime of the wetland.

Water Quality Inputs and Treatments for Wetland Protection contains considerations for ensuring that stormwater coming from a proposed project site does not harm a wetland to be protected. One example of a possible treatment method is presented.

WETLAND BOUNDARY DETERMINATIONS

One of the most important factors to establish early in the project planning stage is the extent of wetlands on the project site. The presence or absence of wetlands can substantially affect the permitting process through the requirements and criteria that must be satisfied in order to obtain an environmental resource permit. The District can assist permit applicants with the determination of wetland boundaries in one of two ways, 1) formal wetland determinations or 2) informal wetland determinations.

Once the wetland lines have been clearly established on a project site, the planning and design work can proceed with a higher level of certainty regarding the permittability of a design. The need for major revisions to project designs should be greatly reduced or eliminated by knowing the extent of the wetlands on a site before committing to a project design. Designing around the limitations of the land (and wetlands) will facilitate the permitting process.

Informal Non-binding Wetland Determinations

If a land owner does not wish to obtain a formal wetland determination, the District can provide an informal non-binding wetland determination. An informal determination is not a final agency action and does not bind the District, or any other governmental agency in any way.

A land owner initiates an informal wetland determination by submitting a written request to the District. Clear and legible aerial photographs with the property boundaries depicted must be submitted with the written request. The District also will need a location map and a copy of the county soils map showing the property.

The land owner should arrange to have an environmental consultant or wetland scientist/ecologist stake and flag the wetland boundaries prior to District staff verifying the wetland limits. The District staff will inspect the property and verify the staked wetland boundaries. The land owner may or may not have the wetland limits surveyed. If a survey is not performed, an approximation of the wetland boundaries may be drawn on aerial photographs for inspection and verification by District staff. Once agreement on the approximation is reached, the District will provide written notification of concurrence with the approximate wetland boundary lines.

Again, informal determinations are not binding on the District or any other agency and should not be considered as a "sign off" by the agency on an exact wetland boundary line. Informal wetland determinations are provided as a service to the regulated community in order to assist with project planning needs. An informal determination is conducted as a service only to the level of need of the individual requesting it.

Formal Wetland Determinations

Application Procedure

A land owner, a person with legal, or equitable interest in a property such as a purchase contract or option, or an entity with the power of eminent domain, may apply for a formal wetland determination by submitting an application to the District. The application must include Form 0972 "Petition for a Formal Wetland and Surface Water Determination", the correct processing fee and some basic information about the property. Items such as location maps, aerial photographs, proof of ownership, county soils maps and USGS quad maps with the property depicted are typical requirements. The information requirements are also listed in Section 4.5 of the *Basis of Review for Environmental Resource Permit Applications.*

The applicant must provide the District with recent aerial photographs which are clear and legible and have the property boundary depicted on the photograph. Aerial photographs may be obtained from a property appraiser's office or from qualified private firms, and should generally be of a scale of 1" = 200' (1:2,400) or 1" = 400' (1:4,800). These are suitable scales for most wetland determinations. Additionally, Redi-map aerial photographs, Marc Hurd aerial photographs, historical aerial photography or other supplemental material may be useful on some sites depending on the size of the property, type of wetland systems, and the need for larger scale photographs to distinguish vegetative features or smaller scale photographs to establish reference landmarks or waterbodies. Oblique aerial photographs are not suitable for wetland boundary determinations.

Certified Survey

The applicant should arrange to have an environmental consultant or wetland scientist/ecologist mark the wetland boundaries on the ground with survey staking and/or survey flagging tape prior to contacting District staff to verify the staked wetland lines. After the District has verified the staked wetland limits, the lines must be surveyed by a registered professional land surveyor. Five copies of the survey drawings, legal descriptions, and wetland acreage information along with five copies of the survey depicted on aerial photographs must be submitted to the District. The survey must meet the minimum technical standards for a boundary or specific purpose survey and be capable of being mathematically reproduced. The signed and sealed survey drawings will be used by the District in the preparation of a report detailing the extent of the wetlands on the property. Applicants who can submit the survey data in digital .dxf file format using state plane coordinates east zone, NAD 83, should do so.

An applicant may also use differentially corrected global positioning systems (GPS) to locate the wetland boundaries if the accuracy can be certified to the minimum technical standards for a specific purpose survey. Five copies of the survey drawings, legal descriptions, and wetland acreage produced by using differentially corrected GPS will need to be submitted to the District along with five copies of the survey depicted on aerial photographs. Additionally, the survey data must be submitted digitally using .dxf file format using state plane coordinates east zone, NAD 83.

Approximate Formal Wetland Determinations

As an alternative to traditional surveying methods, the applicant may in some cases use an approximate method to locate the wetland boundaries. Such methods include GPS, rectified aerial photographs with the wetland boundaries depicted or a geo-referenced digital map produced from a boundary drawn on a non-rectified aerial photograph. An approximate determination method can not be used if the range of variability of the depicted wetland line is greater than 25 feet.

If an applicant intends to use an approximate wetland determination methodology, the level of accuracy or range of variability and appropriateness of the approximate methodology for the project site should be determined in consultation with District staff. An aerial photograph may be used as the basis for an approximate determination only when it clearly and accurately depicts the wetland boundaries. If a wetland determination can not be conducted to an appropriate level of accuracy using the approximate methods, either a traditional survey or differentially corrected GPS certified to the minimum technical surveying standards must be used to locate and depict the wetland boundaries.

Once the methodology for an approximate wetland determination has been agreed upon, a depiction of the wetland boundaries on aerial photographs must be submitted. For each type of approximate determination, District staff will verify the wetland boundary depictions and the range of variability by ground truthing with the individual responsible for establishing the wetland boundaries. The range of variability must be determined by comparing the depicted wetland boundary lines on aerial photographs with field located boundary points. The District will determine the number and location of points on each wetland boundary to be compared. Each wetland will have no fewer than three boundary points field verified and a minimum of one field point for every 1000 feet of wetland boundary will be inspected and compared to the depiction on aerial photographs.

When an approximate GPS is used, the applicant must have the field verified wetland boundary comparison points surveyed. A specific purpose survey of the comparison points showing their relationship to the GPS located boundary points must be submitted to the District. The specific purpose survey must meet minimum technical surveying standards.

If changes to the wetland boundary depictions are necessary based on ground truthing and verification, the aerial photographs with the corrected wetland boundary depictions must be submitted to the District. The level of accuracy or maximum range of variability of the wetland boundary lines should be indicated on each aerial photograph and can not exceed 25 feet on any wetland boundary.

The scale of the aerial photographs used in the depiction of the wetland boundary must be large enough to allow verification of the line in the field. A scale of 1" = 200' or 1" = 400' is generally suitable. Also, the width of the line which depicts the boundary should be carefully considered. Depending on the scale of the aerial photograph, a boundary line drawn with a broad-tipped marker could be wider than the acceptable range of variability. In general, the smaller the width of the line, the less likelihood of problems in interpreting what it is depicting, both on the aerial photograph and at the site.

If a geo-referenced map is used, the digital data should be submitted in .dxf file format using state plane coordinates east zone, NAD 83, along with five copies of the aerial photograph used to produce the geo-referenced map.

If an applicant intends to conduct future activities located within 200 feet of the approximate determination, including the range of variability, the applicant will need to establish the exact wetland boundary either by traditional surveying methods or differentially corrected GPS certified to the minimum technical surveying standards.

District Determination Report

For each type of formal wetland determination, the District will prepare a staff report with information on the types of wetlands found on the site and showing the wetland boundaries in the form of either survey drawings or aerial photographs or a combination of both. The wetland determination report is issued by the Executive Director of the District. Formal wetland determinations are valid for five years and can be renewed prior to expiration. The issuance of a formal wetland determination is a final agency action and is binding on the District, the Florida Department of Environmental Protection and local governments. This determination is not binding on the Federal government.

District Assistance

It is wise to contact your local service center to discuss the particular needs of a specific project site. The environmental analysts in the service center are experienced with the types of wetlands in the areas they serve and can provide guidance on the best approach to the wetland determination needs of your particular project.

Pre-application meetings at the District are used to provide potential applicants with general information about the potential for wetlands occurring on their property. These meetings can be used to discuss the best method for proceeding with either a formal or an informal wetland determination.

ELIMINATION OR REDUCTION OF WETLAND IMPACTS

During the evaluation of a permit application, District staff must consider the effect a project will have on wetlands and surface waters, both onsite and offsite. This evaluation takes into account various types of proposed impacts including direct physical impacts from dredging or filling, impacts from altered hydroperiods and water levels, and secondary and cumulative impacts. In order for staff to recommend approval of an application, the proposed activity cannot have a net adverse impact on wetland functions or surface water functions.

Section 4.2.1 of the *Basis of Review for Environmental Resource Permit Applications*, requires that District staff evaluate whether an applicant has implemented practicable design modifications to eliminate or reduce adverse impacts to wetlands or surface waters. There are several factors that are considered in the staff's evaluation of a design modification and whether a modification is practicable.

A practicable modification must be technically possible to implement, must not adversely affect public health or safety, and must be economically viable. For example, a design modification which removes all economic value is not considered practicable. However, in order to be considered practicable, a design modification does not need to provide the highest and best use of the property.

Conversely, a modification does not need to remove all economic value from the property in order to be considered not practicable. Factors such as the cost of the modification in relation to the overall cost of the project will be considered, as well as the cost of the modification in relation to the overall environmental benefit of implementing the modification.

A design modification which is different in type or function from the original project is not considered practicable. For example, it would not be practicable to redesign or modify a commercial office building project into a residential subdivision because the function of the project is to provide commercial office space. However, it would be practicable to change the layout of the buildings, parking areas and water management lakes or to reduce the number of buildings to keep the footprint of the development out of the wetlands. In the case of linear projects such as roadways, an alternative alignment can be considered a practicable design modification.

Practicable modifications for secondary and cumulative impacts must also be considered. District staff must consider the expected use of the project and the related or connected aspects of the project that could result in adverse impacts to wetlands or surface waters. Additionally, the staff must consider future activities and projects that are expected to occur as well as existing projects in an analysis of cumulative impacts on wetlands and surface waters. This analysis takes into consideration the "big picture" view along with a site specific location of an impact.

Figures L-1 through L-5 provide examples of project design modifications which are considered practicable.

Elimination or Reduction of Impacts

Basis of Review for Environmental Resource Permit Applications

Section 4.2.1

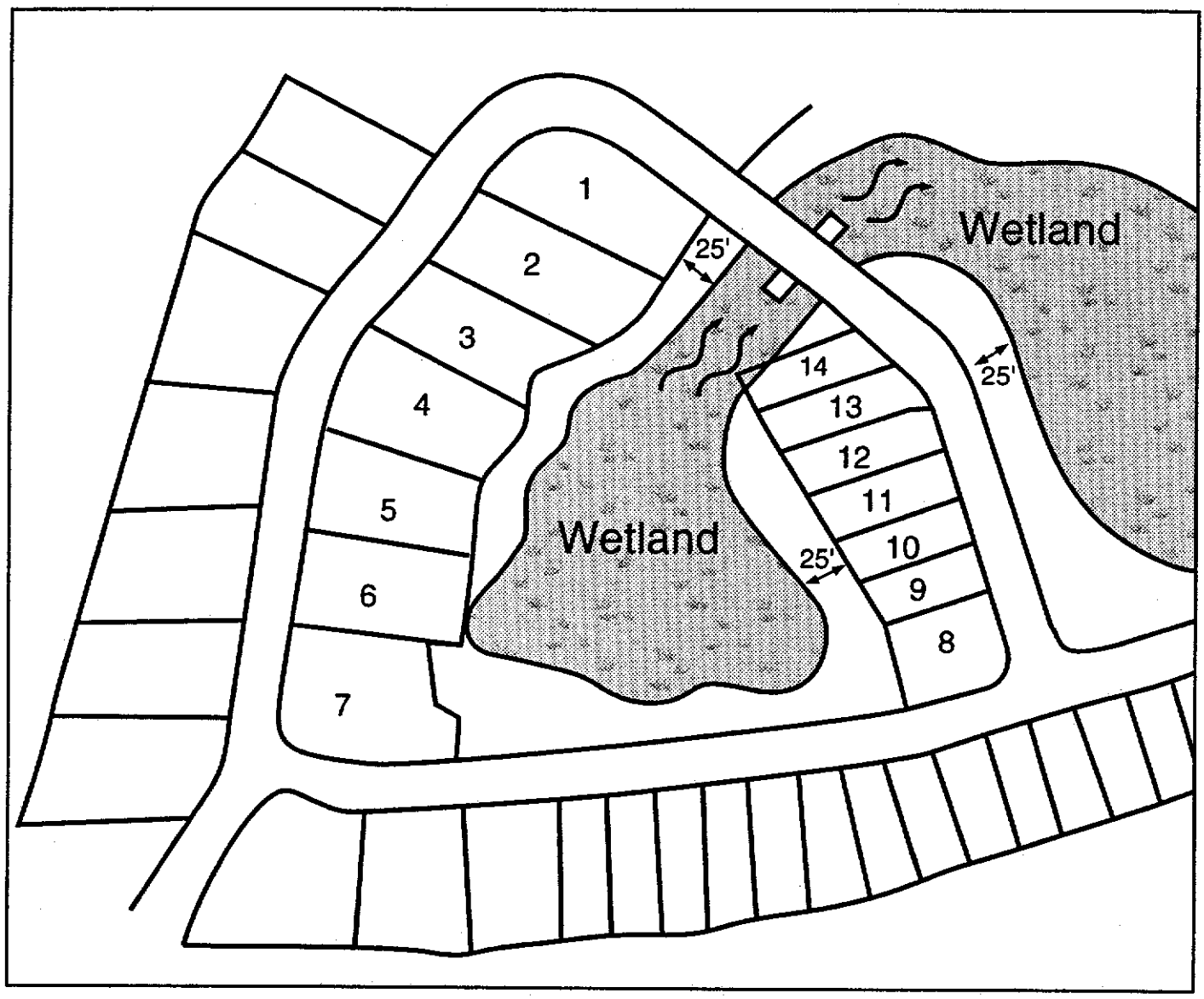


Figure L-1

Typical Environmental Impacts Associated with This Project.

1. Fill placed in wetland for road crossing.
2. Lot 14 and associated fill pad extending into wetland.
3. No buffer provided at lot 6.
4. Interruption of surficial hydrology by road crossing and undersized culvert.
5. Fragmentation of wetland habitat by road.

Elimination or Reduction of Impacts

Basis of Review for Environmental Resource Permit Applications

Section 4.2.1

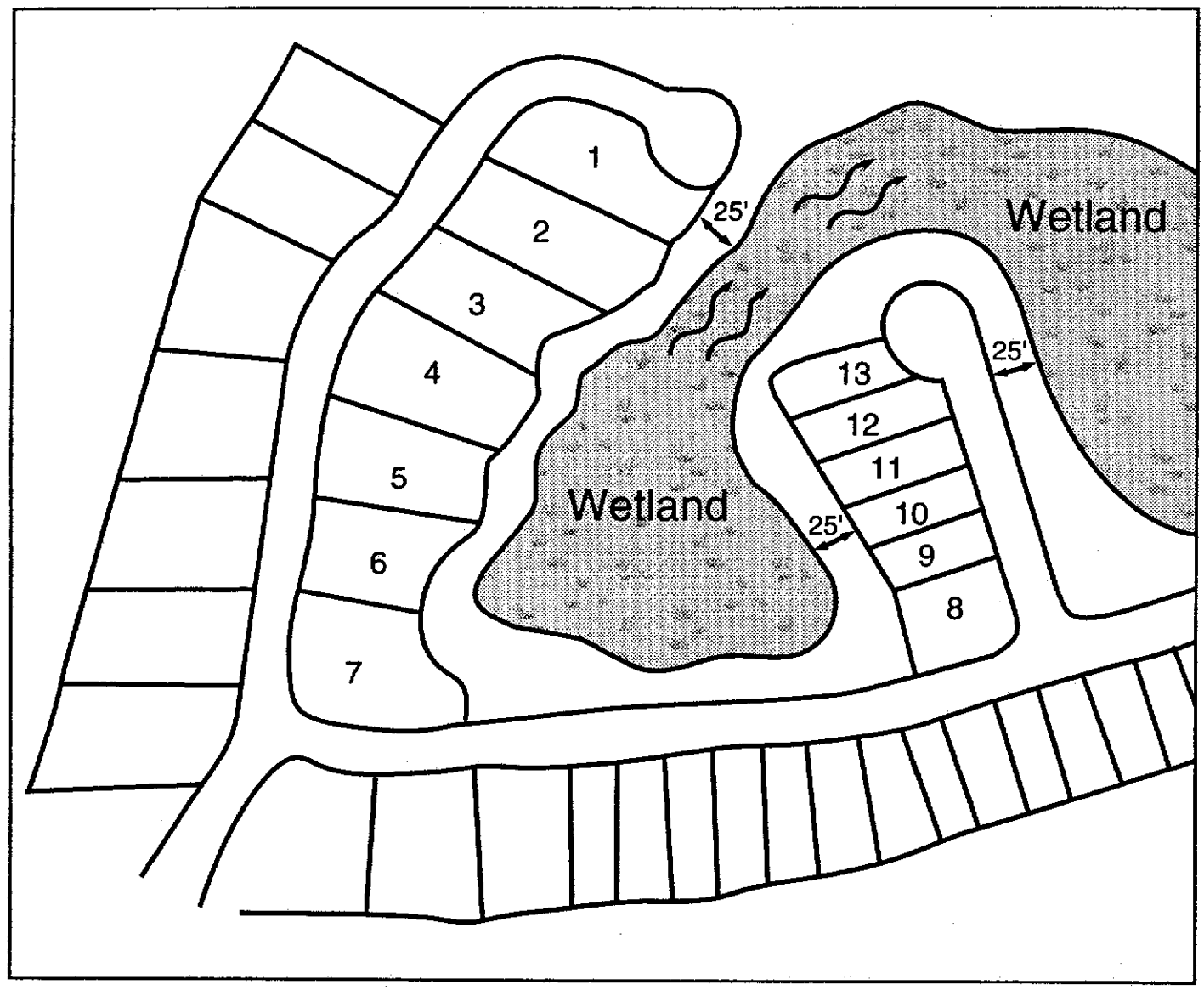


Figure L-2

Project Redesigned to Avoid All Wetland Impacts.

1. Cul-de-sacs used to avoid road crossing.
2. Lot 14 and associated fill in wetland eliminated.
3. Buffer provided on lot 6.
4. Surficial hydrology maintained in wetland.
5. Wetland habitat remains intact/contiguous.

Elimination or Reduction of Impacts

Basis of Review for Environmental Resource Permit Applications

Section 4.2.1

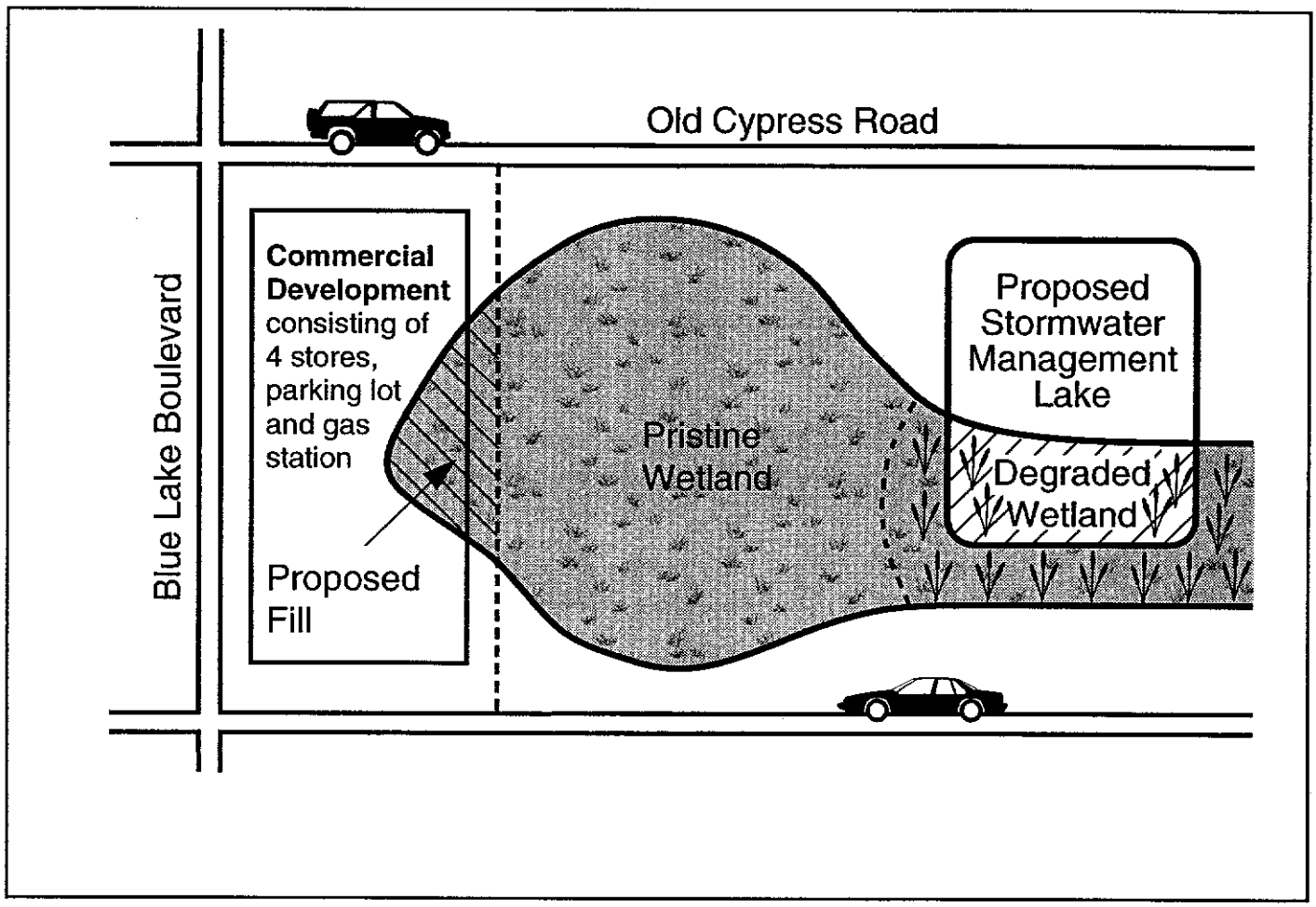


Figure L-3

Types of modifications which meet the criteria of the ***Basis of Review for Environmental Resource Permit Applications,*** section 4.2.1.

1. Move development out of high quality portion of wetland with corresponding reduction in number of stores.
2. Reconfigure Stormwater Management lake and relocate outside of wetland.
3. Use retaining walls rather than fill slopes to stabilize fill.

Elimination or Reduction of Impacts

Basis of Review for Environmental Resource Permit Applications

Section 4.2.1

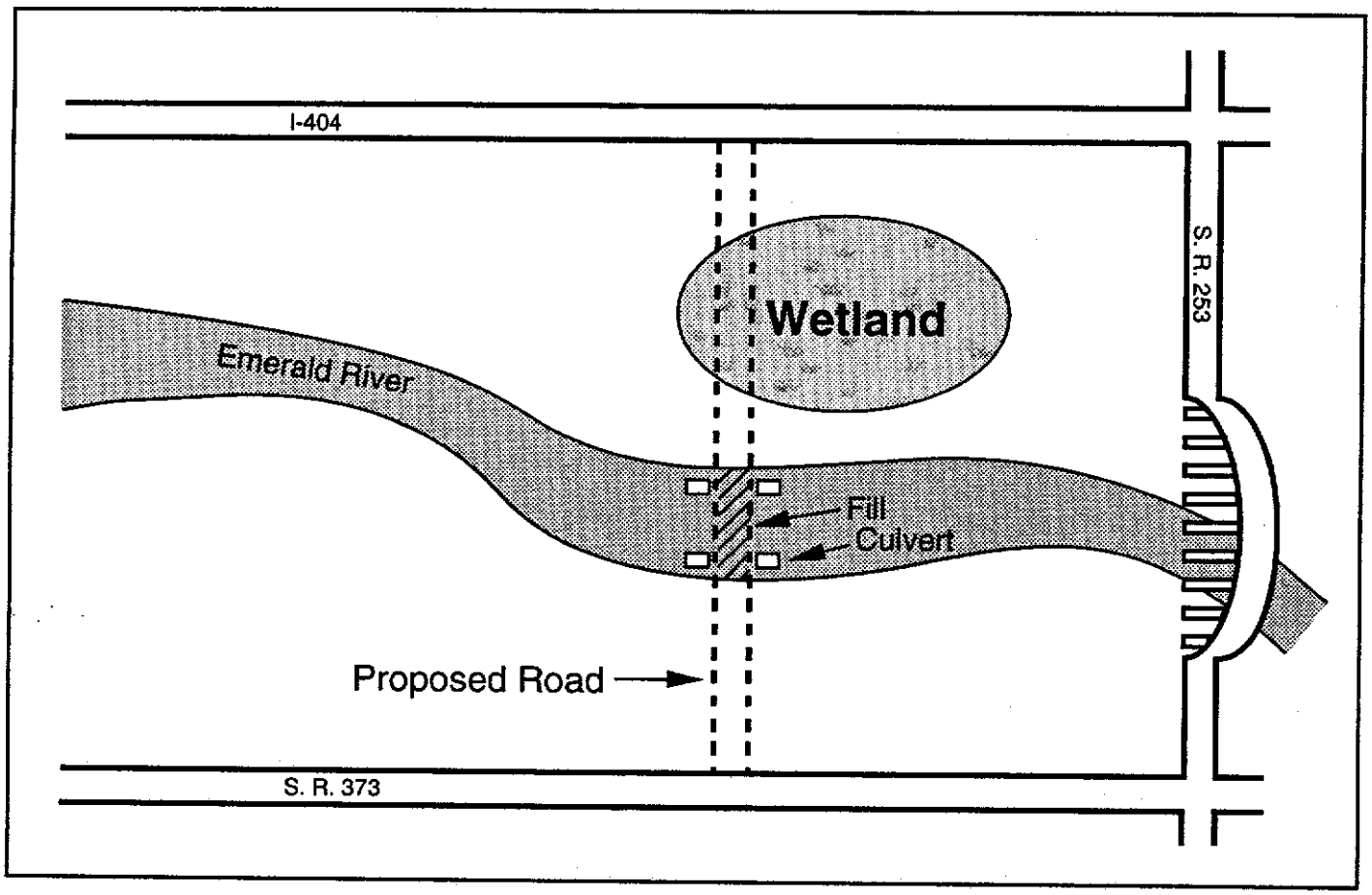


Figure L-4

Types of modifications which meet the criteria of the ***Basis of Review for Environmental Resource Permit Applications,*** section 4.2.1.

1. Bridge the Emerald River rather than fill with culverts.
2. Change alignment to avoid isolated wetland, cross river at narrowest point.
3. Widen S.R. 253, if doing so accomplishes the same thing as the construction of the proposed road would.
4. Reduce median width in wetland and river.

Elimination or Reduction of Impacts

Basis of Review for Environmental Resource Permit Applications

Section 4.2.1

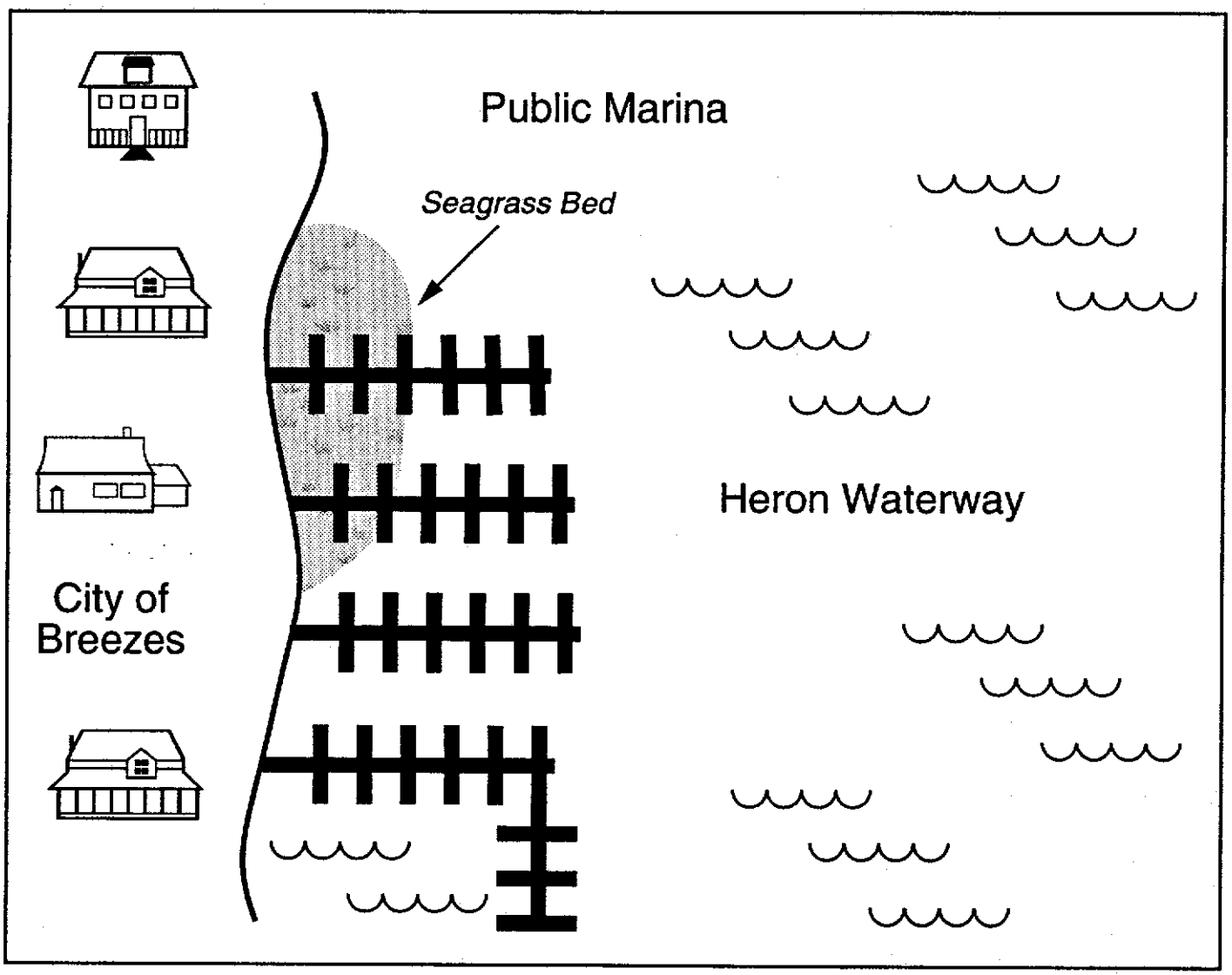


Figure L-5

Types of modifications which meet the criteria of the ***Basis of Review for Environmental Resource Permit Applications,*** section 4.2.1.

1. Eliminate slips over sea grasses.
2. Move slips water-wards to avoid shallow depths.
3. Reconfigure slips to avoid sea grasses.
4. Use PVC or concrete pilings instead of CCA treated pilings.

(THIS SECTION RESERVED)

Separation Of Excavations From Wetlands

The *Basis of Review for Environmental Resource Permit Applications*, Section 6.12, requires that excavations for proposed surface water management lakes, ditches, canals or borrow pits be separated from wetlands by a distance sufficient to protect the hydrologic regime of the wetlands. The proposed excavation must not create a hydraulic gradient, drain, seepage or preferential flow or other condition, which could adversely impact the hydroperiod of the wetlands. This criteria applies to wetlands to be preserved, created, restored or enhanced.

Possible impacts from lake construction to proximal wetlands include shortened hydroperiods, delayed rewetting at wet season, accelerated dry down approaching dry season, interruption of groundwater interflow into wetlands, interruption of surface water flows into wetlands and reduction in wet season water levels.

Special considerations are required for project designs which involve a wetland to be protected and a water body with a proposed control elevation lower than the elevation of the normal pool or control elevation of the wetland. In this scenario, the applicant will need to submit information to 1) substantiate the reason for using a lower control elevation at the proposed excavation site and 2) provide reasonable assurances that there will be no adverse impacts to the hydroperiod of the wetland. The information should consist of data collected on the hydrologic regime of the wetland, the proposed control elevation or normal pool elevation of the wetland, ground water monitoring data from the location and depth of the proposed excavation, seasonal high water table data at the site of excavation, site topography and gradient calculations. (See pages CA-1 through CA-6 and O-1 through O-8.)

Assumptions that wetlands are perched or confined from ground water will not be considered by staff as evidence for allowing a lower control elevation in an excavated water body.

There are places in the District where past and/or present activities are responsible for a lowered water table which is adversely impacting wetlands on or adjacent to a site. If there is evidence that such impacts have occurred, wetland preservation cannot be assured by simply maintaining existing conditions. Therefore, existing or current hydrologic conditions alone will not always be a sufficient reason to propose a control elevation which is different from the elevation at the wetland boundary. It may be necessary to re-establish the wetland hydroperiod by using a control elevation different from the one associated with present conditions.

If a control elevation is proposed which is higher than the wetland, site topography and water table information should be submitted to allow staff to evaluate the proposal. For example, a cascading system where the lakes in the upper reach are physically higher than the downstream wetlands may be appropriate for some areas of the District which have significant topographical variations. If the water table at the location of the proposed excavation is actually higher than the wetland boundary, the data should substantiate the proposal.

The gradient between all onsite and offsite wetlands which may be affected by the control elevation of a proposed water body, including borrow pits, canals and ditches, should be

The gradient between all onsite and offsite wetlands which may be affected by the control elevation of a proposed water body, including borrow pits, canals and ditches, should be evaluated using the gradient criteria in section 6.12. (See Case Examples below.)

Also, the gradient criteria are not to be construed as a means of circumventing the requirements to establish a control elevation that meets the criteria in sections 6.10 and 6.11 of the *Basis of Review*.

Hydrologic impacts to wetlands are also subject to the criteria in section 4.2.1, Elimination or Reduction of Impacts. (See also design aids pages L-1 through L-6.)

Definitions

Driving Head (Δh, feet): (See Figure N-1.) The difference in hydraulic head between the elevation of the ground surface at the boundary of the wetland (h_1) and the control elevation of the proposed water body (h_2).

Separation Distance (L, feet): (See Figure N-1.) The horizontal distance measured between the nearest edge of the proposed water body at the control elevation and the boundary of the wetland.

Gradient ($\blacktriangledown$, dimensionless): (See Figures N-1 and N-2.) The driving head divided by the separation distance.

Case Examples (See Figure N-2.)

A. Case I ($\blacktriangledown \leq 0.005$)

It is presumed that a gradient equal to or less than 0.005 will not result in an adverse impact to the wetland.

B. Case II ($0.005 < \blacktriangledown < 0.015$)

If the gradient is between 0.005 and 0.015, the applicant must provide ground water modeling which demonstrates that the drawdown will not result in adverse impacts to the wetland's hydroperiod. A detailed soil profile constructed from a minimum of three separate sampling locations including permeability testing results must be included. Two-dimensional ground water modeling should be used to accurately represent the locations of the proposed excavation and drawdown relative to the wetlands.

C. Case III ($\blacktriangledown \geq 0.015$)

If the gradient is equal to or greater than 0.015, the applicant must propose an alternative design or action to eliminate the adverse impacts of the drawdown. The action might be construction of an impermeable barrier between the wetland and the

Lake–Wetland Separation

Basis of Review for Environmental Resource Permit Applications

Section 6.12

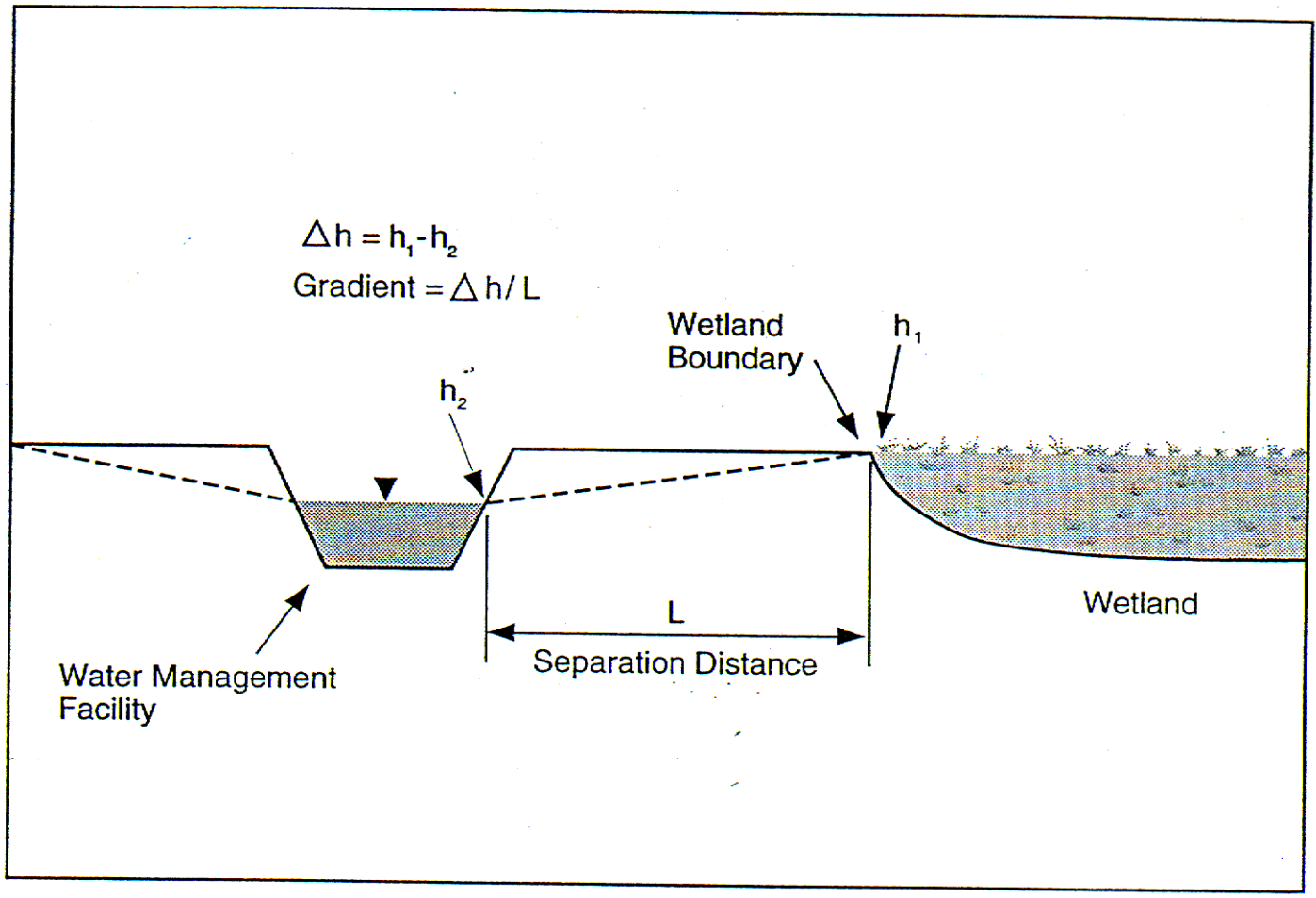


Figure N-1

Hydraulic gradient created between wetland and water management facility.

Lake–Wetland Separation

Basis of Review for Environmental Resource Permit Applications

Section 6.12

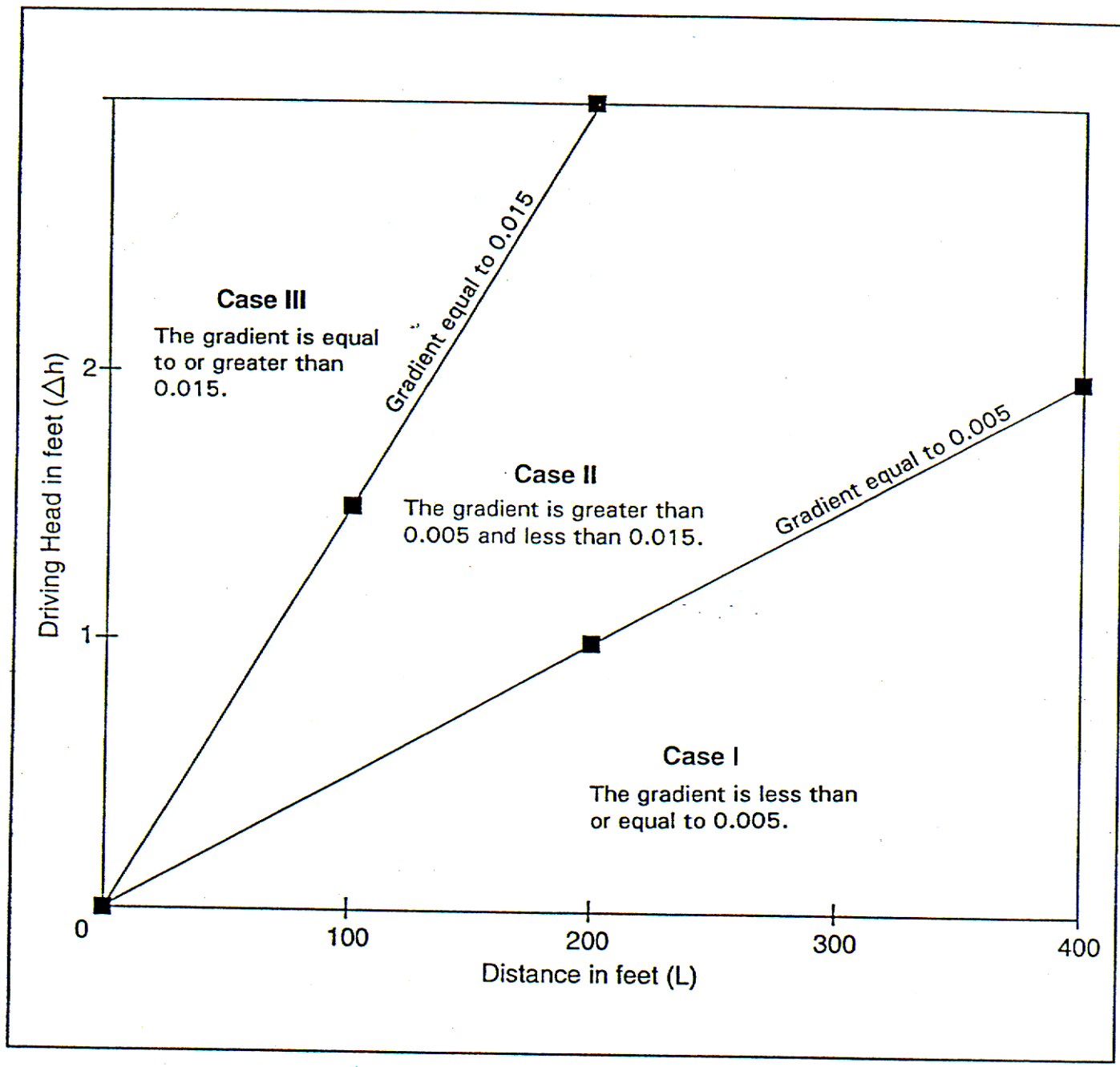


Figure N-2

Case Examples of Hydraulic Gradients.

Examples of different hydraulic gradients depending on 1) distance from wetland boundary to excavation and 2) difference in elevation between natural ground at the wetland boundary and the control elevation of the water management facility.

PROTECTION OF WETLAND HYDROPERIODS

Section 4.2.2.4, Water Quantity Impacts to Wetlands and Other Surface Waters, *Basis of Review for Environmental Resource Permit Applications*, requires that applicants provide reasonable assurance that a proposed project design will not change wetland hydroperiods so as to adversely affect the functions of the wetland system being preserved. Adverse impacts can be caused by increasing or decreasing the depth, duration or frequency of inundation or saturation within a wetland. These factors make up what is commonly referred to as the hydrologic regime of a wetland.

Many projects contain wetlands which are designated to be preserved and incorporated into the project design and surface water management system. Careful consideration of the hydrologic regimes of the preserved wetlands in both a pre-development and a post-development condition is essential for a project with successful wetland preservation. Project designs which change wetland hydrology can be detrimental to the preserved wetlands, unless this change is necessary for improvement (restoration or enhancement) of the wetland.

A design that closely mimics the pre-development hydrologic regime of the wetland will have the best chance of maintaining the ecologic functions of the preserved wetlands over the long term. In the case of wetland restoration or enhancement projects, the design is based on a target wetland hydroperiod which is usually the historic hydrologic regime of the wetland. A well designed project will have less need for maintenance or costly remedial measures due to environmental compliance problems in the future.

Several project components are essential to consider in order to evaluate the effect of the proposed project design on the wetlands. The review of the proposed project will include a comparison of the project control elevation to the elevation of the normal pool and/or seasonal high water *level* of the wetlands and to the elevation of the seasonal high water *table* on the site. District staff will consider how the wetlands are proposed to be incorporated into the surface water management system, how water is proposed to be conveyed to and from the wetlands and at what elevation water enters and leaves the wetlands. Changes to topography and natural drainage patterns of flow into the wetlands will also be evaluated. Additionally, staff will consider how long water stays above the control elevation and how high the water ponds or the peak stage during a rainfall event. This information will be compared to the normal hydrology of a wetland of that type to determine if the project will change the hydrology to the extent that it will adversely impact the wetland.

Definitions

Seasonal High Water Level (SHWL): Elevation of surface water within a wetland which occurs during typical storm events in the wet season. The SHWL is above the normal pool elevation but can be lower than the seasonal high water *table* within the surrounding upland soil. The SHWL is typically found at or near the wetland boundary.

Seasonal High Water Table (SHWT): The highest average depth of saturation during the wet season. (Refer to pages CA-1 through CA-6 for a discussion of the methods and indicators used to establish the SHWT.)

Normal Pool: Elevation of average or sustained wet season water levels in a wetland. It is generally used to establish wetland control elevations.

Hydrologic Indicators: Physical indicators of inundation or saturation which can be easily observed in the field. This includes water marks or stains on structures or woody vegetation, elevated lichen lines and moss collars on trees, algal mats, vegetated tussocks or hummocks, drift lines and rafted debris, and morphological plant adaptations such as adventitious roots or enlarged (buttressed) trunks. For more information on hydrologic indicators please refer to *The Florida Wetlands Delineation Manual*, 1995, Florida Department of Environmental Protection.

Evaluating Wetland Water Regimes

In order to meet the criteria of Section 4.2.2.4, an evaluation of the pre-development hydroperiod is required for each wetland to be preserved on the project site. This evaluation should include the type of wetland system, elevations (in feet NGVD) of the normal pool, the SHWL, and the edge (wetland boundary). Noting the location and elevation of any distinct changes in vegetation zones may also be useful in evaluating the pre-development hydrology of the wetland. The elevation data should be recorded for future reference as should a description of any hydrologic or vegetative indicator observed at the elevation point. This information will allow a wetland scientist or environmental consultant to determine the normal hydrologic patterns of the wetlands on the site.

Special consideration should be given to hydrologic and vegetative indicators observed within the wetland and used in determining the normal pool elevation and seasonal high water level. For the purposes of meeting the criteria of Section 4.2.2.4, the normal pool elevation is commonly considered to be an appropriate indicator of average or sustained wet season water levels in a wetland and is used to set the wetland control elevation. Indicators of the normal pool elevation include the lower edge of moss collars on trees, and an abundance of adventitious roots on woody or herbaceous plants. Wetland plants naturally occurring below the normal pool elevation are generally more tolerant of sustained inundation than those occurring above normal pool. Ex

The SHWL in a wetland indicates high water stages induced by typical summer storm events during the wet season. Wetland water levels may exceed the SHWL during extreme rainfall events but generally do not remain at those higher elevations for significant periods of time. Plant species that are tolerant of short-term inundation are generally found at elevations between the SHWL and normal pool. Indicators of SHWL include drift lines or rafted debris, distinct lichen lines, and water marks or stains. Additionally, the SHWL is typically found at or near the wetland boundary. Plant species that are not particularly tolerant of inundation typically occur at elevations greater than the SHWL. Figures O-1 and O-2 depict normal pool and seasonal high water elevations within a cypress dome.

Depiction of Normal Pool and Seasonal High Water Elevation In a Cypress Swamp

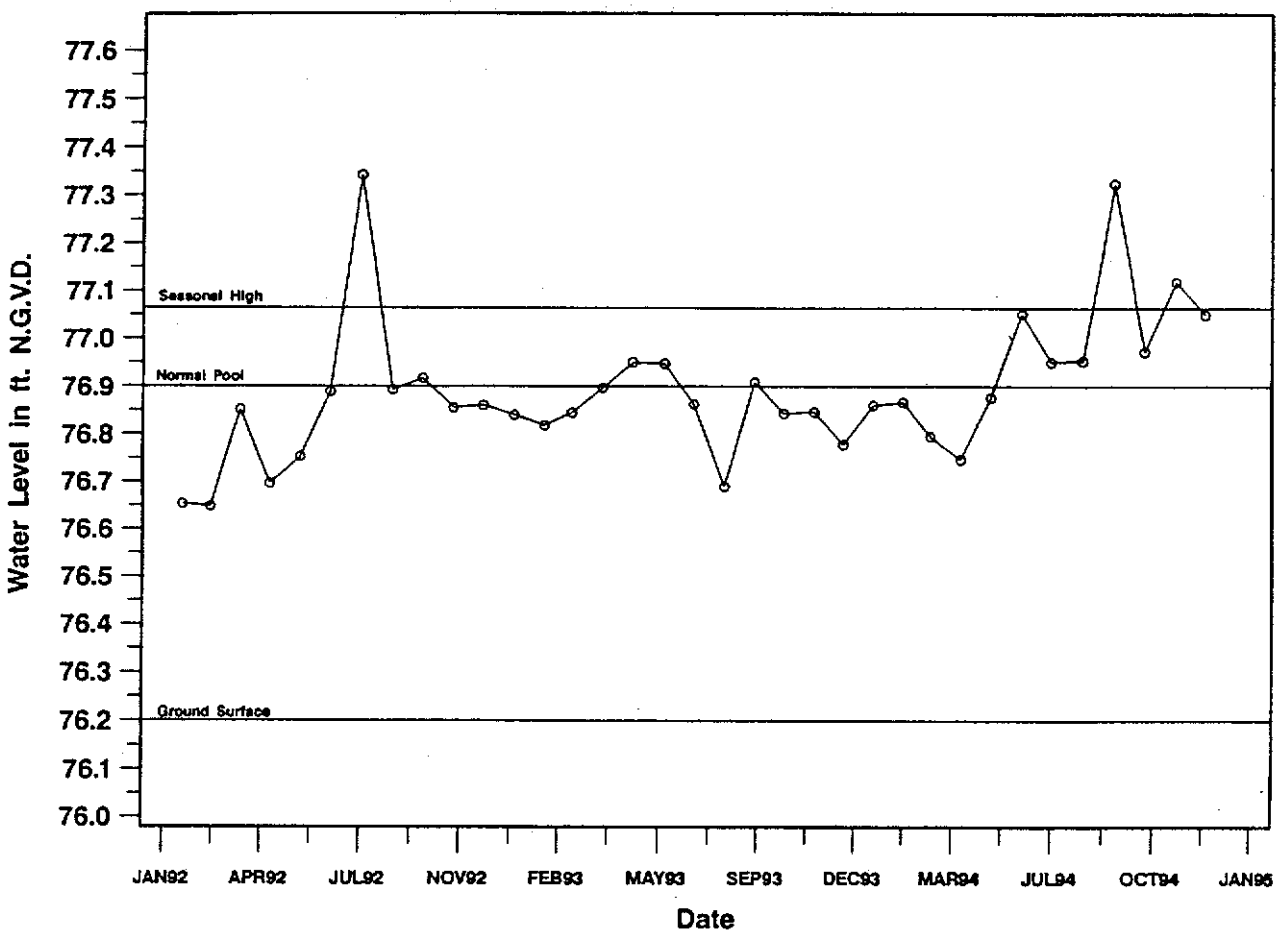


Figure O-1

Typical Cross Section of Cypress Wetland

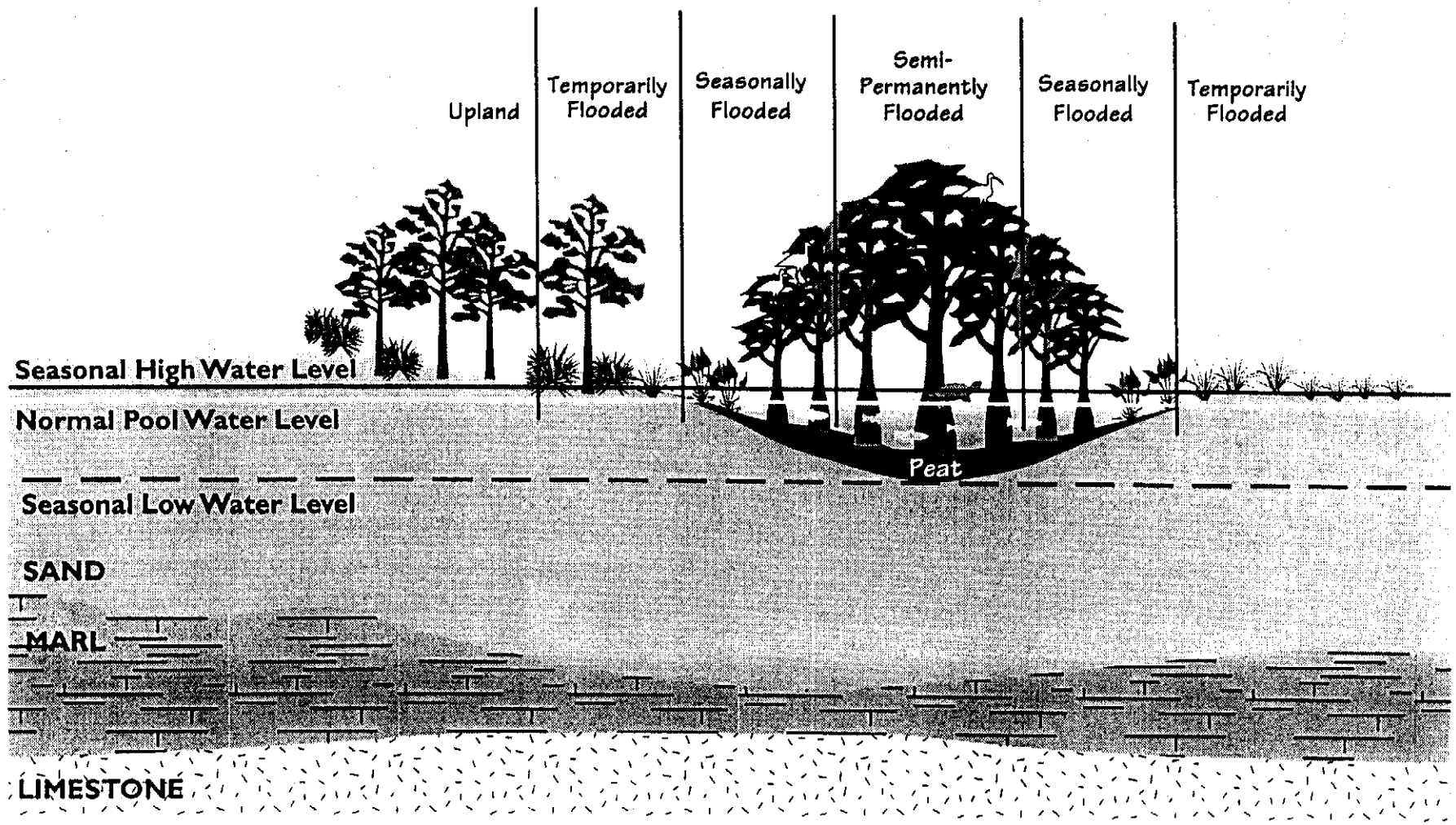


Figure 0-2

When conducting an evaluation of wetland hydrologic regimes, it is necessary to be familiar with antecedent rainfall conditions and seasonal wet and dry patterns for the area in question. The observations made in the field should be analyzed in conjunction with prior rainfall conditions and seasonality. All hydrologic data points collected in the wetland should be considered in the determination of the appropriate wetland control elevation. The collection and interpretation of the data should be conducted by an experienced wetland scientist or environmental professional.

Engineering Design Considerations

Development adjacent to wetlands can cause alterations in topography and drainage which must be considered in order for wetland preservation projects to succeed. Development activities have the potential to compact soils adjacent to wetlands, create artificial drainage boundaries, divert historic sheetflow and groundwater flow, change groundwater gradients, lower water tables, increase or decrease surface runoff into wetlands, and impound the runoff which historically dispersed from wetlands through infiltration or sheetflow. Figure O-3 depicts a surface water management system that has lowered the water table to the extent that the hydroperiod of the adjacent wetland has been adversely impacted.

For projects incorporating wetlands into a surface water management system, the applicant must demonstrate that the post-development hydroperiod will be conducive to maintaining (for preservation) or improving (for restoration and enhancement) the pre-development functions of the wetland. Wetlands which become closed impoundments in post-development may become overinundated or dried out for prolonged periods, causing adverse impacts to the wetland. Designs must provide a way for stormwater to enter and leave post-development wetland impoundments in a manner which does not cause adverse hydrologic impacts to wetlands. The design must also ensure that water will still be able to reach wetlands in a post-development condition and remain for sufficient periods to maintain wetland functions.

Designs which incorporate wetlands into surface water management systems should provide information about both the post-development water depths in the wetland and the time required for the water level to return to the normal pool elevation (control elevation). Calculations should be submitted with the application which demonstrate that the above conditions are met for each wetland on the project site.

Figure O-4 provides examples of discharge structures which have been designed to protect a wetland incorporated into a surface water management system. The riser culvert allows water to begin to leave the system at the normal pool elevation of the wetland. Water levels may increase for short periods of time following storm events, but are allowed to return gradually to normal pool over a period of several days. The inverted triangular bleeder design provides a slow return to the control elevation for the typical afternoon showers which attempts to mimic pre-development vertical infiltration or lateral movement through the soil column. The weir will discharge the runoff from larger design storms into the surface water management system or receiving body, avoiding

Typical Cross Section of Wetland Impacted by a Canal

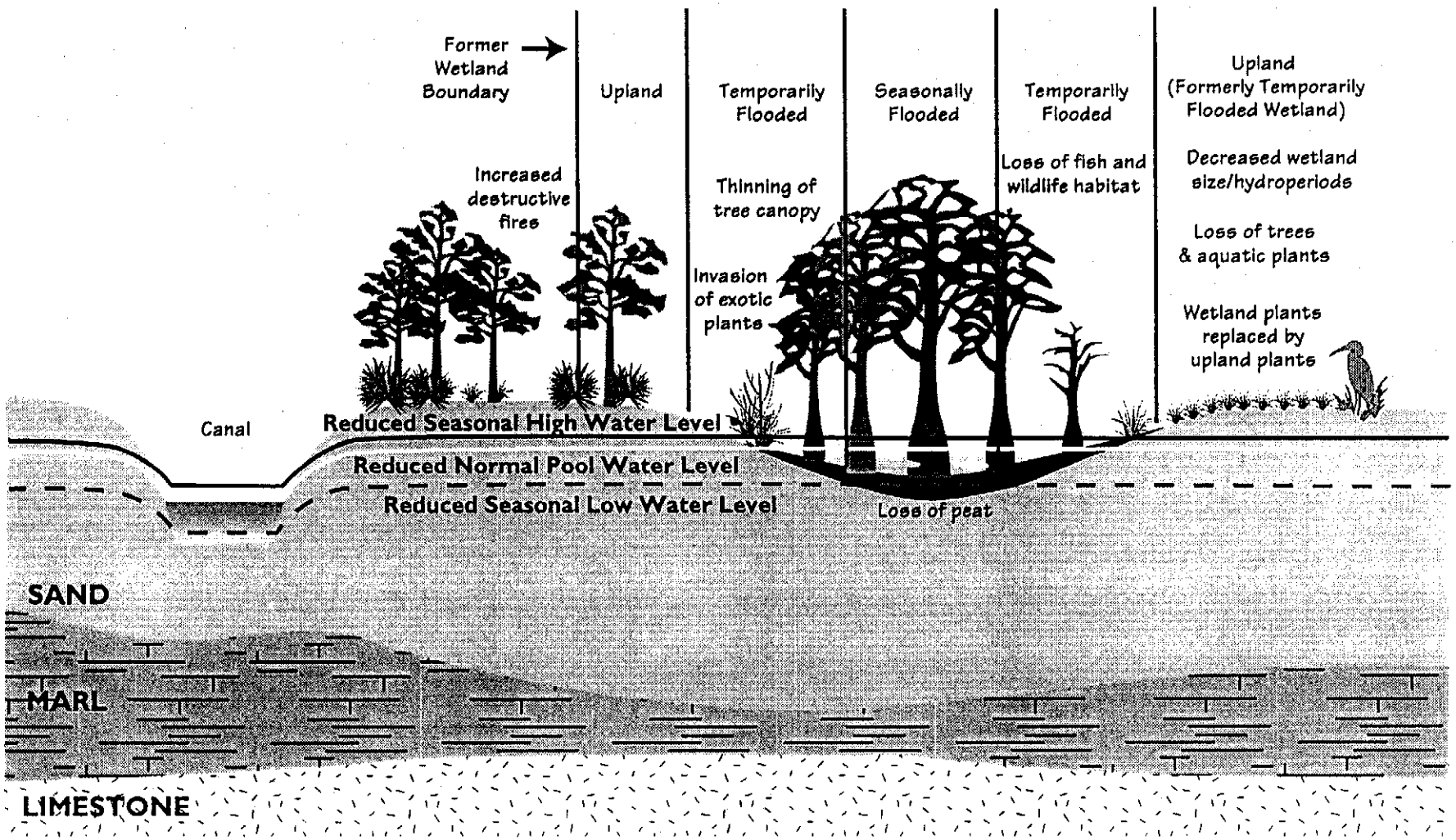
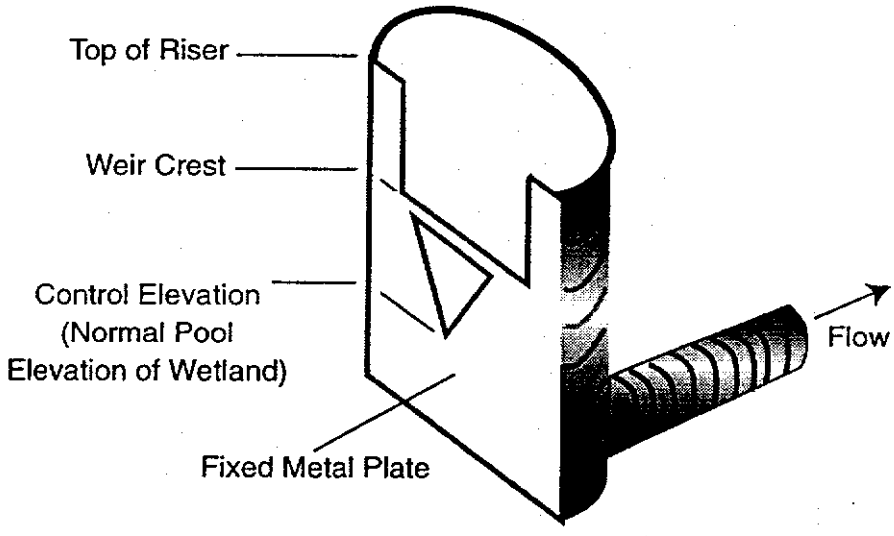
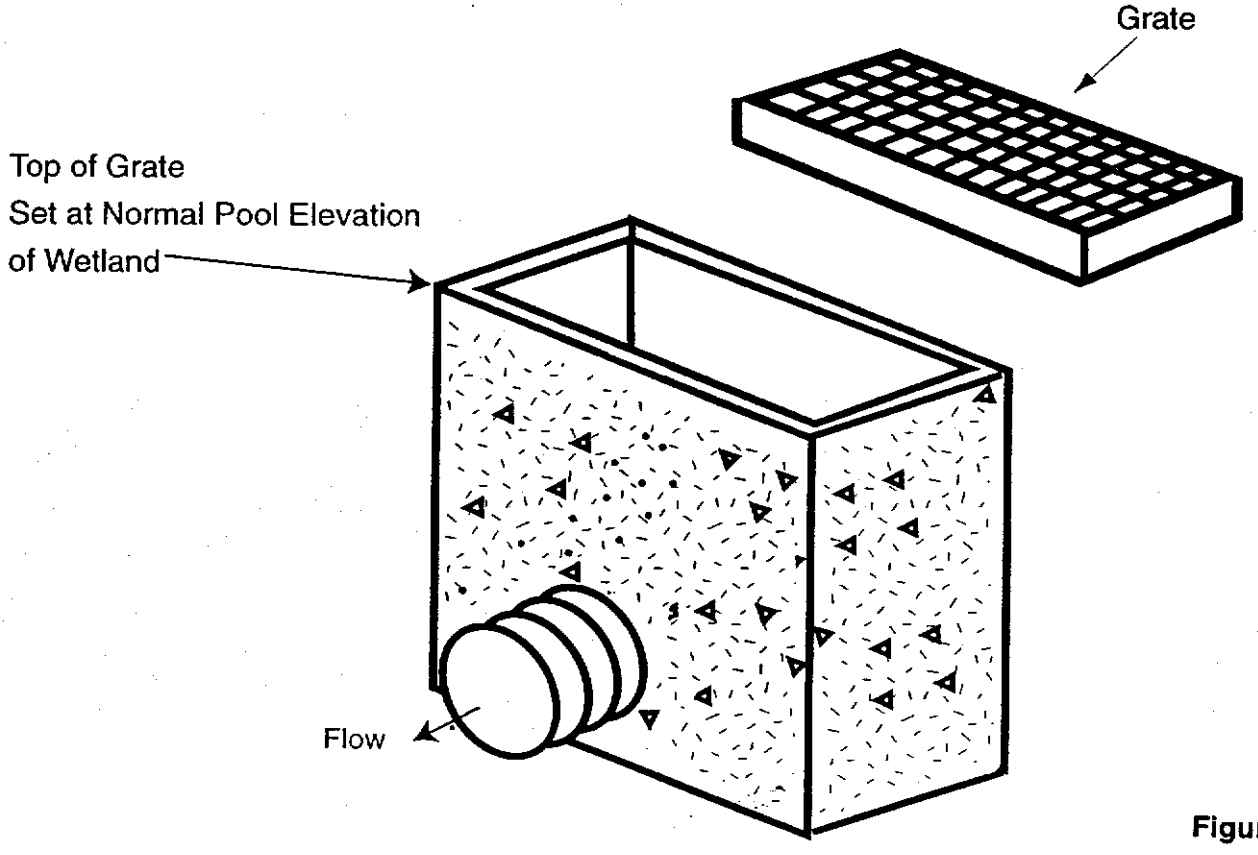


Figure 0-3

TYPICAL DISCHARGE/OVERFLOW STRUCTURES FOR WETLAND IMPOUNDMENTS



Riser Culvert



Drop Inlet

Figure 0-4

prolonged inundation. For typical wet season storm events, this mimics the natural water level fluctuations under pre-development conditions. During extreme storm events, water levels may rise to the SHWL or above, whereupon water is released more rapidly over the weir crest.

Other types of structures may be used to protect wetland hydroperiods depending on site specific conditions such as the type and size of wetland and its relationship to the surface water management system. In some cases a simple drop inlet with a grate at the normal pool elevation of a wetland will provide sufficient hydroperiod protection.

WATER QUALITY INPUTS AND TREATMENTS FOR WETLAND PROTECTION

The criteria of sections 4.2.2, 4.2.7 and 4.2.8 of the Basis of Review for Environmental Resource Permit Applications, require the protection of wetland and surface water functions in order to maintain the abundance, diversity, and habitat of fish, wildlife and listed species. Changes in the quality of water entering a wetland can directly affect the functions it provides. Nutrients can cause changes in vegetation, resulting in not only a proliferation of undesirable exotic and nuisance species, but also the elimination of important native vegetation which provides food and cover for wildlife and listed species. Nutrients can also lower the dissolved oxygen levels in the water column.

Other chemical pollutants such as oils, greases, pesticides and fungicides, can have equally harmful effects on wetlands and the wildlife they support. Certain wetland communities are more sensitive to these types of water quality changes than are other wetlands.

In certain circumstances, development adjacent to protected wetlands may be designed to discharge runoff from portions of the project (such as rear lots) via sheetflow from the developed upland areas into the wetlands. In these cases, it is necessary to consider the type of development discharging the stormwater and the type of wetland receiving the stormwater. The more intensive the development, the more likely that the stormwater coming from the project will be harmful to the wetland. The quality of the water coming into the wetland from intensive development could potentially alter the functions of the wetland and result in adverse impacts.

Projects adjacent to wetlands will typically include an upland buffer area around the perimeter of the wetland. Upland buffers consisting of native vegetation can provide some treatment of stormwater prior to that water entering the wetland via sheetflow. With low intensity projects such as passive recreational, low-density residential or low-intensity commercial, no other water quality treatment measures may be necessary.

Higher intensity developments may need special precautions in addition to providing an upland buffer in order to prevent water quality impacts to wetland functions. Developments which may need to incorporate some pre-treatment measures prior to discharging into wetlands include those having very intensive land uses or high fertilizer or pesticide applications such as multi-family residential, high-intensity commercial, and golf courses.

As mentioned above, some types of wetlands are more sensitive to water quality changes than are other types. Generally speaking, herbaceous wetland systems such as wet prairies and those that have hydroperiods longer than 240 days are more easily altered or impacted by the quality of water entering the wetland. Projects adjacent to herbaceous wetlands will almost always need to provide some type of treatment prior to discharging stormwater into the wetland in order to prevent adverse impacts.

Figure P-1 depicts a typical design example of a water quality treatment method consisting of a berm and swale to catch and detain stormwater. Other designs may be appropriate depending on site-specific considerations.

Typical Wetland Preserve Cross Section with Water Quality Swale and Berm

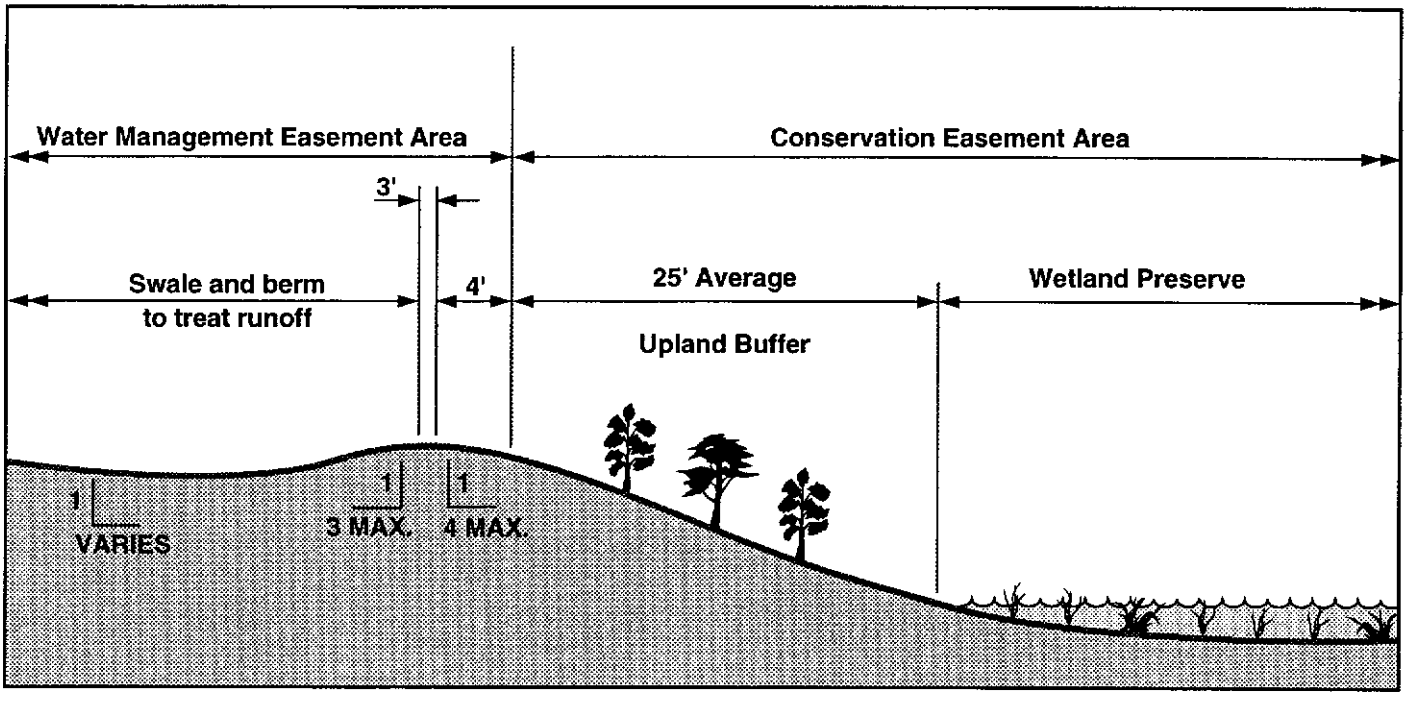


Figure P-1

Certain types of upland development adjacent to wetland preserve areas can result in water quality impacts to wetland systems. These types of developments include heavily fertilized and manicured landscapes such as golf courses or intensely managed lawns. Nutrients, pesticides, fungicides or other harmful substances should be prevented from direct discharge or runoff into sensitive wetland systems. (Refer to BOR sections 4.2.2, 4.2.7 and 4.2.8.)

Water quality swale and berm should be located outside (landward) of upland buffer and placed in a water management easement area.

Runoff from adjacent upland development should be treated prior to entering sensitive wetland systems.

Project Design Examples

PROJECT DESIGN EXAMPLES

PROJECT DESIGN EXAMPLES

This part of *Volume IV* contains examples of how the rules, technical criteria and design aids presented in earlier parts might be used during the course of designing various types of surface water management systems. What is presented does not constitute additional rule criteria, and should not be used in lieu of the criteria or in a manner which is inconsistent with duly adopted rules.

Applicants are cautioned that these examples are not intended to provide guidance for all potential design aspects of surface water management systems. Specific project variables encountered – such as topography, soils, existing development, receiving body location, receiving body water quality classification, development density and wetland preserve areas – may dictate much more detailed or elaborate analyses.

AGRICULTURAL PROJECTS

The following two design examples represent two different agricultural projects. The main difference between the two is that one of them utilizes a major impoundment for water storage while the other utilizes a minor impoundment. (Impoundments are not for use exclusively in agricultural projects; large industrial projects, such as power plants, might also use either a major or a minor impoundment.)

Both design examples contain computer printouts representing hydrographic calculations. In order to reduce the volume of paper and still provide meaningful examples, portions of the printouts, which address stages and flows at various time steps, have been edited. The input data are presented along with the output summary in addition to a representative sample of the entire time step calculation.

The majority of the applications for permits to construct and operate surface water management systems serving agricultural land uses incorporate minor impoundments within their design. Although applications to construct major impoundments are not received as often, the potential damage that could occur if a major impoundment fails dictates that they be designed under criteria which are different from that which pertain to minor impoundments. Other than these differences, the following comments are intended to provide additional guidance on what usually needs to be considered in the design of a surface water management system serving an agricultural land use.

Soils and Vegetation

A review of the soil and vegetation within the area of proposed development will usually indicate areas, which are not feasible for farming because of environmental constraints and excessive drainage requirements. These areas will normally consist of poorly drained hydric soils and wetland vegetation. These areas are most often defined and delineated as wetlands pursuant to Chapter 62-340, F.A.C. and regulated pursuant to Section 4.0 of the *Basis of Review for Environmental Resource Permit Applications*. If properly designed, such areas can serve a dual purpose of preservation and storage, since onsite storage of water will probably be required in the final design.

One of the most important aspects to consider when incorporating wetlands into an above ground impoundment, is the control elevation of the impoundment in relation to the elevation of average or sustained wet season water levels (normal pool) of the wetland. Additionally, the peak stage and bleed down time are also critical to the successful preservation of the wetland habitat. The section in the Environmental Design Aids entitled *Protection of Wetland Hydroperiods* gives a basic overview of the factors to consider in this type of project design.

Floodplain Encroachment

The District considers two aspects of floodplain encroachment: storage reduction and flow interference. The 100-year storm event is the one that must be considered.

Delineation of the 100-year floodplain, however, can be difficult in remote agricultural areas. In general, the storage volume between the 100-year flood elevation and the average wet season water table must be preserved in addition to maintaining a continuous flow cross section. The project detention area may partially serve this purpose but it may also be necessary for land outside of diked and farmed areas to remain undisturbed. One solution may include low farm dikes, which could be overtopped by 100-year flood stages since that amount of rainfall would destroy many crops anyway or might occur when no crops are planted.

Offsite Discharge

In most new farm areas of the District, where preconstructed works do not exist, it is necessary to accept upstream flows generated by a design storm event and pass them through or around the proposed project. In most cases, it will not be economical to attempt to mix the project runoff with the offsite flows as they enter the project site. The problems created by such designs include the backwater effects of the project on upstream lands, which may cause new upstream flooding.

Significant onsite storage area is therefore necessary because of the shallow storage depths which might be required. In flat areas where sheetflow of unknown direction predominates, the District usually requires that the toe of new farm dikes be kept away from property boundaries in order to allow water to move freely among the outside farm fields. The minimum setback distance is usually 50 feet, but may be more if it appears necessary. The construction of conveyance facilities may or may not be necessary in this setback area.

Onsite Storage

Onsite storage is necessary for quantity and quality management. It may also serve an additional purpose for irrigation supply. The District preference for storage areas is for separately contained areas fed by pumps, or gravity if the topography allows it. All discharge from the storage areas should be by gravity. Field protection is afforded under this scheme since fields can be pumped into the storage area. An internal emergency overflow structure is required in order to limit the head on the gravity structure which directs flows out of the water storage area. The external storage area levees should be more substantial than interior ones so that any failure would be internal rather than offsite.

Water Quality

The basic criteria applicable to projects are the detention of the first inch of runoff or the runoff from a 2.5 inch rainfall event, whichever is greater. The 1 inch criterion is the one that applies to agriculture. This first inch must be detained and allowed to be released

within about 5 days. Actual retention, as opposed to detention, is usually difficult to accomplish because a guaranteed seepage system is necessary. Most farms are not in a location where this can be feasibly accomplished.

Design Example
for
An Agricultural Site

DESIGN EXAMPLE

FOR

AN AGRICULTURAL SITE

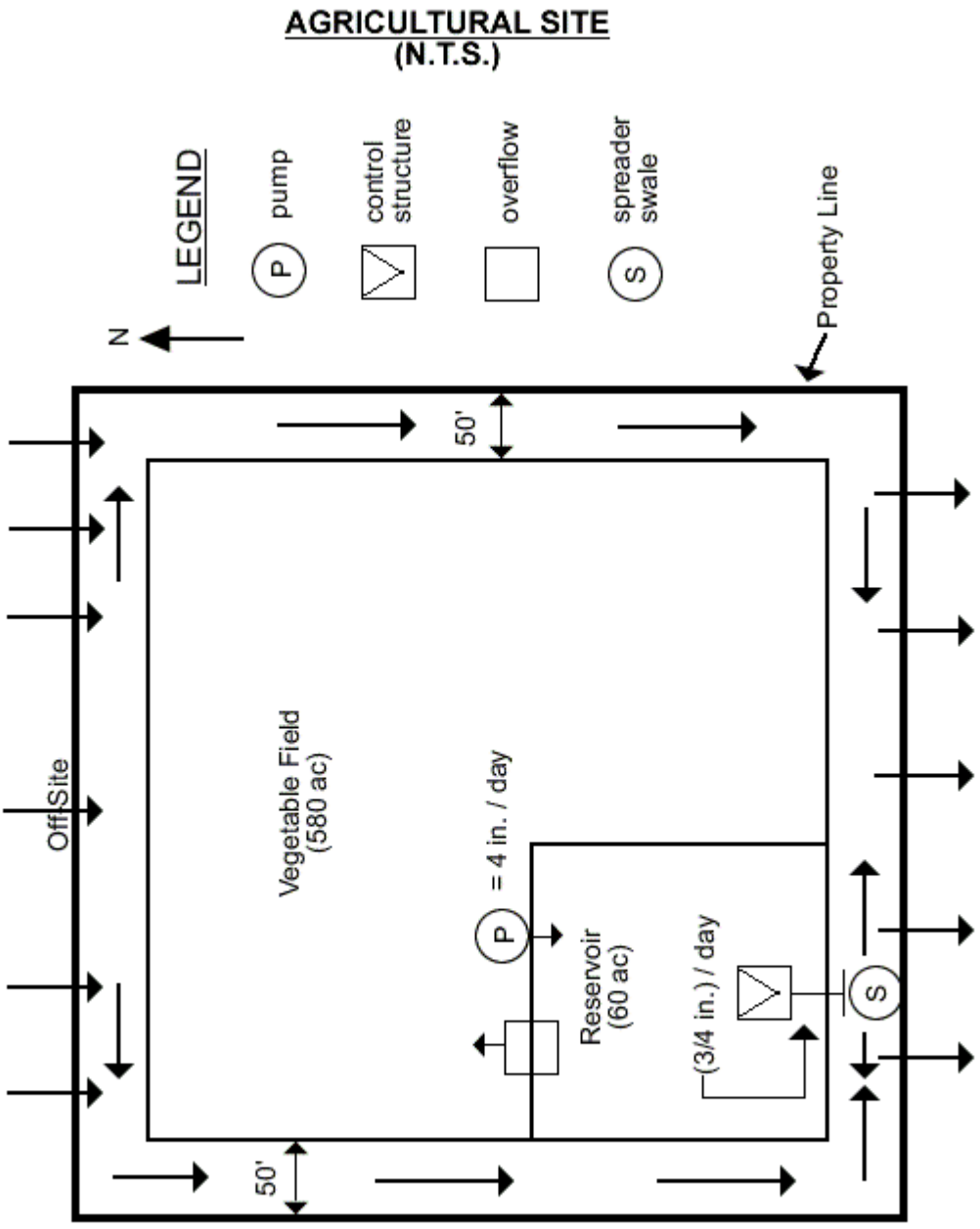

AGRICULTURAL SITE
(N.T.S.)
LEGEND
pump
control structure
overflow
spreader swale
Property Line
N
50'
Vegetable Field
(580 ac)
= 4 in. / day
Reservoir
(60 ac)
(3/4 in.) / day
OffSite
50'

Figure XB-1

I. Given

A. Proposed Acreages

1. Total = 640 ac

2. Reservoir = 60 ac

3. Laterals = 40 ac

4. Vegetable Field = 540 ac

B. Elevations

1. Laterals extend from elevation 60' (bed) to 64' NGVD (banks).

2. Field extends from elevations 64' to 68' NGVD.

3. Field control elevation is 60' NGVD.

4. Reservoir control elevation is 65' NGVD, to maintain wetlands.

C. Off-site areas contribute sheetflow to the site. The off-site runoff will be routed around the site via perimeter swales. (Toes of the berms are set back at least 50 feet from the property line; berms have a top width of 5 feet; have external sideslopes of 2.5H:1V, and interior sideslopes of 3H:1V for ease of maintenance.)

D. Discharge off-site will continue to be by sheetflow, to preserve natural conditions.

E. Depth to average wet season water table = 4.0 ft.

F. A pumping rate of 4 in./day (97.6 cfs) from the field is proposed.

Pump capacity: 43,800 gpm = 97.6 cfs

Pump schedule	on	off
1 – 43,800 gpm	61.5' NGVD	60.0' NGVD

G. Postdevelopment discharge allowed = 20 cfs = ¾ inch per day.

NOTE: Discharge allowed can be determined two ways:

1. Predevelopment = postdevelopment

2. Receiving body discharge criteria if they have been established.

H. 25-year 3-day design storm rainfall = 7.0 in. x 1.359 = 9.5 in.

Treat the systems as two basins:

1. Basin 1 (field) routed into Basin 2.

2. Basin 2 (reservoir) routed to receiving body.

II. Computations

A. Field

1. Compute Pervious/Impervious (P/I).

540 acre field

40 acre laterals (to be assumed impervious)

%I = (40 ac/580 ac) x 100% = 7%

%P = (540 ac/580 ac) x 100% = 93%.

2. Compute Soil Storage and SCS Curve Number.

a. Depth to average wet season water table = 4.0 ft.

b. From *Basis of Review*, 10.9 inches of moisture can be stored in the soil column beneath pervious areas.

c. Ground storage under pervious areas

= 10.9 in. x (1 ft/12 in.) x 540 ac

= 490.5 ac-ft.

d. Equivalent soil storage, S

= (490.5 ac-ft x (12 in./1 ft))/580 ac

= 10.2 in.

e. SCS curve number, CN

= 1000/(S + 10)

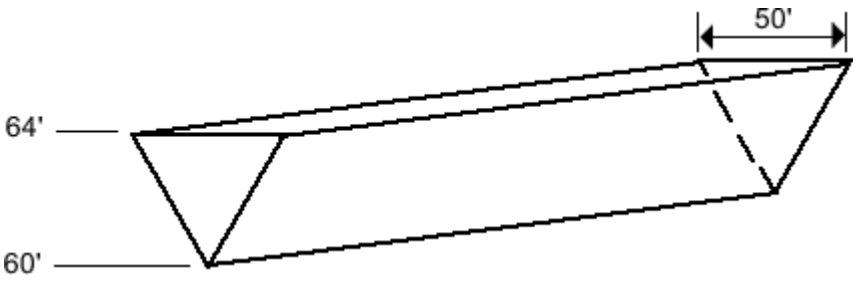
= 1000/(10.2 + 10)

= 50.

3. Compute Open Surface Stage versus Storage

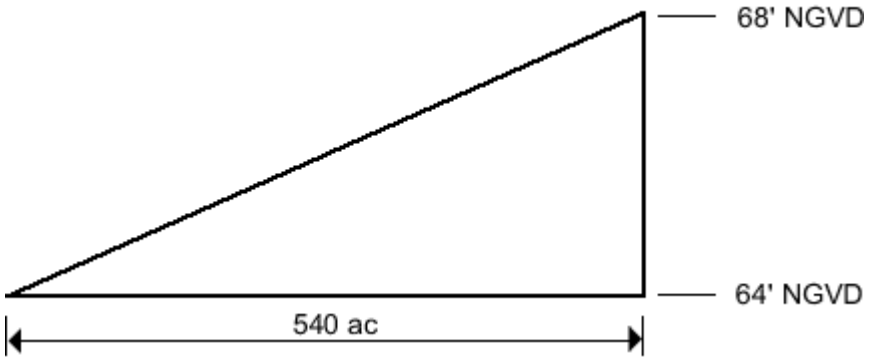
a. Laterals store between elevations 60’ and 64’ NGVD

Typical lateral cross-section



40 acres of laterals at top of bank

b. Developed field area stores linearly between elevations 64’ and 68’ NGVD.



	Storage		
Stage (ft, NGVD)	Laterals (ac-ft)	Site (ac-ft)	Total
60	0	0	0
61	0.5 (10ac) (1ft) = 5	0	5
62	0.5 (20ac) (2ft) = 20	0	20
63	0.5 (30ac) (3ft) = 45	0	45
64	0.5 (40ac) (4ft) = 80	0	80
65	80 + 40ac (1ft) = 120	0.5 (540ac) ((1x1ft)/4) = 67.5	188
66	80 + 40ac (2ft) = 160	0.5 (540ac) ((2x2ft)/4) = 270	430
67	80 + 40ac (3ft) = 200	0.5 (540ac) ((3x3ft)/4) = 607.5	808
68	80 + 40ac (4ft) = 240	0.5 (540ac) ((4x4ft)/4) = 1080	1320

4. Flood Route the Design Storm

   25-year 3-day event

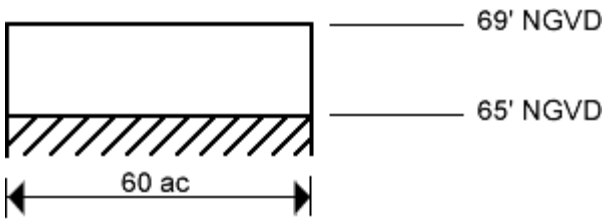
   (See pages XB-13 through XB-17.)

   Maximum stage in field = 63.6' NGVD.

B. Reservoir

1. S = 0.01 in. (District computer program will not accept zero.)

2. Since the reservoir will be used to mitigate for the loss of some wetlands, 1 foot of water will be maintained in parts of the reservoir at elevation 64.0' NGVD. Storage will then start at the control elevation, 65.0' NGVD.



Stage (ft, NGVD)	Storage (ac-ft)
65	0
66	60
67	120
68	180
69	240

3. Allowable Discharge

   20 cfs was determined by pre- versus postdevelopment.

4. Weir crest elevation required.

   a. First inch of runoff

   b. Volume = 1 in. x (1 ft/12 in.) x 640 ac = 53.3 ac-ft. From the table in B.2., above, the weir crest should be set at elevation 65.9' NGVD, so that 53.3 ac-ft are detained.

5. Compute weir length

   a. Rainfall from the 25-year 3-day storm is 9.5 inches. Using the S value calculated for the field,

   $$\text{Runoff} = Q = \frac{(P - 0.2S)^2}{(P + 0.8S)} = 3.2 \text{ in.}$$

   b. Volume of runoff

   = 3.2 in. x (1 ft/12 in.) x 640 ac

   = 171 ac-ft, or a reservoir stage of elevation 67.9' NGVD (table in B.2.), or 2 ft above the proposed weir crest.

   c. The maximum design head is 2.0 feet.

   $Q = 3.13LH^{1.5}$

   $L = 20 \text{ cfs}/(3.13 \times (2)^{1.5}) = 2.3$ feet

6. Water quality control device should be designed to discharge an amount (Q) equal to ½ inch in 24 hours.

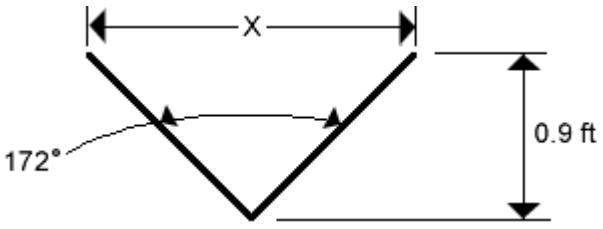
   53.3 ac-ft/2 = 26.7 ac-ft in 24 hours, or about 13 cfs

   $Q = 2.5 \times (\tan(\theta/2)) \times (H)^{2.5}$, or

   $\theta = 2 \times \tan^{-1}(0.492 \times Q/(H)^{2.5})$

   $\theta = 2 \times \tan^{-1}(0.492 \times 26.7/(0.9)^{2.5})$

   $\theta = 172$ degrees



   $\tan(\theta/2) = (X/2)/0.9$ ft

   $X = 2 \times (0.9 \text{ ft} \times \tan(172°/2))$

   X = <u>25.7 ft</u> - will not fit into weir.

7. Try an orifice

$Q = 4.8 \times A \times (H)^{0.5}$

where Q = discharge, cfs

A = area of orifice, sq ft

H = head above notch centroid, ft

therefore, Q = 20 cfs*

$A = 0.5 \times b \times h$

assume h = 2 ft

Notch centroid will be 2/3 of h above notch invert, or 1.3 ft above elevation 65.0' NGVD, or at elevation 66.3' NGVD.

H = 67.9' NGVD – 66.3' NGVD

= 1.6 ft

$Q = 4.8 \times A \times H^{0.5}$

$= 4.8 \times (0.5 \times b \times h) \times H^{0.5}$

therefore,

$b = Q/(4.8 \times 0.5 \times h \times (H)^{0.5})$

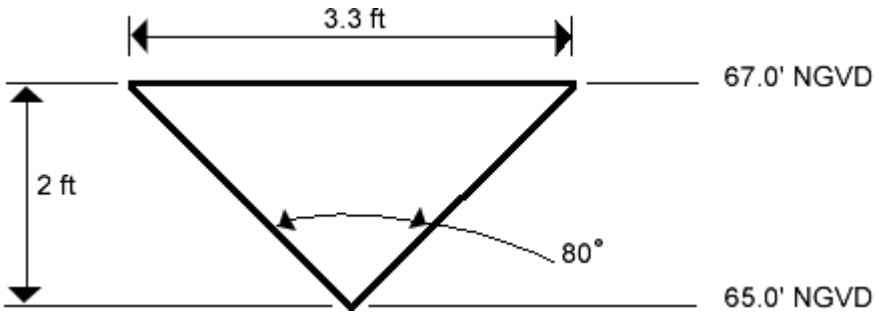
$= 20 \text{ cfs}/(4.8 \times 0.5 \times 2 \text{ ft} \times (1.6 \text{ ft})^{0.5})$

$= 20 \text{ cfs}/6.05$

$= 3.3 \text{ ft}.$

*(NOTE: The orifice was designed using the more restrictive condition created by the allowable discharge criteria rather than the water quality rate.)

Therefore, the structure is 1-2.0 ft high by 3.3 ft wide triangular orifice with an invert at elevation 65.0' NGVD. Only an orifice is used since the allowable discharge is low and the lake size is preferred to be left unchanged, so a V-notch is impractical. The proposed control structure will be considerably smaller than what is required to meet the detention requirements for water quality. Therefore, discharge at elevation 67.0' NGVD will be considerably less than 0.5 inch in 24 hours.



The structure should be properly baffled, to reduce the possibility of clogging. The outfall pipe should be large enough so that the peak design storm discharge is not limited by culvert control.

8. Check the routed design storm discharge.

   a. The design storm is the 25-year 3-day event.

   b. The one-day rainfall amount is given to be 7 inches.

   c. The three-day rainfall amount

      = (one-day amount) x 1.359

      = 7 in. x 1.359

      = 9.51 inches of rainfall.

   d. Pages XB-13 through XB-15 show the results of calculations of pumping rainfall runoff from the field. (Notice, on page XB-14, that the peak water surface elevation in the field was 63.55' NGVD at hour 65.)

   e. Pages XB-15 through XB-17 are the routings through the reservoir of the pumped inflow, plus the rainfall on the reservoir.

      i. On pages XB-16 and XB-17, flows in excess of 20 cfs occur from about hours 77 to 79. This is deemed acceptable, since the allowed rate of 20 cfs was based on ¾ in. *per day*.

ii. Also, on page XB-16, the peak design storm elevation in the reservoir is listed as 68.03' NGVD. District recommended criteria are that, in the absence of a detailed dam structural safety analysis, the maximum above-grade stored depth of water shall be 4.0 feet. Since the average grade in the reservoir is 65' NGVD, which is just 3 feet less than the design storm peak,

the above-grade water depth is adequate.

iii. District recommended criteria on freeboard are 3 feet above the stored routed design storm.

Since the routed design storm peaks at elevation 68.0' NGVD.

the top of the reservoir berms should be no lower than elevation 71.0' NGVD.

9. Overflow Structure

a. Criteria

i. For gravity filled impoundments, no separate overflow structure is required, because the inflow structure will allow reservoir and field stages to be the same.

ii. The weir crest shall be set at the peak elevation of the routed 25-year 3-day storm.

iii. The weir crest length shall be adequate to pass the peak of:

the sum of the volume of the 100-year 3-day storm falling on the reservoir surface plus the inflow pump hydrograph for the same event, minus the routed discharge control structure outflow, with not more than 6 inches of head on the overflow structure weir crest.

iv. A simple culvert, or culverts, extending through the reservoir side, and with inverts at the design storm peak stage, are not acceptable, because of the danger of erosion of the reservoir dike.

v. There are at least two acceptable overflow structure designs.

I. A non-adjustable shaft spillway.

II. A properly designed and built non-adjustable sharp- or broad- crested weir in the reservoir dike.

vi. Sodded earthen berms are not acceptable as overflow structures.

vii. The inflow pump system shall be the same as that used for designing the control structure.

viii. Other proposed designs should be discussed with District staff as early in the design process as possible.

b. Design calculations

i. Treat the system as two basins: Basin 1 (Field) routed into Basin 2 (Reservoir).

ii. Basin 1 (Field) pumps shall turn on at elevation 61.5' NGVD, and turn off at elevation 60.0' NGVD.

(Other methods of calculating the pumped flow hydrograph into the reservoir – for the purposes of computing the overflow weir length – may be submitted by the applicant for District staff consideration.)

iii. The stage-storage information for Basin 2 (Reservoir) is unchanged from that previously calculated.

iv. After some preliminary calculations try a 70-foot long broad - crested weir.

v. The weir crest is set at the peak elevation of the 25-year 72-hour routed storm, in this case 68.0' NGVD, to the nearest tenth of a foot.

vi. The stage-discharge calculations for the overflow weir are based on the equation $Q = CLH^{1.5}$

where:

Q = discharge, cfs

C = weir coefficient, 3.00 for this broad-crested weir

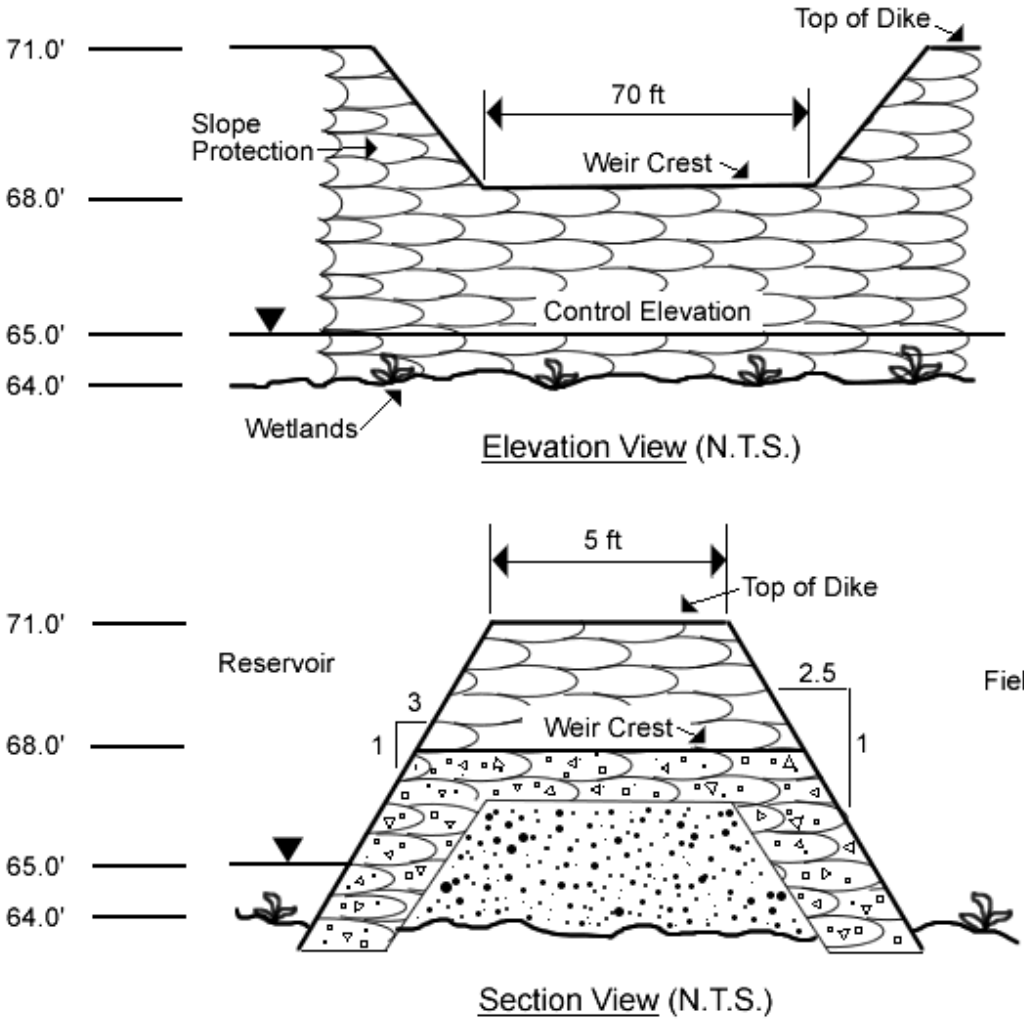
L = weir length, in this case: 70.0 ft

H = head on the weir, ft; which is not to exceed 0.5 ft

vii. Pages XB-18 through XB-25 show the results of routing the pumped inflow (“Structure 1”) plus the 100-year 72-hour rainfall on the reservoir, out of the combination of the control (“Structure 2”) and overflow (“Structure 3”) structures.

Page XB-25 contains a summary of peak stages and discharges. Reservoir peak discharge occurs at elevation 68.5' NGVD, which is 0.5 foot (6 inches) higher than the crest of the overflow structure. Therefore, the trial overflow structure is adequate.

A sketch of the proposed overflow structure is on the next page. A complete design would include, among other things, proper attention to erosion control around the overflow weir, and energy dissipation devices downstream of it.



OVERFLOW STRUCTURE

Figure XB-2

Project Name: Volume IV Examples
Reviewer: User
Project Number: Agricultural Site
Period Begin: Jan 01, 2000;0000 hr End: Jan 05, 2000;0400 hr Duration: 100 hr
Time Step: 0.2 hr, Iterations: 10

Basin 1: Field

Method: Santa Barbara Unit Hydrograph
Rainfall Distribution: SFWMD - 3day
Design Frequency: 25 year
1 Day Rainfall: 7 inches
Area: 580 acres
Ground Storage: 10.2 inches
Time of Concentration: 2 hours
Initial Stage: 60 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
60.00	0.00
61.00	5.00
62.00	20.00
63.00	45.00
64.00	80.00
65.00	188.00

Basin 2: Reservoir

Method: Santa Barbara Unit Hydrograph
Rainfall Distribution: SFWMD - 3day
Design Frequency: 25 year
1 Day Rainfall: 7 inches
Area: 60 acres
Ground Storage: 0.01 inches
Time of Concentration: 0.5 hours
Initial Stage: 65 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
65.00	0.00
66.00	60.00
67.00	120.00
68.00	180.00
69.00	240.00

Offsite Receiving Body: Offsite1

Time (hr)	Stage (ft NGVD)
0.00	0.00
4000.00	0.00

Structure: 1

From Basin: Field
To Basin: Reservoir
Structure Type: Pump
On Elev = 61.5 ft NGVD, Off Elev = 60 ft NGVD, Capacity = 43800 gpm

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	60.00	65.00
1.00	0.04	0.00	0.00	0.00	60.00	65.00
2.00	0.09	0.00	0.00	0.00	60.00	65.00
3.00	0.13	0.00	0.00	0.00	60.00	65.01
4.00	0.17	0.00	0.00	0.00	60.00	65.01
5.00	0.21	0.00	0.00	0.00	60.00	65.01
6.00	0.26	0.00	0.00	0.00	60.00	65.02
7.00	0.30	0.00	0.00	0.00	60.00	65.02
8.00	0.34	0.00	0.00	0.00	60.00	65.03
9.00	0.38	0.00	0.00	0.00	60.00	65.03
10.00	0.43	0.00	0.00	0.00	60.00	65.03
11.00	0.47	0.00	0.00	0.00	60.00	65.04
12.00	0.51	0.00	0.00	0.00	60.00	65.04
13.00	0.55	0.00	0.00	0.00	60.00	65.04
14.00	0.60	0.00	0.00	0.00	60.00	65.05
15.00	0.64	0.00	0.00	0.00	60.00	65.05
16.00	0.68	0.00	0.00	0.00	60.00	65.05
17.00	0.72	0.00	0.00	0.00	60.00	65.06
18.00	0.77	0.00	0.00	0.00	60.00	65.06
19.00	0.81	0.00	0.00	0.00	60.00	65.06
20.00	0.85	0.00	0.00	0.00	60.00	65.07
21.00	0.89	0.00	0.00	0.00	60.00	65.07
22.00	0.94	0.00	0.00	0.00	60.00	65.08
23.00	0.98	0.00	0.00	0.00	60.00	65.08
24.00	1.02	0.00	0.00	0.00	60.00	65.08
25.00	1.08	0.00	0.00	0.00	60.00	65.09
26.00	1.15	0.00	0.00	0.00	60.00	65.09
27.00	1.21	0.00	0.00	0.00	60.00	65.10
28.00	1.27	0.00	0.00	0.00	60.00	65.10
29.00	1.33	0.00	0.00	0.00	60.00	65.11
30.00	1.39	0.00	0.00	0.00	60.00	65.11
31.00	1.46	0.00	0.00	0.00	60.00	65.12
32.00	1.52	0.00	0.00	0.00	60.00	65.12
33.00	1.58	0.00	0.00	0.00	60.00	65.13
34.00	1.64	0.00	0.00	0.00	60.00	65.13
35.00	1.71	0.00	0.00	0.00	60.00	65.14
36.00	1.77	0.00	0.00	0.00	60.00	65.14
37.00	1.83	0.00	0.00	0.00	60.00	65.15
38.00	1.89	0.00	0.00	0.00	60.00	65.15
39.00	1.95	0.00	0.00	0.00	60.00	65.16
40.00	2.02	0.00	0.00	0.00	60.00	65.16
41.00	2.08	0.04	0.00	0.00	60.00	65.17
42.00	2.14	0.22	0.00	0.00	60.00	65.17
43.00	2.20	0.50	0.00	0.00	60.01	65.18
44.00	2.26	0.84	0.00	0.00	60.02	65.18
45.00	2.33	1.20	0.00	0.00	60.04	65.19
46.00	2.39	1.59	0.00	0.00	60.06	65.19
47.00	2.45	1.98	0.00	0.00	60.09	65.20
48.00	2.51	2.37	0.00	0.00	60.12	65.21
49.00	2.58	2.93	0.00	0.00	60.17	65.21
50.00	2.65	3.47	0.00	0.00	60.22	65.22
51.00	2.74	4.38	0.00	0.00	60.29	65.22
52.00	2.83	5.44	0.00	0.00	60.37	65.23
53.00	2.95	7.38	0.00	0.00	60.47	65.24
54.00	3.09	10.21	0.00	0.00	60.62	65.25
55.00	3.27	13.96	0.00	0.00	60.82	65.26
56.00	3.47	18.71	0.00	0.00	61.03	65.28
57.00	3.71	25.01	0.00	0.00	61.15	65.30
58.00	4.00	34.27	0.00	0.00	61.31	65.32
59.00	4.40	50.18	97.59	1.61	61.48	65.36
60.00	7.11	344.68	97.59	9.68	61.69	65.60
61.00	7.88	308.27	97.59	17.75	62.59	65.89
62.00	8.24	236.09	97.59	25.81	63.12	66.08
63.00	8.46	174.84	97.59	33.88	63.37	66.23
64.00	8.67	136.41	97.59	41.95	63.50	66.38
65.00	8.80	101.17	97.59	50.01	63.55	66.52

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
66.00	8.93	79.94	97.59	58.08	63.53	66.66
67.00	9.05	67.22	97.59	66.15	63.47	66.79
68.00	9.18	59.66	97.59	74.21	63.39	66.92
69.00	9.26	48.85	97.59	82.28	63.29	67.05
70.00	9.35	42.36	97.59	90.35	63.16	67.17
71.00	9.43	38.49	97.59	98.41	63.03	67.29
72.00	9.51	36.20	97.59	106.48	62.84	67.41
73.00	9.51	21.96	97.59	114.55	62.61	67.53
74.00	9.51	13.32	97.59	122.61	62.35	67.64
75.00	9.51	8.08	97.59	130.68	62.06	67.75
76.00	9.51	4.90	97.59	138.75	61.60	67.86
77.00	9.51	2.97	97.59	146.81	61.08	67.96
78.00	9.51	1.80	0.00	151.65	60.15	68.03
79.00	9.51	1.09	0.00	151.65	60.17	68.00
80.00	9.51	0.66	0.00	151.65	60.19	67.97
81.00	9.51	0.40	0.00	151.65	60.20	67.94
82.00	9.51	0.24	0.00	151.65	60.20	67.92
83.00	9.51	0.15	0.00	151.65	60.20	67.89
84.00	9.51	0.09	0.00	151.65	60.21	67.86
85.00	9.51	0.05	0.00	151.65	60.21	67.83
86.00	9.51	0.03	0.00	151.65	60.21	67.81
87.00	9.51	0.02	0.00	151.65	60.21	67.78
88.00	9.51	0.01	0.00	151.65	60.21	67.76
89.00	9.51	0.01	0.00	151.65	60.21	67.73
90.00	9.51	0.00	0.00	151.65	60.21	67.70
91.00	9.51	0.00	0.00	151.65	60.21	67.68
92.00	9.51	0.00	0.00	151.65	60.21	67.65
93.00	9.51	0.00	0.00	151.65	60.21	67.63
94.00	9.51	0.00	0.00	151.65	60.21	67.60
95.00	9.51	0.00	0.00	151.65	60.21	67.58
96.00	9.51	0.00	0.00	151.65	60.21	67.55
97.00	9.51	0.00	0.00	151.65	60.21	67.53
98.00	9.51	0.00	0.00	151.65	60.21	67.51
99.00	9.51	0.00	0.00	151.65	60.21	67.48
100.00	9.51	0.00	0.00	151.65	60.21	67.46

Structure: 2

From Basin: Reservoir
To Basin: Offsite1
Structure Type: Gravity
Weir: None
Bleeder: Inv-Tri, Invert Elev = 65 ft NGVD, Height = 2 ft
Width = 3.3 ft
Default Coefs: Weir Coef = 2.5, Orifice Coef = 0.6
Pipe: None

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	65.00	0.00
1.00	0.04	1.92	0.00	0.00	65.00	0.00
2.00	0.09	2.45	0.00	0.00	65.00	0.00
3.00	0.13	2.54	0.00	0.00	65.01	0.00
4.00	0.17	2.56	0.00	0.00	65.01	0.00
5.00	0.21	2.57	0.00	0.00	65.01	0.00
6.00	0.26	2.57	0.00	0.00	65.02	0.00
7.00	0.30	2.57	0.00	0.00	65.02	0.00
8.00	0.34	2.57	0.00	0.00	65.03	0.00
9.00	0.38	2.57	0.00	0.00	65.03	0.00
10.00	0.43	2.57	0.00	0.00	65.03	0.00
11.00	0.47	2.57	0.00	0.00	65.04	0.00
12.00	0.51	2.57	0.00	0.00	65.04	0.00
13.00	0.55	2.57	0.00	0.00	65.04	0.00

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
14.00	0.60	2.57	0.00	0.00	65.05	0.00
15.00	0.64	2.57	0.00	0.00	65.05	0.00
16.00	0.68	2.57	0.00	0.00	65.05	0.00
17.00	0.72	2.57	0.00	0.00	65.06	0.00
18.00	0.77	2.58	0.00	0.00	65.06	0.00
19.00	0.81	2.58	0.00	0.00	65.06	0.00
20.00	0.85	2.58	0.00	0.00	65.07	0.00
21.00	0.89	2.58	0.00	0.00	65.07	0.00
22.00	0.94	2.58	0.00	0.00	65.08	0.00
23.00	0.98	2.58	0.00	0.00	65.08	0.00
24.00	1.02	2.58	0.00	0.00	65.08	0.00
25.00	1.08	3.60	0.00	0.00	65.09	0.00
26.00	1.15	3.74	0.01	0.00	65.09	0.00
27.00	1.21	3.75	0.01	0.00	65.10	0.00
28.00	1.27	3.76	0.01	0.00	65.10	0.00
29.00	1.33	3.76	0.01	0.00	65.11	0.00
30.00	1.39	3.76	0.01	0.01	65.11	0.00
31.00	1.46	3.76	0.01	0.01	65.12	0.00
32.00	1.52	3.76	0.01	0.01	65.12	0.00
33.00	1.58	3.76	0.01	0.01	65.13	0.00
34.00	1.64	3.76	0.01	0.01	65.13	0.00
35.00	1.71	3.76	0.01	0.01	65.14	0.00
36.00	1.77	3.76	0.02	0.01	65.14	0.00
37.00	1.83	3.76	0.02	0.01	65.15	0.00
38.00	1.89	3.76	0.02	0.01	65.15	0.00
39.00	1.95	3.76	0.02	0.02	65.16	0.00
40.00	2.02	3.76	0.02	0.02	65.16	0.00
41.00	2.08	3.76	0.02	0.02	65.17	0.00
42.00	2.14	3.76	0.03	0.02	65.17	0.00
43.00	2.20	3.76	0.03	0.02	65.18	0.00
44.00	2.26	3.76	0.03	0.03	65.18	0.00
45.00	2.33	3.76	0.03	0.03	65.19	0.00
46.00	2.39	3.76	0.03	0.03	65.19	0.00
47.00	2.45	3.76	0.04	0.03	65.20	0.00
48.00	2.51	3.76	0.04	0.04	65.21	0.00
49.00	2.58	4.17	0.04	0.04	65.21	0.00
50.00	2.65	4.22	0.04	0.05	65.22	0.00
51.00	2.74	4.96	0.05	0.05	65.22	0.00
52.00	2.83	5.59	0.05	0.05	65.23	0.00
53.00	2.95	7.14	0.06	0.06	65.24	0.00
54.00	3.09	8.82	0.06	0.06	65.25	0.00
55.00	3.27	10.51	0.07	0.07	65.26	0.00
56.00	3.47	12.20	0.08	0.08	65.28	0.00
57.00	3.71	14.42	0.10	0.08	65.30	0.00
58.00	4.00	17.65	0.12	0.09	65.32	0.00
59.00	4.40	24.19	0.16	0.10	65.36	0.00
60.00	7.11	191.70	0.58	0.13	65.60	0.00
61.00	7.88	60.88	1.55	0.23	65.89	0.00
62.00	8.24	26.09	2.49	0.40	66.08	0.00
63.00	8.46	14.92	3.49	0.66	66.23	0.00
64.00	8.67	13.00	4.63	1.00	66.38	0.00
65.00	8.80	8.35	5.90	1.45	66.52	0.00
66.00	8.93	7.72	7.31	2.00	66.66	0.00
67.00	9.05	7.63	8.88	2.68	66.79	0.00
68.00	9.18	7.62	10.60	3.50	66.92	0.00
69.00	9.26	5.42	13.40	4.52	67.05	0.00
70.00	9.35	5.13	14.50	5.69	67.17	0.00
71.00	9.43	5.09	15.52	6.94	67.29	0.00
72.00	9.51	5.08	16.46	8.27	67.41	0.00
73.00	9.51	0.69	17.32	9.67	67.53	0.00
74.00	9.51	0.09	18.10	11.14	67.64	0.00
75.00	9.51	0.01	18.85	12.67	67.75	0.00
76.00	9.51	0.00	19.56	14.27	67.86	0.00
77.00	9.51	0.00	20.24	15.92	67.96	0.00
78.00	9.51	0.00	20.64	17.62	68.03	0.00
79.00	9.51	0.00	20.47	19.32	68.00	0.00

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
80.00	9.51	0.00	20.30	21.00	67.97	0.00
81.00	9.51	0.00	20.12	22.67	67.94	0.00
82.00	9.51	0.00	19.95	24.32	67.92	0.00
83.00	9.51	0.00	19.77	25.96	67.89	0.00
84.00	9.51	0.00	19.60	27.59	67.86	0.00
85.00	9.51	0.00	19.43	29.20	67.83	0.00
86.00	9.51	0.00	19.25	30.80	67.81	0.00
87.00	9.51	0.00	19.08	32.38	67.78	0.00
88.00	9.51	0.00	18.90	33.95	67.76	0.00
89.00	9.51	0.00	18.73	35.50	67.73	0.00
90.00	9.51	0.00	18.56	37.04	67.70	0.00
91.00	9.51	0.00	18.38	38.57	67.68	0.00
92.00	9.51	0.00	18.21	40.08	67.65	0.00
93.00	9.51	0.00	18.04	41.57	67.63	0.00
94.00	9.51	0.00	17.86	43.06	67.60	0.00
95.00	9.51	0.00	17.69	44.52	67.58	0.00
96.00	9.51	0.00	17.51	45.98	67.55	0.00
97.00	9.51	0.00	17.34	47.42	67.53	0.00
98.00	9.51	0.00	17.17	48.84	67.51	0.00
99.00	9.51	0.00	16.99	50.25	67.48	0.00
100.00	9.51	0.00	16.82	51.65	67.46	0.00

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	97.59	59.00	0.00	0.00
2	20.68	77.80	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Field	63.55	65.20	60.00	0.00
Reservoir	68.03	77.80	65.00	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Field	152.68	0.00	151.63	0.00	1.05	0.00
Reservoir	47.49	151.63	51.50	0.00	147.62	0.00

Project Name: Volume IV Examples
Reviewer: User
Project Number: Agricultural Site
Period Begin: Jan 01, 2000;0000 hr End: Jan 06, 2000;1000 hr Duration: 130 hr
Time Step: 0.2 hr, Iterations: 10

Basin 1: Field

Method: Santa Barbara Unit Hydrograph
Rainfall Distribution: SFWMD - 3day
Design Frequency: 100 year
1 Day Rainfall: 9 inches
Area: 580 acres
Ground Storage: 10.2 inches
Time of Concentration: 2 hours
Initial Stage: 60 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
60.00	0.00
61.00	5.00
62.00	20.00
63.00	45.00
64.00	80.00
65.00	188.00

Basin 2: Reservoir

Method: Santa Barbara Unit Hydrograph
Rainfall Distribution: SFWMD - 3day
Design Frequency: 25 year
1 Day Rainfall: 7 inches
Area: 60 acres
Ground Storage: 0.01 inches
Time of Concentration: 0.5 hours
Initial Stage: 65 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
65.00	0.00
66.00	60.00
67.00	120.00
68.00	180.00
69.00	240.00

Offsite Receiving Body: Offsite1

Time (hr)	Stage (ft NGVD)
0.00	0.00
4000.00	0.00

Structure: 1

From Basin: Field
To Basin: Reservoir
Structure Type: Pump
On Elev = 61.5 ft NGVD, Off Elev = 60 ft NGVD, Capacity = 43800 gpm

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	60.00	65.00
1.00	0.05	0.00	0.00	0.00	60.00	65.00
2.00	0.11	0.00	0.00	0.00	60.00	65.00
3.00	0.16	0.00	0.00	0.00	60.00	65.01
4.00	0.22	0.00	0.00	0.00	60.00	65.01
5.00	0.27	0.00	0.00	0.00	60.00	65.01
6.00	0.33	0.00	0.00	0.00	60.00	65.02
7.00	0.38	0.00	0.00	0.00	60.00	65.02
8.00	0.44	0.00	0.00	0.00	60.00	65.03
9.00	0.49	0.00	0.00	0.00	60.00	65.03
10.00	0.55	0.00	0.00	0.00	60.00	65.03
11.00	0.60	0.00	0.00	0.00	60.00	65.04
12.00	0.66	0.00	0.00	0.00	60.00	65.04
13.00	0.71	0.00	0.00	0.00	60.00	65.04
14.00	0.77	0.00	0.00	0.00	60.00	65.05
15.00	0.82	0.00	0.00	0.00	60.00	65.05
16.00	0.88	0.00	0.00	0.00	60.00	65.05
17.00	0.93	0.00	0.00	0.00	60.00	65.06
18.00	0.99	0.00	0.00	0.00	60.00	65.06
19.00	1.04	0.00	0.00	0.00	60.00	65.06
20.00	1.09	0.00	0.00	0.00	60.00	65.07
21.00	1.15	0.00	0.00	0.00	60.00	65.07
22.00	1.20	0.00	0.00	0.00	60.00	65.08
23.00	1.26	0.00	0.00	0.00	60.00	65.08
24.00	1.31	0.00	0.00	0.00	60.00	65.08
25.00	1.39	0.00	0.00	0.00	60.00	65.09
26.00	1.47	0.00	0.00	0.00	60.00	65.09
27.00	1.55	0.00	0.00	0.00	60.00	65.10
28.00	1.63	0.00	0.00	0.00	60.00	65.10
29.00	1.71	0.00	0.00	0.00	60.00	65.11
30.00	1.79	0.00	0.00	0.00	60.00	65.11
31.00	1.87	0.00	0.00	0.00	60.00	65.12
32.00	1.95	0.00	0.00	0.00	60.00	65.12
33.00	2.03	0.00	0.00	0.00	60.00	65.13
34.00	2.11	0.13	0.00	0.00	60.00	65.13
35.00	2.19	0.49	0.00	0.00	60.01	65.14
36.00	2.27	0.98	0.00	0.00	60.02	65.14
37.00	2.35	1.55	0.00	0.00	60.04	65.15
38.00	2.43	2.16	0.00	0.00	60.07	65.15
39.00	2.51	2.78	0.00	0.00	60.11	65.16
40.00	2.59	3.41	0.00	0.00	60.16	65.16
41.00	2.67	4.04	0.00	0.00	60.22	65.17
42.00	2.75	4.66	0.00	0.00	60.29	65.17
43.00	2.83	5.27	0.00	0.00	60.38	65.18
44.00	2.91	5.87	0.00	0.00	60.47	65.18
45.00	2.99	6.46	0.00	0.00	60.57	65.19
46.00	3.07	7.04	0.00	0.00	60.68	65.19
47.00	3.15	7.60	0.00	0.00	60.80	65.20
48.00	3.23	8.16	0.00	0.00	60.93	65.21
49.00	3.32	9.19	0.00	0.00	61.03	65.21
50.00	3.41	10.07	0.00	0.00	61.08	65.22
51.00	3.52	11.84	0.00	0.00	61.14	65.22
52.00	3.64	13.85	0.00	0.00	61.21	65.23
53.00	3.79	17.71	0.00	0.00	61.30	65.24
54.00	3.98	23.14	0.00	0.00	61.41	65.25
55.00	4.20	30.04	97.59	3.23	61.39	65.30
56.00	4.46	38.38	97.59	11.29	61.04	65.45
57.00	4.77	49.07	97.59	19.36	60.24	65.61
58.00	5.15	64.46	0.00	20.97	60.69	65.67
59.00	5.65	90.46	0.00	20.97	61.31	65.69
60.00	9.14	552.07	97.59	27.43	62.11	65.90
61.00	10.13	483.60	97.59	35.49	63.38	66.18
62.00	10.59	366.08	97.59	43.56	64.05	66.37
63.00	10.88	268.66	97.59	51.63	64.21	66.52
64.00	11.15	207.51	97.59	59.69	64.32	66.66
65.00	11.31	152.82	97.59	67.76	64.38	66.80

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
66.00	11.47	119.82	97.59	75.83	64.41	66.93
67.00	11.64	99.98	97.59	83.89	64.42	67.06
68.00	11.80	88.10	97.59	91.96	64.42	67.19
69.00	11.91	71.83	97.59	100.03	64.40	67.31
70.00	12.02	62.03	97.59	108.09	64.38	67.43
71.00	12.12	56.15	97.59	116.16	64.35	67.55
72.00	12.23	52.66	97.59	124.23	64.31	67.66
73.00	12.23	31.94	97.59	132.29	64.27	67.77
74.00	12.23	19.37	97.59	140.36	64.22	67.88
75.00	12.23	11.75	97.59	148.43	64.15	67.99
76.00	12.23	7.13	97.59	156.49	64.09	68.09
77.00	12.23	4.32	97.59	164.56	64.03	68.18
78.00	12.23	2.62	97.59	172.63	63.91	68.26
79.00	12.23	1.59	97.59	180.69	63.76	68.32
80.00	12.23	0.96	97.59	188.76	63.63	68.36
81.00	12.23	0.58	97.59	196.83	63.52	68.40
82.00	12.23	0.35	97.59	204.89	63.42	68.42
83.00	12.23	0.22	97.59	212.96	63.33	68.44
84.00	12.23	0.13	97.59	221.03	63.25	68.46
85.00	12.23	0.08	97.59	229.09	63.18	68.47
86.00	12.23	0.05	97.59	237.16	63.11	68.48
87.00	12.23	0.03	97.59	245.23	63.04	68.48
88.00	12.23	0.02	97.59	253.29	62.97	68.49
89.00	12.23	0.01	97.59	261.36	62.89	68.49
90.00	12.23	0.01	97.59	269.43	62.81	68.49
91.00	12.23	0.00	97.59	277.49	62.73	68.50
92.00	12.23	0.00	97.59	285.56	62.65	68.50
93.00	12.23	0.00	97.59	293.63	62.57	68.50
94.00	12.23	0.00	97.59	301.69	62.49	68.50
95.00	12.23	0.00	97.59	309.76	62.41	68.50
96.00	12.23	0.00	97.59	317.83	62.33	68.50
97.00	12.23	0.00	97.59	325.89	62.25	68.50
98.00	12.23	0.00	97.59	333.96	62.18	68.50
99.00	12.23	0.00	97.59	342.03	62.10	68.50
100.00	12.23	0.00	97.59	350.10	62.02	68.50
101.00	12.23	0.00	97.59	358.16	61.90	68.50
102.00	12.23	0.00	97.59	366.23	61.78	68.50
103.00	12.23	0.00	97.59	374.30	61.65	68.50
104.00	12.23	0.00	97.59	382.36	61.52	68.50
105.00	12.23	0.00	97.59	390.43	61.39	68.50
106.00	12.23	0.00	97.59	398.50	61.26	68.50
107.00	12.23	0.00	97.59	406.56	61.13	68.50
108.00	12.23	0.00	97.59	414.63	61.00	68.50
109.00	12.23	0.00	97.59	422.70	60.62	68.50
110.00	12.23	0.00	97.59	430.76	60.24	68.50
111.00	12.23	0.00	0.00	435.60	60.31	68.46
112.00	12.23	0.00	0.00	435.60	61.07	68.36
113.00	12.23	0.00	0.00	435.60	61.27	68.27
114.00	12.23	0.00	0.00	435.60	61.41	68.21
115.00	12.23	0.00	97.59	437.22	61.45	68.17
116.00	12.23	0.00	97.59	445.28	61.02	68.25
117.00	12.23	0.00	0.00	451.74	60.12	68.30
118.00	12.23	0.00	0.00	451.74	60.58	68.23
119.00	12.23	0.00	0.00	451.74	60.89	68.17
120.00	12.23	0.00	0.00	451.74	61.03	68.13
121.00	12.23	0.00	0.00	451.74	61.07	68.09
122.00	12.23	0.00	0.00	451.74	61.09	68.05
123.00	12.23	0.00	0.00	451.74	61.10	68.02
124.00	12.23	0.00	0.00	451.74	61.10	67.99
125.00	12.23	0.00	0.00	451.74	61.10	67.97
126.00	12.23	0.00	0.00	451.74	61.10	67.94
127.00	12.23	0.00	0.00	451.74	61.10	67.91
128.00	12.23	0.00	0.00	451.74	61.10	67.88
129.00	12.23	0.00	0.00	451.74	61.10	67.86
130.00	12.23	0.00	0.00	451.74	61.10	67.83

Structure: 2

From Basin: Reservoir
To Basin: Offsite1
Structure Type: Gravity
Weir: None
Bleeder: Inv-Tri, Invert Elev = 65 ft NGVD, Height = 2 ft
Width = 3.3 ft
Default Coefs: Weir Coef = 2.5, Orifice Coef = 0.6
Pipe: None

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	65.00	0.00
1.00	0.04	1.92	0.00	0.00	65.00	0.00
2.00	0.09	2.45	0.00	0.00	65.00	0.00
3.00	0.13	2.54	0.00	0.00	65.01	0.00
4.00	0.17	2.56	0.00	0.00	65.01	0.00
5.00	0.21	2.57	0.00	0.00	65.01	0.00
6.00	0.26	2.57	0.00	0.00	65.02	0.00
7.00	0.30	2.57	0.00	0.00	65.02	0.00
8.00	0.34	2.57	0.00	0.00	65.03	0.00
9.00	0.38	2.57	0.00	0.00	65.03	0.00
10.00	0.43	2.57	0.00	0.00	65.03	0.00
11.00	0.47	2.57	0.00	0.00	65.04	0.00
12.00	0.51	2.57	0.00	0.00	65.04	0.00
13.00	0.55	2.57	0.00	0.00	65.04	0.00
14.00	0.60	2.57	0.00	0.00	65.05	0.00
15.00	0.64	2.57	0.00	0.00	65.05	0.00
16.00	0.68	2.57	0.00	0.00	65.05	0.00
17.00	0.72	2.57	0.00	0.00	65.06	0.00
18.00	0.77	2.58	0.00	0.00	65.06	0.00
19.00	0.81	2.58	0.00	0.00	65.06	0.00
20.00	0.85	2.58	0.00	0.00	65.07	0.00
21.00	0.89	2.58	0.00	0.00	65.07	0.00
22.00	0.94	2.58	0.00	0.00	65.08	0.00
23.00	0.98	2.58	0.00	0.00	65.08	0.00
24.00	1.02	2.58	0.00	0.00	65.08	0.00
25.00	1.08	3.60	0.00	0.00	65.09	0.00
26.00	1.15	3.74	0.01	0.00	65.09	0.00
27.00	1.21	3.75	0.01	0.00	65.10	0.00
28.00	1.27	3.76	0.01	0.00	65.10	0.00
29.00	1.33	3.76	0.01	0.00	65.11	0.00
30.00	1.39	3.76	0.01	0.01	65.11	0.00
31.00	1.46	3.76	0.01	0.01	65.12	0.00
32.00	1.52	3.76	0.01	0.01	65.12	0.00
33.00	1.58	3.76	0.01	0.01	65.13	0.00
34.00	1.64	3.76	0.01	0.01	65.13	0.00
35.00	1.71	3.76	0.01	0.01	65.14	0.00
36.00	1.77	3.76	0.02	0.01	65.14	0.00
37.00	1.83	3.76	0.02	0.01	65.15	0.00
38.00	1.89	3.76	0.02	0.01	65.15	0.00
39.00	1.95	3.76	0.02	0.02	65.16	0.00
40.00	2.02	3.76	0.02	0.02	65.16	0.00
41.00	2.08	3.76	0.02	0.02	65.17	0.00
42.00	2.14	3.76	0.03	0.02	65.17	0.00
43.00	2.20	3.76	0.03	0.02	65.18	0.00
44.00	2.26	3.76	0.03	0.03	65.18	0.00
45.00	2.33	3.76	0.03	0.03	65.19	0.00
46.00	2.39	3.76	0.03	0.03	65.19	0.00
47.00	2.45	3.76	0.04	0.03	65.20	0.00
48.00	2.51	3.76	0.04	0.04	65.21	0.00
49.00	2.58	4.17	0.04	0.04	65.21	0.00
50.00	2.65	4.22	0.04	0.05	65.22	0.00
51.00	2.74	4.96	0.05	0.05	65.22	0.00
52.00	2.83	5.59	0.05	0.05	65.23	0.00
53.00	2.95	7.14	0.06	0.06	65.24	0.00

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
54.00	3.09	8.82	0.06	0.06	65.25	0.00
55.00	3.27	10.51	0.10	0.07	65.30	0.00
56.00	3.47	12.20	0.29	0.09	65.45	0.00
57.00	3.71	14.42	0.59	0.12	65.61	0.00
58.00	4.00	17.65	0.75	0.18	65.67	0.00
59.00	4.40	24.19	0.83	0.25	65.69	0.00
60.00	7.11	191.70	1.56	0.34	65.90	0.00
61.00	7.88	60.88	3.14	0.55	66.18	0.00
62.00	8.24	26.09	4.49	0.88	66.37	0.00
63.00	8.46	14.92	5.87	1.32	66.52	0.00
64.00	8.67	13.00	7.36	1.88	66.66	0.00
65.00	8.80	8.35	8.97	2.56	66.80	0.00
66.00	8.93	7.72	10.70	3.39	66.93	0.00
67.00	9.05	7.63	13.49	4.42	67.06	0.00
68.00	9.18	7.62	14.62	5.59	67.19	0.00
69.00	9.26	5.42	15.63	6.85	67.31	0.00
70.00	9.35	5.13	16.57	8.19	67.43	0.00
71.00	9.43	5.09	17.45	9.60	67.55	0.00
72.00	9.51	5.08	18.27	11.09	67.66	0.00
73.00	9.51	0.69	19.03	12.63	67.77	0.00
74.00	9.51	0.09	19.73	14.24	67.88	0.00
75.00	9.51	0.01	20.41	15.91	67.99	0.00
76.00	9.51	0.00	21.03	17.62	68.09	0.00
77.00	9.51	0.00	21.57	19.39	68.18	0.00
78.00	9.51	0.00	22.00	21.19	68.26	0.00
79.00	9.51	0.00	22.33	23.03	68.32	0.00
80.00	9.51	0.00	22.59	24.89	68.36	0.00
81.00	9.51	0.00	22.79	26.77	68.40	0.00
82.00	9.51	0.00	22.94	28.66	68.42	0.00
83.00	9.51	0.00	23.05	30.56	68.44	0.00
84.00	9.51	0.00	23.13	32.47	68.46	0.00
85.00	9.51	0.00	23.19	34.38	68.47	0.00
86.00	9.51	0.00	23.23	36.30	68.48	0.00
87.00	9.51	0.00	23.26	38.23	68.48	0.00
88.00	9.51	0.00	23.29	40.15	68.49	0.00
89.00	9.51	0.00	23.31	42.07	68.49	0.00
90.00	9.51	0.00	23.32	44.00	68.49	0.00
91.00	9.51	0.00	23.33	45.93	68.50	0.00
92.00	9.51	0.00	23.33	47.86	68.50	0.00
93.00	9.51	0.00	23.34	49.79	68.50	0.00
94.00	9.51	0.00	23.34	51.72	68.50	0.00
95.00	9.51	0.00	23.35	53.65	68.50	0.00
96.00	9.51	0.00	23.35	55.58	68.50	0.00
97.00	9.51	0.00	23.35	57.51	68.50	0.00
98.00	9.51	0.00	23.35	59.44	68.50	0.00
99.00	9.51	0.00	23.35	61.37	68.50	0.00
100.00	9.51	0.00	23.35	63.30	68.50	0.00
101.00	9.51	0.00	23.35	65.23	68.50	0.00
102.00	9.51	0.00	23.35	67.16	68.50	0.00
103.00	9.51	0.00	23.35	69.09	68.50	0.00
104.00	9.51	0.00	23.35	71.02	68.50	0.00
105.00	9.51	0.00	23.35	72.95	68.50	0.00
106.00	9.51	0.00	23.35	74.88	68.50	0.00
107.00	9.51	0.00	23.35	76.81	68.50	0.00
108.00	9.51	0.00	23.35	78.74	68.50	0.00
109.00	9.51	0.00	23.35	80.67	68.50	0.00
110.00	9.51	0.00	23.35	82.60	68.50	0.00
111.00	9.51	0.00	23.14	84.52	68.46	0.00
112.00	9.51	0.00	22.56	86.41	68.36	0.00
113.00	9.51	0.00	22.10	88.25	68.27	0.00
114.00	9.51	0.00	21.72	90.05	68.21	0.00
115.00	9.51	0.00	21.50	91.84	68.17	0.00
116.00	9.51	0.00	21.94	93.64	68.25	0.00
117.00	9.51	0.00	22.22	95.47	68.30	0.00
118.00	9.51	0.00	21.82	97.28	68.23	0.00
119.00	9.51	0.00	21.50	99.07	68.17	0.00

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
120.00	9.51	0.00	21.23	100.83	68.13	0.00
121.00	9.51	0.00	21.00	102.58	68.09	0.00
122.00	9.51	0.00	20.79	104.30	68.05	0.00
123.00	9.51	0.00	20.60	106.01	68.02	0.00
124.00	9.51	0.00	20.43	107.70	67.99	0.00
125.00	9.51	0.00	20.26	109.38	67.97	0.00
126.00	9.51	0.00	20.08	111.05	67.94	0.00
127.00	9.51	0.00	19.91	112.70	67.91	0.00
128.00	9.51	0.00	19.73	114.34	67.88	0.00
129.00	9.51	0.00	19.56	115.96	67.86	0.00
130.00	9.51	0.00	19.39	117.57	67.83	0.00

Structure: 3

From Basin: Reservoir
To Basin: Field
Structure Type: Gravity
Weir: Broad Crested, Crest Elev = 68 ft NGVD, Length = 70 ft, Weir Coef = 3
Bleeder: None
Pipe: None

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	65.00	60.00
1.00	0.04	1.92	0.00	0.00	65.00	60.00
2.00	0.09	2.45	0.00	0.00	65.00	60.00
3.00	0.13	2.54	0.00	0.00	65.01	60.00
4.00	0.17	2.56	0.00	0.00	65.01	60.00
5.00	0.21	2.57	0.00	0.00	65.01	60.00
6.00	0.26	2.57	0.00	0.00	65.02	60.00
7.00	0.30	2.57	0.00	0.00	65.02	60.00
8.00	0.34	2.57	0.00	0.00	65.03	60.00
9.00	0.38	2.57	0.00	0.00	65.03	60.00
10.00	0.43	2.57	0.00	0.00	65.03	60.00
11.00	0.47	2.57	0.00	0.00	65.04	60.00
12.00	0.51	2.57	0.00	0.00	65.04	60.00
13.00	0.55	2.57	0.00	0.00	65.04	60.00
14.00	0.60	2.57	0.00	0.00	65.05	60.00
15.00	0.64	2.57	0.00	0.00	65.05	60.00
16.00	0.68	2.57	0.00	0.00	65.05	60.00
17.00	0.72	2.57	0.00	0.00	65.06	60.00
18.00	0.77	2.58	0.00	0.00	65.06	60.00
19.00	0.81	2.58	0.00	0.00	65.06	60.00
20.00	0.85	2.58	0.00	0.00	65.07	60.00
21.00	0.89	2.58	0.00	0.00	65.07	60.00
22.00	0.94	2.58	0.00	0.00	65.08	60.00
23.00	0.98	2.58	0.00	0.00	65.08	60.00
24.00	1.02	2.58	0.00	0.00	65.08	60.00
25.00	1.08	3.60	0.00	0.00	65.09	60.00
26.00	1.15	3.74	0.00	0.00	65.09	60.00
27.00	1.21	3.75	0.00	0.00	65.10	60.00
28.00	1.27	3.76	0.00	0.00	65.10	60.00
29.00	1.33	3.76	0.00	0.00	65.11	60.00
30.00	1.39	3.76	0.00	0.00	65.11	60.00
31.00	1.46	3.76	0.00	0.00	65.12	60.00
32.00	1.52	3.76	0.00	0.00	65.12	60.00
33.00	1.58	3.76	0.00	0.00	65.13	60.00
34.00	1.64	3.76	0.00	0.00	65.13	60.00
35.00	1.71	3.76	0.00	0.00	65.14	60.01
36.00	1.77	3.76	0.00	0.00	65.14	60.02
37.00	1.83	3.76	0.00	0.00	65.15	60.04
38.00	1.89	3.76	0.00	0.00	65.15	60.07
39.00	1.95	3.76	0.00	0.00	65.16	60.11

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
40.00	2.02	3.76	0.00	0.00	65.16	60.16
41.00	2.08	3.76	0.00	0.00	65.17	60.22
42.00	2.14	3.76	0.00	0.00	65.17	60.29
43.00	2.20	3.76	0.00	0.00	65.18	60.38
44.00	2.26	3.76	0.00	0.00	65.18	60.47
45.00	2.33	3.76	0.00	0.00	65.19	60.57
46.00	2.39	3.76	0.00	0.00	65.19	60.68
47.00	2.45	3.76	0.00	0.00	65.20	60.80
48.00	2.51	3.76	0.00	0.00	65.21	60.93
49.00	2.58	4.17	0.00	0.00	65.21	61.03
50.00	2.65	4.22	0.00	0.00	65.22	61.08
51.00	2.74	4.96	0.00	0.00	65.22	61.14
52.00	2.83	5.59	0.00	0.00	65.23	61.21
53.00	2.95	7.14	0.00	0.00	65.24	61.30
54.00	3.09	8.82	0.00	0.00	65.25	61.41
55.00	3.27	10.51	0.00	0.00	65.30	61.39
56.00	3.47	12.20	0.00	0.00	65.45	61.04
57.00	3.71	14.42	0.00	0.00	65.61	60.24
58.00	4.00	17.65	0.00	0.00	65.67	60.69
59.00	4.40	24.19	0.00	0.00	65.69	61.31
60.00	7.11	191.70	0.00	0.00	65.90	62.11
61.00	7.88	60.88	0.00	0.00	66.18	63.38
62.00	8.24	26.09	0.00	0.00	66.37	64.05
63.00	8.46	14.92	0.00	0.00	66.52	64.21
64.00	8.67	13.00	0.00	0.00	66.66	64.32
65.00	8.80	8.35	0.00	0.00	66.80	64.38
66.00	8.93	7.72	0.00	0.00	66.93	64.41
67.00	9.05	7.63	0.00	0.00	67.06	64.42
68.00	9.18	7.62	0.00	0.00	67.19	64.42
69.00	9.26	5.42	0.00	0.00	67.31	64.40
70.00	9.35	5.13	0.00	0.00	67.43	64.38
71.00	9.43	5.09	0.00	0.00	67.55	64.35
72.00	9.51	5.08	0.00	0.00	67.66	64.31
73.00	9.51	0.69	0.00	0.00	67.77	64.27
74.00	9.51	0.09	0.00	0.00	67.88	64.22
75.00	9.51	0.01	0.00	0.00	67.99	64.15
76.00	9.51	0.00	5.87	0.23	68.09	64.09
77.00	9.51	0.00	16.32	1.22	68.18	64.03
78.00	9.51	0.00	27.27	3.12	68.26	63.91
79.00	9.51	0.00	37.26	5.87	68.32	63.76
80.00	9.51	0.00	45.72	9.38	68.36	63.63
81.00	9.51	0.00	52.57	13.51	68.40	63.52
82.00	9.51	0.00	57.95	18.13	68.42	63.42
83.00	9.51	0.00	62.09	23.14	68.44	63.33
84.00	9.51	0.00	65.23	28.43	68.46	63.25
85.00	9.51	0.00	67.59	33.94	68.47	63.18
86.00	9.51	0.00	69.34	39.62	68.48	63.11
87.00	9.51	0.00	70.64	45.42	68.48	63.04
88.00	9.51	0.00	71.60	51.31	68.49	62.97
89.00	9.51	0.00	72.31	57.26	68.49	62.89
90.00	9.51	0.00	72.83	63.27	68.49	62.81
91.00	9.51	0.00	73.21	69.30	68.50	62.73
92.00	9.51	0.00	73.48	75.37	68.50	62.65
93.00	9.51	0.00	73.69	81.45	68.50	62.57
94.00	9.51	0.00	73.84	87.55	68.50	62.49
95.00	9.51	0.00	73.95	93.66	68.50	62.41
96.00	9.51	0.00	74.03	99.78	68.50	62.33
97.00	9.51	0.00	74.08	105.90	68.50	62.25
98.00	9.51	0.00	74.13	112.02	68.50	62.18
99.00	9.51	0.00	74.16	118.15	68.50	62.10
100.00	9.51	0.00	74.18	124.28	68.50	62.02
101.00	9.51	0.00	74.20	130.42	68.50	61.90
102.00	9.51	0.00	74.21	136.55	68.50	61.78
103.00	9.51	0.00	74.22	142.68	68.50	61.65
104.00	9.51	0.00	74.22	148.82	68.50	61.52
105.00	9.51	0.00	74.23	154.95	68.50	61.39

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
106.00	9.51	0.00	74.23	161.09	68.50	61.26
107.00	9.51	0.00	74.23	167.23	68.50	61.13
108.00	9.51	0.00	74.24	173.36	68.50	61.00
109.00	9.51	0.00	74.24	179.50	68.50	60.62
110.00	9.51	0.00	74.24	185.63	68.50	60.24
111.00	9.51	0.00	65.87	191.58	68.46	60.31
112.00	9.51	0.00	44.45	195.91	68.36	61.07
113.00	9.51	0.00	30.07	198.83	68.27	61.27
114.00	9.51	0.00	20.12	200.80	68.21	61.41
115.00	9.51	0.00	14.75	202.13	68.17	61.45
116.00	9.51	0.00	25.75	203.89	68.25	61.02
117.00	9.51	0.00	33.66	206.50	68.30	60.12
118.00	9.51	0.00	22.62	208.71	68.23	60.58
119.00	9.51	0.00	14.86	210.17	68.17	60.89
120.00	9.51	0.00	9.30	211.11	68.13	61.03
121.00	9.51	0.00	5.31	211.68	68.09	61.07
122.00	9.51	0.00	2.50	211.97	68.05	61.09
123.00	9.51	0.00	0.67	212.08	68.02	61.10
124.00	9.51	0.00	0.00	212.09	67.99	61.10
125.00	9.51	0.00	0.00	212.09	67.97	61.10
126.00	9.51	0.00	0.00	212.09	67.94	61.10
127.00	9.51	0.00	0.00	212.09	67.91	61.10
128.00	9.51	0.00	0.00	212.09	67.88	61.10
129.00	9.51	0.00	0.00	212.09	67.86	61.10
130.00	9.51	0.00	0.00	212.09	67.83	61.10

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	97.59	54.80	0.00	0.00
2	23.35	110.00	0.00	0.00
3	74.24	110.00	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Field	64.42	67.20	60.00	0.00
Reservoir	68.50	110.00	65.00	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Field	246.10	212.06	451.67	0.00	6.48	-0.00
Reservoir	47.49	451.67	329.45	0.00	169.71	0.00

Design Example
for
A Major Impoundment

DESIGN EXAMPLE

FOR

A MAJOR IMPOUNDMENT

AGRICULTURAL SITE WITH MAJOR IMPOUNDMENT
(N.T.S.)

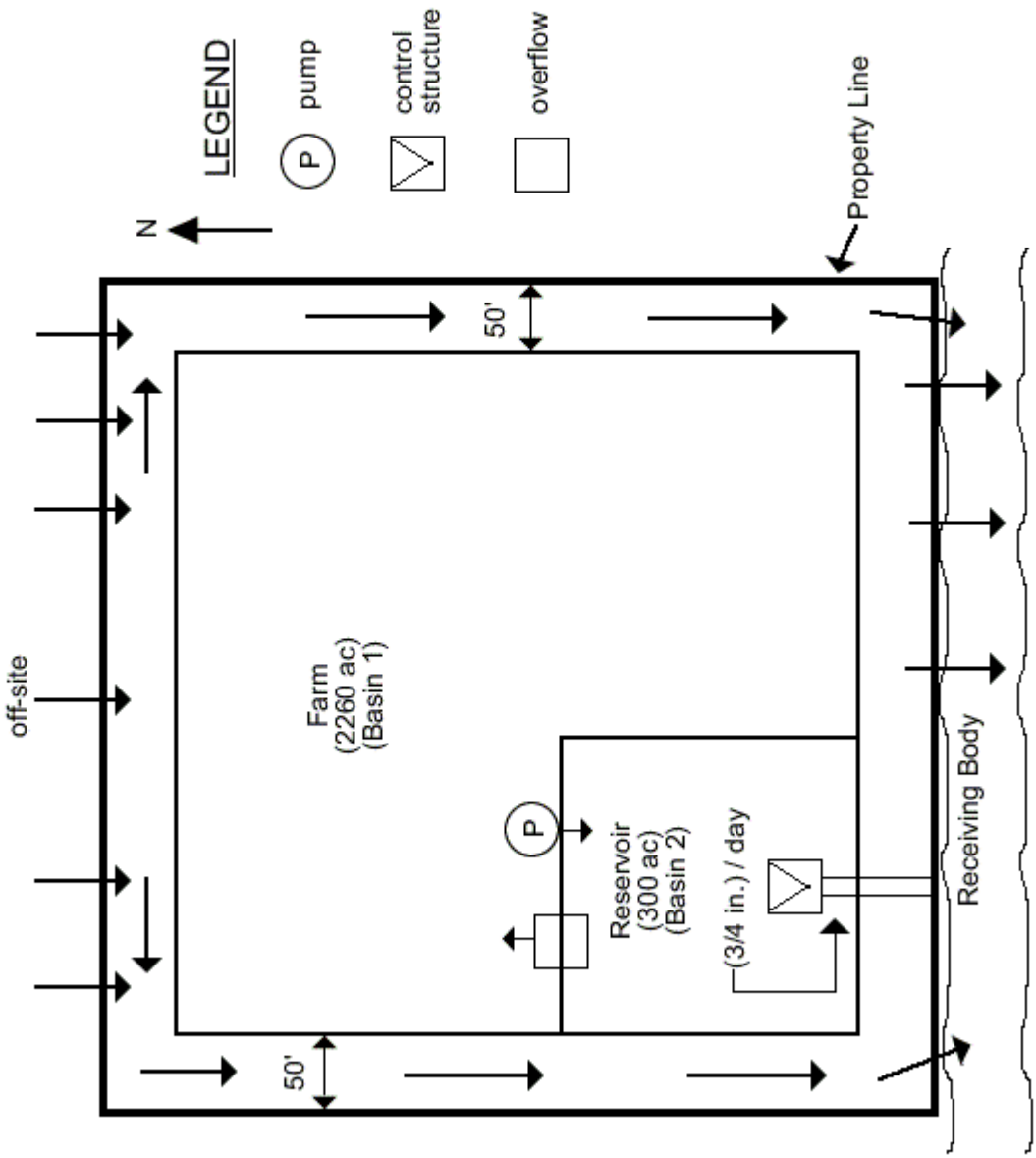


Figure XC-1

I. Given

A. Proposed Land Use

1. Total =2560 ac

2. Reservoir = 300 ac

3. Lateral Canals = 60 ac

4. Sod Farm =2200 ac

B. A large mobile home park is immediately adjacent to the west boundary of the sod farm.

C. Elevations

1. Laterals extend from elevation 18’ (bed) to 22’ NGVD (banks).

2. Developed farm site grading varies from elevation 22’ to 25’ NGVD.

3. Farm control elevation is 20’ NGVD.

4. Reservoir control elevation is 23’ NGVD to maintain wetlands.

D. Off-site areas contribute sheetflow runoff to the site. The off-site runoff will be routed around the site via perimeter swales. Discharge off-site will continue to be sheetflow, to simulate pre-development natural conditions. (Toes of the perimeter berms are set back at least 50 feet from the property line; berms have a top width of 5 feet; have external sideslopes of 2.5H:1V, and interior sideslopes of 3H:1V for ease of maintenance.)

E. Farm discharge will be routed through a control structure, culvert, and spreader swale to the adjacent receiving body.

F. Depth to average wet season water table = 2.0 ft.

G. A pumping rate of 4 in./day (380 cfs) from the farm to the detention area is proposed.

Pump capacity: 4 @ 42,636 gpm = 95 cfs; or 170,544 gpm = 380 cfs
Pump schedule: On at 21.5' NGVD, off at 20.0' NGVD

H. Post development discharge allowed = 81 cfs = ¾ inch per day.

NOTE: Discharge allowed can be determined two ways:

1. Predevelopment = post development

2. Receiving body discharge criteria if they have been established.

I. 25-year 3-day design storm rainfall = 8.0 in. x 1.359 = 10.9 in.

Treat the systems as two basins:

1. Basin 1 (farm) routed into Basin 2 (reservoir).
2. Basin 2 (reservoir) routed to receiving body.

II. Computations

A. Farm

1. Compute Pervious/Impervious (P/I)
2200 acre farm (pervious)
60 acre laterals (assumed impervious for soil storage calculations)

%I = (60 ac/2260 ac) x 100 = 2.7%
%P = (2200 ac/2260 ac) x 100 = 97.3%.

2. Compute Soil Storage and SCS Curve Number

a. Depth to average wet season water table = 2.0 ft.

b. From *Basis of Review*, 2.5 inches of moisture can be stored in the soil column beneath pervious areas.

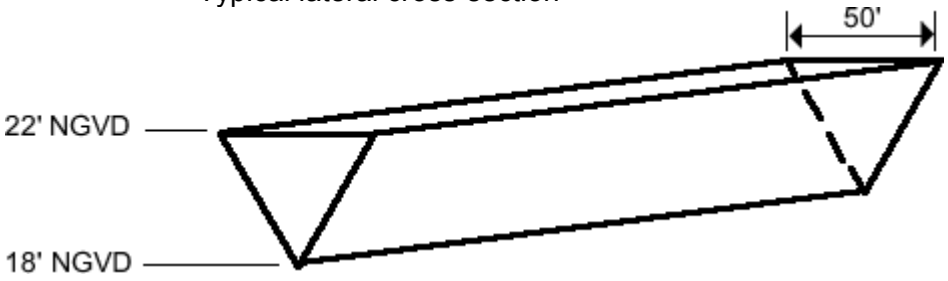
c. Ground storage under pervious areas
= 2.5 in. x (1 ft/12 in.) x 2200 ac
= 458 ac-ft.

d. Equivalent soil storage, S
= 458 ac-ft x ((12 in./1 ft)/2260 ac)
= 2.4 in.

e. SCS curve number, CN
= 1000/(S + 10)
= 1000/(2.4 + 10)
= 81.

3. Compute Open Surface Stage versus Storage

a. Laterals store between elevations 20’ and 22’ NGVD
Typical lateral cross-section



60 acres of laterals at top of bank

b. Developed farm area stores linearly between elevations 22' and 25' NGVD.



	Storage		
Stage (ft, NGVD)	Laterals (ac-ft)	Site (ac-ft)	Total (ac-ft)
20	0	0	0
21	((30 ac + 45 ac)/2)(1 ft)	0	37.5
22	((30 ac + 60 ac)/2)(2 ft)	0	90.0
23	90 + 60 ac(1 ft)	0.5 (2200 ac) ((1x1 ft)/3)	516.67
24	90 + 60 ac(2 ft)	0.5 (2200 ac) ((2x2 ft)/3)	1676.67
25	90 + 60 ac(3 ft)	0.5 (2200 ac) ((3x3 ft)/3)	3570.00

4. Flood Route the Design Storm

25-year 3-day event

(See pages XC-15 through XC-22.)

Maximum stage in farm = 23.1' NGVD (to the nearest tenth of a foot).

B. Reservoir

1. S = 0.01 in. (District computer program will not accept zero.)

2. Since the reservoir will be used to mitigate for the loss of some wetlands, 1 foot of water will be maintained in parts of the reservoir at elevation 22.0' NGVD. Storage will then start at the control elevation, 23.0' NGVD.

Stage (ft, NGVD)	300-acre Reservoir Storage (ac-ft)
23	0
24	300
25	600
26	900
27	1200
28	1500
29	1800
30	2100
31	2400
32	2700
33	3000
34	3300
35	3600
36	3900
37	4200

3. Allowable Discharge

   81 cfs was determined by pre- versus postdevelopment.

4. Weir crest elevation required

   a. First inch of runoff

   b. Volume = 1 in. x (1 ft/12 in.) x 2560 ac = 213 ac-ft. From the reservoir storage calculation (B.2), the weir crest should be set at elevation 23.7' NGVD, so that 213 ac-ft are detained.

5. Compute weir length

   a. Rainfall from the 25-year 3-day storm is 10.9 inches. Using the S value calculated for the sod farm,

   $$\text{runoff} = Q = \frac{(P - 0.2S)^2}{(P + 0.8S)} = 8.5 \text{ in.}$$

   b. Volume of runoff

      = 8.5 in. x (1 ft/12 in.) x 2560 ac

      = 1813 ac-ft, or a reservoir stage of elevation 29' NGVD (per reservoir stage storage table), or 5.3 ft above the proposed weir crest.

   c. The maximum design head is 5.3 feet.

      $Q = 3.13LH^{1.5}$

      $L = 81 \text{ cfs}/(3.13 \times (5.3 \text{ ft})^{1.5}) = 2.1 \text{ ft}$

6. Water quality control device should be designed to discharge an amount (Q) equal to ½ inch in 24 hours.

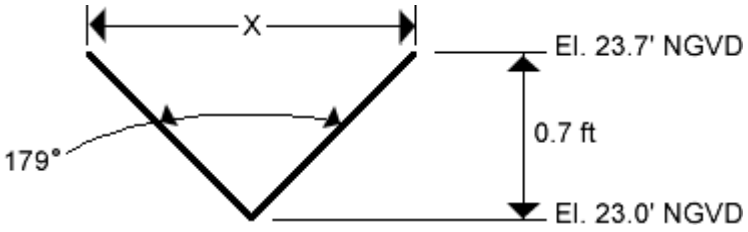
213 ac-ft/2 = 107 ac-ft in 24 hours, or about 54 cfs
(1 cfs = 1.9835 ac-ft per 24 hrs.)

$Q = 2.5 \times (\tan(\theta/2)) \times (H)^{2.5}$, or

$\theta = 2 \times \tan^{-1}(0.492 \times Q/(H)^{2.5})$

$\theta = 2 \times \tan^{-1}(0.492 \times 107 \text{ ac-ft}/(0.7 \text{ ft})^{2.5})$

= 179 degrees



$\tan(\theta/2) = (X/2)/0.7$ ft

$X = 2 \times 0.7 \text{ ft} \times (\tan(179°/2))$

X = <u>160 ft</u> - will not fit into weir.

7. Try a triangular orifice

$Q = 4.8 \times A \times (H)^{0.5}$

where Q = discharge, cfs

A = area of orifice, sq ft

H = head above notch centroid, ft

therefore, Q = 81 cfs [see * on next page]

$A = 0.5 \times b \times h$

assume h = 3 ft

Orifice centroid will be 2/3 of h above orifice invert, or 2.0 ft above elevation 23.0' NGVD, or at elevation 25.0' NGVD.

H = 29.0' NGVD – 25.0' NGVD

= 4.0 ft

$Q = 4.8 \times A \times H^{0.5}$

$= 4.8 \times (0.5 \times b \times h) \times (H)^{0.5}$

therefore,

$b = Q/(4.8 \times 0.5 \times h \times (H)^{0.5})$

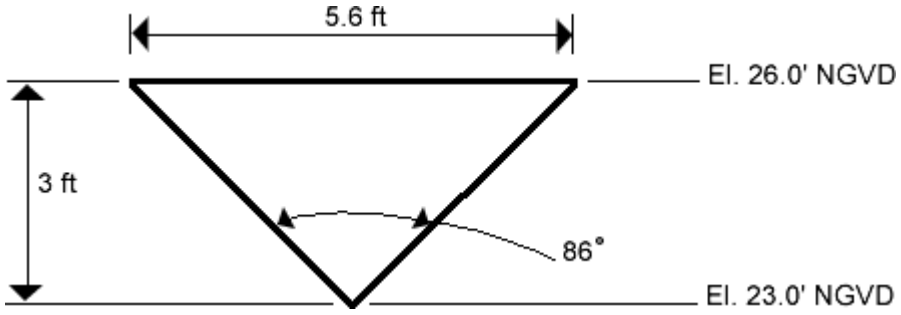
$= 81 \text{ cfs}/(4.8 \times 0.5 \times 3 \text{ ft} \times (4.0 \text{ ft})^{0.5})$

$= 81 \text{ cfs}/14.4$

$= 5.6 \text{ ft.}$

*(NOTE: The orifice was designed using the more restrictive condition created by the allowable discharge criteria rather than the water quality rate.)

Therefore, the structure is 1-3.0 ft high by 5.6 ft wide triangular orifice with an invert at elevation 23.0' NGVD. Only an orifice is used since the allowable discharge is low and the lake size is preferred to be left unchanged, so a V-notch is impractical. The proposed control structure will be considerably smaller than what is required to meet the detention requirements for water quality. Therefore, discharge at elevation 26.0' NGVD will be considerably less than 0.5 inch in 24 hours.



The structure should be properly baffled, to reduce the possibility of clogging. The outfall pipe should be large enough so that the peak design storm discharge is not limited by culvert control.

8. Check the routed design storm discharge.

   a. The design storm is the 25-year 3-day event.

   b. The one-day rainfall amount is given to be 8 inches.

c. The three-day rainfall amount

= (one-day amount) x 1.359

= 8 in. x 1.359

= 10.9 inches of rainfall.

d. Pages XC-15 through XC-22 show calculations of pumping rainfall runoff into the reservoir, plus the rainfall on the reservoir.

i. On page XC-22, the peak design storm discharge from the reservoir is (rounded) 77 cfs. This is deemed acceptable, since the allowed rate of 81 cfs is based on 3/4 in. *per day*.

ii. Also on page XC-22, the peak design storm elevation is listed as 28.6' NGVD (to the nearest tenth of a foot). District recommended criteria are that if the stored depth of water is greater than 4 feet above the surrounding ground, and berm failure would cause significant damage to the property of others besides the permittee, the impoundment should be designed as a major impoundment.

The lowest elevations of the surrounding areas are not substantially different from the 22' NGVD on the project, so the 28.6' NGVD stage represents a depth of water substantially in excess of 4 feet; there is a mobile home park just west of the farm. Consequently, this reservoir must be designed as a major impoundment.

(NOTE: A detailed influence line analysis is beyond the scope of this text. Applicants should seek expert advice from experienced consultants.

The article "Dam-Breach Flood Wave Models" by Ralph A Wurbs, in the January 1987 *Journal of Hydraulic Engineering*, Volume 113, Number 1, published by the American Society of Civil Engineers, contains a discussion and comparison of several leading dam-breach flood wave models. Anyone contemplating designing a major impoundment should contact District staff as early in the project development process as possible for guidance on applicable District criteria and methods of analysis.)

iii. Freeboard requirement will be dependent upon the maximum water depth which is, in turn, dependent upon the design of the overflow structure.

9. Overflow Structure

a. Criteria

i. For gravity filled impoundments, no separate overflow structure is required, because the inflow structure will allow reservoir and farm stages to be the same.

ii. The weir crest shall be set no lower than the peak elevation of the routed 25-year 3-day storm.

iii. The minimum freeboard requirement for a given reservoir and depth of water is three feet, or that required to prevent overtopping or failure due to hurricane force winds, as derived from the *South Florida Building Code*.

iv. The weir of the crest length shall be adequate to pass the peak of:

the sum of the volume of the appropriate storm (ref. Appendix 6 of *Basis of Review*) falling on the reservoir surface plus the inflow pump hydrograph for the same event, minus the routed discharge control structure outflow.

v. A simple culvert, or culverts, extending through the reservoir side, and with inverts at the design storm peak stage, are not acceptable, because of the danger of erosion of the reservoir berm.

vi. There are at least two acceptable overflow structure designs.

I. A non-adjustable shaft spillway.

II. A properly designed and built non-adjustable sharp- or broad-crested weir in the reservoir berm.

vii. Sodded earthen berms are not acceptable as overflow structures.

viii. Other proposed designs should be discussed with District staff as early in the design process as possible.

b. Design Calculations

i. Treat the system as two basins: Basin 1 (farm) routed into Basin 2 (reservoir).

ii. Basin 1 (farm) shall be considered to have the pumps running continuously.

(Other methods of calculating the pumped flow hydrograph into the reservoir - for the purposes of computing the

overflow weir length – may be submitted by the applicant for District staff consideration.)

Pages XC-24 and -25 show the hydrograph of continuous farm pumping into the reservoir.

iii. After some preliminary calculations try a 100-foot long broad - crested weir.

iv. The weir crest should be set no lower than the peak elevation of the 25-year 72-hour routed storm, in this case 28.6' NGVD, to the nearest tenth of a foot.

v. The stage-discharge calculations for the overflow weir are based on the equation $Q = CLH^{1.5}$

where:

Q = discharge, cfs

C = weir coefficient, 2.60

L = weir length, in this case: 100.0 ft

H = head on the weir, ft

vi. Pages XC-23 through XC-30 show the results of routing continuous pumped inflow plus the 36-inch 72-hour rainfall into the reservoir, out of the combination of the control and overflow structures. Peak discharge occurs at elevation 29.9' NGVD (to the nearest tenth of a foot).

Determining the length and crest elevation of the overflow weir is largely an economic and operational consideration. The length and elevation used in this example result in approximately the minimum additional water depth from the severe storm established in Appendix 6. It is conceivable that additional water depth may be desirable to the permittee. However, it should be noted that additional depth may sharply increase both design requirements imposed by the District and subsequent construction costs.

10. Freeboard Analysis

a. Criteria - Minimum freeboard is three feet above maximum water depth, or that amount required to prevent overtopping or failure due to hurricane force winds as derived from the *South Florida Building Code*, whichever is greater.

b. Minimum crest elevation is at least 32.9' NGVD based on the three foot minimum requirement, but may be higher based on overtopping requirement.

c. The rise in still water depth on the leeward side of the reservoir can be calculated using the Zuider Zee Formula:

$$S = \frac{V^2 \times F}{1400 \times D}$$

Where: V = Wind velocity, mph

F = Fetch, statute miles

D = Average depth along fetch, feet

Wind velocity per *South Florida Building Code* is 120 mph, approximate maximum fetch is about 0.7 mile and average depth is:

29.9' NGVD - ((22'+23') NGVD/2) = 7.4 ft

Therefore, average increased depth on the leeward side is:

$$S = \frac{(120 \text{ mph})^2 \times 0.7 \text{ mi}}{1400 \times 7.4 \text{ ft}}$$

$$= 0.97 \text{ ft}$$

Maximum still water depth (D_{max}) would be:

$$D_{max} = 7.4 \text{ ft} + 0.97 \text{ ft}$$

$$= 8.37 \text{ ft}$$

Which represents a surface water elevation of 30.87' NGVD.

Maximum wave height is given by the equation:

$$H = 0.034 \times V^{1.06} \times F^{0.47}$$

Where: V = Wind velocity, mph

F = Fetch, statute miles

Therefore:

$$H = 0.034 \times (120 \text{ mph})^{1.06} \times (0.7 \text{ mi})^{0.47}$$

$$= 4.6 \text{ ft}$$

Wave run-up on slope = about 1.5 x H

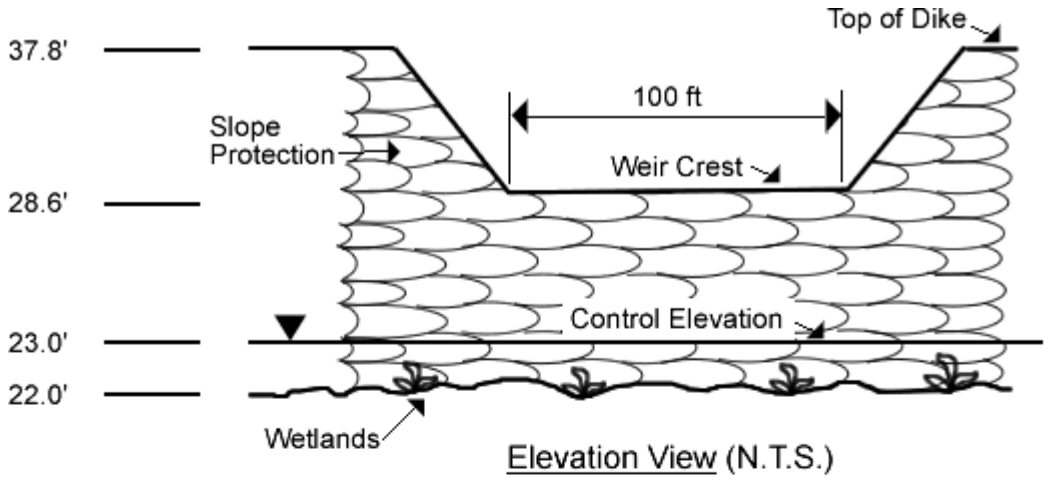
The elevation of the top of the embankment is equal to the maximum still water depth elevation, plus the wave run-up:

= 30.87' NGVD + (1.5 x 4.6 ft)

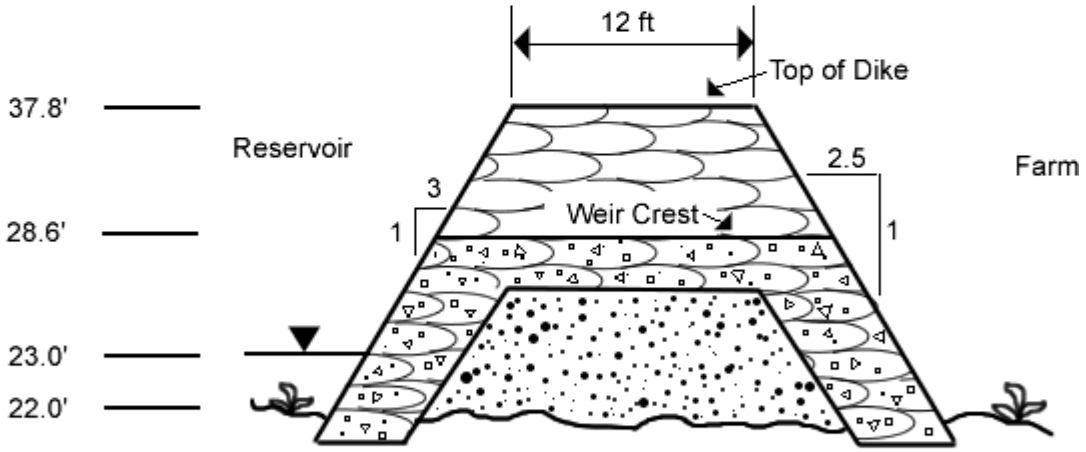
= 37.8' NGVD

Freeboard or wind and wave analysis can become very involved, and a thorough presentation is beyond the scope of this text. The following references are suggested (others may be acceptable): Brater and King, *Handbook of Hydraulics*, Sixth Edition; Saville, McClendon, and Cochran, "Freeboard Allowance for Waves in Inland Reservoirs," *Journal of the Waterways and Harbors Division*, May, 1962; U.S. Bureau of Reclamation, *Design of Small Dams*, 1977.

A sketch of the proposed overflow structure is on the next page. A complete design would include, among other things, proper attention to erosion control around the overflow weir, and energy dissipation devices downstream of it. Additional design requirements may include, but not be limited to, a site-specific geotechnical investigation; and slope stability, seepage and dambreak analyses. Paragraphs 1.4.1 and 2.1.1 - 2.1.5, in Appendix 6 to the *Basis of Review*, also provide a list of design and information requirements for major impoundments.



Elevation View (N.T.S.)



Section View (N.T.S.)

OVERFLOW STRUCTURE

Figure XC-2

(This page reserved.)

Project Name: Volume IV Examples
Reviewer: User
Project Number: Major Impoundment
Period Begin: Jan 01, 2000;0000 hr End: Jan 06, 2000;0000 hr Duration: 120 hr
Time Step: 0.2 hr, Iterations: 10

Basin 1: Farm

Method: Santa Barbara Unit Hydrograph
Rainfall Distribution: SFWMD - 3day
Design Frequency: 25 year
1 Day Rainfall: 8 inches
Area: 2260 acres
Ground Storage: 2.4 inches
Time of Concentration: 4 hours
Initial Stage: 20 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
20.00	0.00
21.00	37.50
22.00	90.00
23.00	516.67
24.00	1676.67
25.00	3570.00

Basin 2: Reservoir

Method: Santa Barbara Unit Hydrograph
Rainfall Distribution: SFWMD - 3day
Design Frequency: 25 year
1 Day Rainfall: 8 inches
Area: 300 acres
Ground Storage: 0.01 inches
Time of Concentration: 0.08 hours
Initial Stage: 23 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
23.00	0.00
24.00	300.00
25.00	600.00
26.00	900.00
27.00	1200.00
28.00	1500.00
29.00	1800.00
30.00	2100.00
31.00	2400.00
32.00	2700.00
33.00	3000.00
34.00	3300.00
35.00	3600.00
36.00	3900.00
37.00	4200.00

Offsite Receiving Body: Offsite1

Time (hr)	Stage (ft NGVD)
0.00	20.00
1000.00	20.00

Structure: 1

From Basin: Farm
To Basin: Reservoir
Structure Type: Pump
On Elev = 21.5 ft NGVD, Off Elev = 20 ft NGVD, Capacity = 170556 gpm

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	20.00	23.00
1.00	0.05	0.00	0.00	0.00	20.00	23.00
2.00	0.10	0.00	0.00	0.00	20.00	23.01
3.00	0.15	0.00	0.00	0.00	20.00	23.01
4.00	0.19	0.00	0.00	0.00	20.00	23.01
5.00	0.24	0.00	0.00	0.00	20.00	23.02
6.00	0.29	0.00	0.00	0.00	20.00	23.02
7.00	0.34	0.00	0.00	0.00	20.00	23.03
8.00	0.39	0.00	0.00	0.00	20.00	23.03
9.00	0.44	0.00	0.00	0.00	20.00	23.04
10.00	0.49	0.01	0.00	0.00	20.00	23.04
11.00	0.54	0.65	0.00	0.00	20.00	23.04
12.00	0.58	2.07	0.00	0.00	20.00	23.05
13.00	0.63	4.05	0.00	0.00	20.01	23.05
14.00	0.68	6.42	0.00	0.00	20.02	23.06
15.00	0.73	9.05	0.00	0.00	20.04	23.06
16.00	0.78	11.83	0.00	0.00	20.06	23.06
17.00	0.83	14.70	0.00	0.00	20.09	23.07
18.00	0.88	17.60	0.00	0.00	20.13	23.07
19.00	0.92	20.48	0.00	0.00	20.17	23.08
20.00	0.97	23.32	0.00	0.00	20.22	23.08
21.00	1.02	26.10	0.00	0.00	20.27	23.08
22.00	1.07	28.81	0.00	0.00	20.33	23.09
23.00	1.12	31.43	0.00	0.00	20.40	23.09
24.00	1.17	33.96	0.00	0.00	20.47	23.10
25.00	1.24	41.12	0.00	0.00	20.55	23.10
26.00	1.31	47.62	0.00	0.00	20.65	23.11
27.00	1.38	53.56	0.00	0.00	20.76	23.11
28.00	1.45	58.99	0.00	0.00	20.89	23.12
29.00	1.52	63.98	0.00	0.00	21.02	23.13
30.00	1.59	68.59	0.00	0.00	21.12	23.13
31.00	1.66	72.85	0.00	0.00	21.23	23.14
32.00	1.74	76.80	0.00	0.00	21.35	23.14
33.00	1.81	80.48	0.00	0.00	21.47	23.15
34.00	1.88	83.91	380.03	25.13	21.18	23.23
35.00	1.95	87.11	380.03	56.54	20.61	23.34
36.00	2.02	90.11	0.00	81.67	20.05	23.44
37.00	2.09	92.93	0.00	81.67	20.25	23.44
38.00	2.16	95.57	0.00	81.67	20.46	23.45
39.00	2.23	98.06	0.00	81.67	20.67	23.46
40.00	2.30	100.41	0.00	81.67	20.89	23.46
41.00	2.38	102.62	0.00	81.67	21.08	23.47
42.00	2.45	104.72	0.00	81.67	21.25	23.47
43.00	2.52	106.70	0.00	81.67	21.41	23.48
44.00	2.59	108.58	380.03	100.52	21.28	23.54
45.00	2.66	110.36	380.03	131.93	20.80	23.65
46.00	2.73	112.06	380.03	163.34	20.21	23.76
47.00	2.80	113.67	0.00	169.62	20.20	23.80
48.00	2.87	115.20	0.00	169.62	20.46	23.80
49.00	2.95	120.09	0.00	169.62	20.72	23.81
50.00	3.03	124.22	0.00	169.62	20.99	23.81
51.00	3.13	133.98	0.00	169.62	21.19	23.82
52.00	3.23	145.34	0.00	169.62	21.41	23.83
53.00	3.37	167.44	380.03	194.75	21.24	23.91
54.00	3.54	198.37	380.03	226.16	20.90	24.03
55.00	3.74	236.69	380.03	257.57	20.54	24.15
56.00	3.97	281.25	380.03	288.99	20.27	24.27
57.00	4.24	334.78	380.03	320.40	20.11	24.40
58.00	4.58	406.14	380.03	351.81	20.09	24.53
59.00	5.02	514.99	380.03	383.22	20.25	24.67

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
60.00	8.12	1897.37	380.03	414.63	21.35	24.98
61.00	9.01	1893.72	380.03	446.04	22.22	25.20
62.00	9.42	1669.73	380.03	477.45	22.49	25.34
63.00	9.67	1423.28	380.03	508.87	22.72	25.46
64.00	9.91	1224.32	380.03	540.28	22.90	25.58
65.00	10.06	1023.11	380.03	571.69	23.02	25.69
66.00	10.20	866.49	380.03	603.10	23.06	25.80
67.00	10.34	744.57	380.03	634.51	23.09	25.90
68.00	10.49	649.69	380.03	665.92	23.11	26.01
69.00	10.58	552.56	380.03	697.33	23.12	26.11
70.00	10.68	476.94	380.03	728.75	23.13	26.21
71.00	10.78	418.08	380.03	760.16	23.14	26.31
72.00	10.87	372.26	380.03	791.57	23.14	26.41
73.00	10.87	289.92	380.03	822.98	23.14	26.51
74.00	10.87	225.79	380.03	854.39	23.13	26.60
75.00	10.87	175.84	380.03	885.80	23.11	26.69
76.00	10.87	136.95	380.03	917.21	23.10	26.78
77.00	10.87	106.65	380.03	948.63	23.08	26.87
78.00	10.87	83.06	380.03	980.04	23.06	26.96
79.00	10.87	64.69	380.03	1011.45	23.04	27.04
80.00	10.87	50.38	380.03	1042.86	23.01	27.13
81.00	10.87	39.24	380.03	1074.27	22.97	27.22
82.00	10.87	30.56	380.03	1105.68	22.91	27.31
83.00	10.87	23.80	380.03	1137.10	22.84	27.40
84.00	10.87	18.53	380.03	1168.51	22.77	27.48
85.00	10.87	14.43	380.03	1199.92	22.70	27.57
86.00	10.87	11.24	380.03	1231.33	22.63	27.66
87.00	10.87	8.75	380.03	1262.74	22.56	27.74
88.00	10.87	6.82	380.03	1294.15	22.48	27.83
89.00	10.87	5.31	380.03	1325.57	22.41	27.92
90.00	10.87	4.14	380.03	1356.98	22.34	28.00
91.00	10.87	3.22	380.03	1388.39	22.27	28.09
92.00	10.87	2.51	380.03	1419.80	22.19	28.17
93.00	10.87	1.95	380.03	1451.21	22.12	28.26
94.00	10.87	1.52	380.03	1482.62	22.05	28.34
95.00	10.87	1.18	380.03	1514.04	21.78	28.43
96.00	10.87	0.92	380.03	1545.45	21.18	28.51
97.00	10.87	0.72	380.03	1576.86	20.42	28.59
98.00	10.87	0.56	0.00	1589.42	20.00	28.62
99.00	10.87	0.44	0.00	1589.42	20.01	28.60
100.00	10.87	0.34	0.00	1589.42	20.01	28.58
101.00	10.87	0.26	0.00	1589.42	20.01	28.56
102.00	10.87	0.21	0.00	1589.42	20.01	28.54
103.00	10.87	0.16	0.00	1589.42	20.01	28.52
104.00	10.87	0.12	0.00	1589.42	20.01	28.50
105.00	10.87	0.10	0.00	1589.42	20.01	28.48
106.00	10.87	0.08	0.00	1589.42	20.01	28.46
107.00	10.87	0.06	0.00	1589.42	20.01	28.44
108.00	10.87	0.05	0.00	1589.42	20.01	28.42
109.00	10.87	0.04	0.00	1589.42	20.01	28.40
110.00	10.87	0.03	0.00	1589.42	20.01	28.37
111.00	10.87	0.02	0.00	1589.42	20.01	28.35
112.00	10.87	0.02	0.00	1589.42	20.01	28.33
113.00	10.87	0.01	0.00	1589.42	20.01	28.31
114.00	10.87	0.01	0.00	1589.42	20.01	28.29
115.00	10.87	0.01	0.00	1589.42	20.01	28.27
116.00	10.87	0.01	0.00	1589.42	20.01	28.25
117.00	10.87	0.00	0.00	1589.42	20.01	28.23
118.00	10.87	0.00	0.00	1589.42	20.01	28.21
119.00	10.87	0.00	0.00	1589.42	20.01	28.19
120.00	10.87	0.00	0.00	1589.42	20.01	28.17

Structure: 2

From Basin: Reservoir

To Basin: Offsite1
Structure Type: Gravity
  Weir: None
  Bleeder: Inv-Tri, Invert Elev = 23 ft NGVD, Height = 3 ft
    Width = 5.6 ft
    Default Coefs: Weir Coef = 2.5, Orifice Coef = 0.6
  Pipe: None

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	23.00	20.00
1.00	0.05	14.13	0.00	0.00	23.00	20.00
2.00	0.10	14.57	0.00	0.00	23.01	20.00
3.00	0.15	14.65	0.00	0.00	23.01	20.00
4.00	0.19	14.68	0.00	0.00	23.01	20.00
5.00	0.24	14.69	0.00	0.00	23.02	20.00
6.00	0.29	14.70	0.00	0.00	23.02	20.00
7.00	0.34	14.70	0.00	0.00	23.03	20.00
8.00	0.39	14.71	0.00	0.00	23.03	20.00
9.00	0.44	14.71	0.00	0.00	23.04	20.00
10.00	0.49	14.71	0.00	0.00	23.04	20.00
11.00	0.54	14.71	0.00	0.00	23.04	20.00
12.00	0.58	14.71	0.00	0.00	23.05	20.00
13.00	0.63	14.71	0.00	0.00	23.05	20.00
14.00	0.68	14.71	0.00	0.00	23.06	20.00
15.00	0.73	14.71	0.00	0.00	23.06	20.00
16.00	0.78	14.71	0.00	0.00	23.06	20.00
17.00	0.83	14.71	0.00	0.00	23.07	20.00
18.00	0.88	14.71	0.00	0.00	23.07	20.00
19.00	0.92	14.72	0.00	0.00	23.08	20.00
20.00	0.97	14.72	0.00	0.00	23.08	20.00
21.00	1.02	14.72	0.00	0.00	23.08	20.00
22.00	1.07	14.72	0.01	0.00	23.09	20.00
23.00	1.12	14.72	0.01	0.00	23.09	20.00
24.00	1.17	14.72	0.01	0.00	23.10	20.00
25.00	1.24	21.47	0.01	0.00	23.10	20.00
26.00	1.31	21.47	0.01	0.01	23.11	20.00
27.00	1.38	21.47	0.01	0.01	23.11	20.00
28.00	1.45	21.47	0.01	0.01	23.12	20.00
29.00	1.52	21.47	0.01	0.01	23.13	20.00
30.00	1.59	21.47	0.01	0.01	23.13	20.00
31.00	1.66	21.47	0.02	0.01	23.14	20.00
32.00	1.74	21.47	0.02	0.01	23.14	20.00
33.00	1.81	21.47	0.02	0.01	23.15	20.00
34.00	1.88	21.47	0.06	0.02	23.23	20.00
35.00	1.95	21.47	0.16	0.03	23.34	20.00
36.00	2.02	21.47	0.30	0.05	23.44	20.00
37.00	2.09	21.47	0.31	0.07	23.44	20.00
38.00	2.16	21.47	0.32	0.10	23.45	20.00
39.00	2.23	21.47	0.33	0.12	23.46	20.00
40.00	2.30	21.47	0.34	0.15	23.46	20.00
41.00	2.38	21.47	0.35	0.18	23.47	20.00
42.00	2.45	21.47	0.36	0.21	23.47	20.00
43.00	2.52	21.47	0.37	0.24	23.48	20.00
44.00	2.59	21.47	0.49	0.27	23.54	20.00
45.00	2.66	21.47	0.79	0.33	23.65	20.00
46.00	2.73	21.47	1.17	0.41	23.76	20.00
47.00	2.80	21.47	1.32	0.52	23.80	20.00
48.00	2.87	21.47	1.34	0.63	23.80	20.00
49.00	2.95	24.19	1.37	0.74	23.81	20.00
50.00	3.03	24.19	1.39	0.86	23.81	20.00
51.00	3.13	29.03	1.42	0.97	23.82	20.00
52.00	3.23	33.85	1.46	1.09	23.83	20.00
53.00	3.37	43.53	1.86	1.23	23.91	20.00
54.00	3.54	53.21	2.52	1.41	24.03	20.00
55.00	3.74	62.88	3.31	1.66	24.15	20.00
56.00	3.97	72.56	4.27	1.98	24.27	20.00
57.00	4.24	87.06	5.40	2.39	24.40	20.00

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
58.00	4.58	106.41	6.75	2.90	24.53	20.00
59.00	5.02	154.69	8.38	3.54	24.67	20.00
60.00	8.12	1625.50	12.87	4.39	24.98	20.00
61.00	9.01	184.48	16.77	5.68	25.20	20.00
62.00	9.42	111.37	19.49	7.20	25.34	20.00
63.00	9.67	72.61	22.12	8.94	25.46	20.00
64.00	9.91	72.58	24.87	10.90	25.58	20.00
65.00	10.06	43.54	27.62	13.10	25.69	20.00
66.00	10.20	43.54	30.50	15.52	25.80	20.00
67.00	10.34	43.54	33.53	18.19	25.90	20.00
68.00	10.49	43.54	40.46	21.18	26.01	20.00
69.00	10.58	29.03	42.47	24.63	26.11	20.00
70.00	10.68	29.03	44.37	28.23	26.21	20.00
71.00	10.78	29.03	46.18	31.99	26.31	20.00
72.00	10.87	29.03	47.91	35.89	26.41	20.00
73.00	10.87	0.00	49.46	39.93	26.51	20.00
74.00	10.87	0.00	50.94	44.09	26.60	20.00
75.00	10.87	0.00	52.37	48.37	26.69	20.00
76.00	10.87	0.00	53.76	52.77	26.78	20.00
77.00	10.87	0.00	55.11	57.28	26.87	20.00
78.00	10.87	0.00	56.42	61.90	26.96	20.00
79.00	10.87	0.00	57.69	66.63	27.04	20.00
80.00	10.87	0.00	58.94	71.46	27.13	20.00
81.00	10.87	0.00	60.15	76.39	27.22	20.00
82.00	10.87	0.00	61.33	81.42	27.31	20.00
83.00	10.87	0.00	62.49	86.55	27.40	20.00
84.00	10.87	0.00	63.63	91.77	27.48	20.00
85.00	10.87	0.00	64.73	97.09	27.57	20.00
86.00	10.87	0.00	65.82	102.49	27.66	20.00
87.00	10.87	0.00	66.89	107.98	27.74	20.00
88.00	10.87	0.00	67.93	113.56	27.83	20.00
89.00	10.87	0.00	68.96	119.23	27.92	20.00
90.00	10.87	0.00	69.96	124.98	28.00	20.00
91.00	10.87	0.00	70.95	130.81	28.09	20.00
92.00	10.87	0.00	71.93	136.73	28.17	20.00
93.00	10.87	0.00	72.88	142.72	28.26	20.00
94.00	10.87	0.00	73.83	148.79	28.34	20.00
95.00	10.87	0.00	74.75	154.94	28.43	20.00
96.00	10.87	0.00	75.67	161.16	28.51	20.00
97.00	10.87	0.00	76.57	167.46	28.59	20.00
98.00	10.87	0.00	76.90	173.82	28.62	20.00
99.00	10.87	0.00	76.67	180.16	28.60	20.00
100.00	10.87	0.00	76.44	186.49	28.58	20.00
101.00	10.87	0.00	76.22	192.79	28.56	20.00
102.00	10.87	0.00	75.99	199.08	28.54	20.00
103.00	10.87	0.00	75.77	205.35	28.52	20.00
104.00	10.87	0.00	75.54	211.61	28.50	20.00
105.00	10.87	0.00	75.32	217.84	28.48	20.00
106.00	10.87	0.00	75.09	224.05	28.46	20.00
107.00	10.87	0.00	74.87	230.25	28.44	20.00
108.00	10.87	0.00	74.64	236.42	28.42	20.00
109.00	10.87	0.00	74.42	242.58	28.40	20.00
110.00	10.87	0.00	74.19	248.72	28.37	20.00
111.00	10.87	0.00	73.97	254.84	28.35	20.00
112.00	10.87	0.00	73.74	260.95	28.33	20.00
113.00	10.87	0.00	73.51	267.03	28.31	20.00
114.00	10.87	0.00	73.29	273.10	28.29	20.00
115.00	10.87	0.00	73.06	279.14	28.27	20.00
116.00	10.87	0.00	72.84	285.17	28.25	20.00
117.00	10.87	0.00	72.61	291.18	28.23	20.00
118.00	10.87	0.00	72.39	297.17	28.21	20.00
119.00	10.87	0.00	72.16	303.14	28.19	20.00
120.00	10.87	0.00	71.94	309.10	28.17	20.00

Structure: 3

From Basin: Reservoir
To Basin: Farm
Structure Type: Gravity
  Weir: Broad Crested, Crest Elev = 28.6 ft NGVD, Length = 100 ft, Weir Coef = 2.6
  Bleeder: None
  Pipe: None

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	23.00	20.00
1.00	0.05	14.13	0.00	0.00	23.00	20.00
2.00	0.10	14.57	0.00	0.00	23.01	20.00
3.00	0.15	14.65	0.00	0.00	23.01	20.00
4.00	0.19	14.68	0.00	0.00	23.01	20.00
5.00	0.24	14.69	0.00	0.00	23.02	20.00
6.00	0.29	14.70	0.00	0.00	23.02	20.00
7.00	0.34	14.70	0.00	0.00	23.03	20.00
8.00	0.39	14.71	0.00	0.00	23.03	20.00
9.00	0.44	14.71	0.00	0.00	23.04	20.00
10.00	0.49	14.71	0.00	0.00	23.04	20.00
11.00	0.54	14.71	0.00	0.00	23.04	20.00
12.00	0.58	14.71	0.00	0.00	23.05	20.00
13.00	0.63	14.71	0.00	0.00	23.05	20.01
14.00	0.68	14.71	0.00	0.00	23.06	20.02
15.00	0.73	14.71	0.00	0.00	23.06	20.04
16.00	0.78	14.71	0.00	0.00	23.06	20.06
17.00	0.83	14.71	0.00	0.00	23.07	20.09
18.00	0.88	14.71	0.00	0.00	23.07	20.13
19.00	0.92	14.72	0.00	0.00	23.08	20.17
20.00	0.97	14.72	0.00	0.00	23.08	20.22
21.00	1.02	14.72	0.00	0.00	23.08	20.27
22.00	1.07	14.72	0.00	0.00	23.09	20.33
23.00	1.12	14.72	0.00	0.00	23.09	20.40
24.00	1.17	14.72	0.00	0.00	23.10	20.47
25.00	1.24	21.47	0.00	0.00	23.10	20.55
26.00	1.31	21.47	0.00	0.00	23.11	20.65
27.00	1.38	21.47	0.00	0.00	23.11	20.76
28.00	1.45	21.47	0.00	0.00	23.12	20.89
29.00	1.52	21.47	0.00	0.00	23.13	21.02
30.00	1.59	21.47	0.00	0.00	23.13	21.12
31.00	1.66	21.47	0.00	0.00	23.14	21.23
32.00	1.74	21.47	0.00	0.00	23.14	21.35
33.00	1.81	21.47	0.00	0.00	23.15	21.47
34.00	1.88	21.47	0.00	0.00	23.23	21.18
35.00	1.95	21.47	0.00	0.00	23.34	20.61
36.00	2.02	21.47	0.00	0.00	23.44	20.05
37.00	2.09	21.47	0.00	0.00	23.44	20.25
38.00	2.16	21.47	0.00	0.00	23.45	20.46
39.00	2.23	21.47	0.00	0.00	23.46	20.67
40.00	2.30	21.47	0.00	0.00	23.46	20.89
41.00	2.38	21.47	0.00	0.00	23.47	21.08
42.00	2.45	21.47	0.00	0.00	23.47	21.25
43.00	2.52	21.47	0.00	0.00	23.48	21.41
44.00	2.59	21.47	0.00	0.00	23.54	21.28
45.00	2.66	21.47	0.00	0.00	23.65	20.80
46.00	2.73	21.47	0.00	0.00	23.76	20.21
47.00	2.80	21.47	0.00	0.00	23.80	20.20
48.00	2.87	21.47	0.00	0.00	23.80	20.46
49.00	2.95	24.19	0.00	0.00	23.81	20.72
50.00	3.03	24.19	0.00	0.00	23.81	20.99
51.00	3.13	29.03	0.00	0.00	23.82	21.19
52.00	3.23	33.85	0.00	0.00	23.83	21.41
53.00	3.37	43.53	0.00	0.00	23.91	21.24
54.00	3.54	53.21	0.00	0.00	24.03	20.90
55.00	3.74	62.88	0.00	0.00	24.15	20.54
56.00	3.97	72.56	0.00	0.00	24.27	20.27
57.00	4.24	87.06	0.00	0.00	24.40	20.11

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
58.00	4.58	106.41	0.00	0.00	24.53	20.09
59.00	5.02	154.69	0.00	0.00	24.67	20.25
60.00	8.12	1625.50	0.00	0.00	24.98	21.35
61.00	9.01	184.48	0.00	0.00	25.20	22.22
62.00	9.42	111.37	0.00	0.00	25.34	22.49
63.00	9.67	72.61	0.00	0.00	25.46	22.72
64.00	9.91	72.58	0.00	0.00	25.58	22.90
65.00	10.06	43.54	0.00	0.00	25.69	23.02
66.00	10.20	43.54	0.00	0.00	25.80	23.06
67.00	10.34	43.54	0.00	0.00	25.90	23.09
68.00	10.49	43.54	0.00	0.00	26.01	23.11
69.00	10.58	29.03	0.00	0.00	26.11	23.12
70.00	10.68	29.03	0.00	0.00	26.21	23.13
71.00	10.78	29.03	0.00	0.00	26.31	23.14
72.00	10.87	29.03	0.00	0.00	26.41	23.14
73.00	10.87	0.00	0.00	0.00	26.51	23.14
74.00	10.87	0.00	0.00	0.00	26.60	23.13
75.00	10.87	0.00	0.00	0.00	26.69	23.11
76.00	10.87	0.00	0.00	0.00	26.78	23.10
77.00	10.87	0.00	0.00	0.00	26.87	23.08
78.00	10.87	0.00	0.00	0.00	26.96	23.06
79.00	10.87	0.00	0.00	0.00	27.04	23.04
80.00	10.87	0.00	0.00	0.00	27.13	23.01
81.00	10.87	0.00	0.00	0.00	27.22	22.97
82.00	10.87	0.00	0.00	0.00	27.31	22.91
83.00	10.87	0.00	0.00	0.00	27.40	22.84
84.00	10.87	0.00	0.00	0.00	27.48	22.77
85.00	10.87	0.00	0.00	0.00	27.57	22.70
86.00	10.87	0.00	0.00	0.00	27.66	22.63
87.00	10.87	0.00	0.00	0.00	27.74	22.56
88.00	10.87	0.00	0.00	0.00	27.83	22.48
89.00	10.87	0.00	0.00	0.00	27.92	22.41
90.00	10.87	0.00	0.00	0.00	28.00	22.34
91.00	10.87	0.00	0.00	0.00	28.09	22.27
92.00	10.87	0.00	0.00	0.00	28.17	22.19
93.00	10.87	0.00	0.00	0.00	28.26	22.12
94.00	10.87	0.00	0.00	0.00	28.34	22.05
95.00	10.87	0.00	0.00	0.00	28.43	21.78
96.00	10.87	0.00	0.00	0.00	28.51	21.18
97.00	10.87	0.00	0.00	0.00	28.59	20.42
98.00	10.87	0.00	1.00	0.09	28.62	20.00
99.00	10.87	0.00	0.05	0.12	28.60	20.01
100.00	10.87	0.00	0.00	0.12	28.58	20.01
101.00	10.87	0.00	0.00	0.12	28.56	20.01
102.00	10.87	0.00	0.00	0.12	28.54	20.01
103.00	10.87	0.00	0.00	0.12	28.52	20.01
104.00	10.87	0.00	0.00	0.12	28.50	20.01
105.00	10.87	0.00	0.00	0.12	28.48	20.01
106.00	10.87	0.00	0.00	0.12	28.46	20.01
107.00	10.87	0.00	0.00	0.12	28.44	20.01
108.00	10.87	0.00	0.00	0.12	28.42	20.01
109.00	10.87	0.00	0.00	0.12	28.40	20.01
110.00	10.87	0.00	0.00	0.12	28.37	20.01
111.00	10.87	0.00	0.00	0.12	28.35	20.01
112.00	10.87	0.00	0.00	0.12	28.33	20.01
113.00	10.87	0.00	0.00	0.12	28.31	20.01
114.00	10.87	0.00	0.00	0.12	28.29	20.01
115.00	10.87	0.00	0.00	0.12	28.27	20.01
116.00	10.87	0.00	0.00	0.12	28.25	20.01
117.00	10.87	0.00	0.00	0.12	28.23	20.01
118.00	10.87	0.00	0.00	0.12	28.21	20.01
119.00	10.87	0.00	0.00	0.12	28.19	20.01
120.00	10.87	0.00	0.00	0.12	28.17	20.01

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	380.03	33.40	0.00	0.00
2	76.99	97.60	0.00	0.00
3	1.57	97.60	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Farm	23.14	71.80	20.00	0.00
Reservoir	28.63	97.60	23.00	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Farm	1589.46	0.12	1589.21	0.00	0.37	-0.01
Reservoir	271.41	1589.21	308.58	0.00	1552.04	0.01

Project Name: Volume IV Examples
Reviewer: User
Project Number: Major Impoundment
Period Begin: Jan 01, 2000;0000 hr End: Jan 06, 2000;0000 hr Duration: 120 hr
Time Step: 0.2 hr, Iterations: 10

Basin 1: Farm

Method: Santa Barbara Unit Hydrograph
Rainfall Distribution: SFWMD - 3day
Design Frequency: 100 year
1 Day Rainfall: 26.5 inches
Area: 2260 acres
Ground Storage: 2.4 inches
Time of Concentration: 4 hours
Initial Stage: 20 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
20.00	0.00
21.00	37.50
22.00	90.00
23.00	516.67
24.00	1676.67
25.00	3570.00

Basin 2: Reservoir

Method: Santa Barbara Unit Hydrograph
Rainfall Distribution: SFWMD - 3day
Design Frequency: 100 year
1 Day Rainfall: 26.5 inches
Area: 300 acres
Ground Storage: 0.01 inches
Time of Concentration: 0.08 hours
Initial Stage: 23 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
23.00	0.00
24.00	300.00
25.00	600.00
26.00	900.00
27.00	1200.00
28.00	1500.00
29.00	1800.00
30.00	2100.00
31.00	2400.00
32.00	2700.00
33.00	3000.00
34.00	3300.00
35.00	3600.00
36.00	3900.00
37.00	4200.00

Offsite Receiving Body: Offsite Receiving Water

Time (hr)	Stage (ft NGVD)
0.00	20.00
1000.00	20.00

Structure: 1

From Basin: Farm
To Basin: Reservoir
Structure Type: Pump
On Elev = 21.5 ft NGVD, Off Elev = 20 ft NGVD, Capacity = 380 cfs

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	20.00	23.00
1.00	0.16	0.00	0.00	0.00	20.00	23.01
2.00	0.32	0.00	0.00	0.00	20.00	23.02
3.00	0.48	0.00	0.00	0.00	20.00	23.04
4.00	0.64	5.53	0.00	0.00	20.00	23.05
5.00	0.81	18.79	0.00	0.00	20.03	23.06
6.00	0.97	36.55	0.00	0.00	20.09	23.08
7.00	1.13	56.66	0.00	0.00	20.19	23.09
8.00	1.29	77.63	0.00	0.00	20.34	23.10
9.00	1.45	98.53	0.00	0.00	20.54	23.12
10.00	1.61	118.75	0.00	0.00	20.77	23.13
11.00	1.77	137.91	0.00	0.00	21.04	23.15
12.00	1.93	155.83	0.00	0.00	21.27	23.16
13.00	2.10	172.41	380.03	6.28	21.47	23.18
14.00	2.26	187.66	380.03	37.69	21.16	23.30
15.00	2.42	201.60	380.03	69.11	20.81	23.42
16.00	2.58	214.30	380.03	100.52	20.43	23.54
17.00	2.74	225.85	380.03	131.93	20.08	23.65
18.00	2.90	236.34	0.00	138.21	20.34	23.70
19.00	3.06	245.84	0.00	138.21	20.87	23.71
20.00	3.22	254.47	0.00	138.21	21.30	23.73
21.00	3.39	262.29	380.03	157.06	21.41	23.79
22.00	3.55	269.39	380.03	188.47	21.23	23.91
23.00	3.71	275.85	380.03	219.88	21.06	24.03
24.00	3.87	281.72	380.03	251.29	20.86	24.14
25.00	4.10	318.37	380.03	282.70	20.69	24.27
26.00	4.34	348.39	380.03	314.11	20.58	24.39
27.00	4.57	373.07	380.03	345.53	20.54	24.51
28.00	4.81	393.47	380.03	376.94	20.55	24.63
29.00	5.04	410.40	380.03	408.35	20.60	24.76
30.00	5.28	424.54	380.03	439.76	20.68	24.88
31.00	5.52	436.41	380.03	471.17	20.79	25.00
32.00	5.75	446.44	380.03	502.58	20.93	25.12
33.00	5.99	454.96	380.03	533.99	21.06	25.24
34.00	6.22	462.24	380.03	565.41	21.18	25.36
35.00	6.46	468.51	380.03	596.82	21.32	25.48
36.00	6.69	473.94	380.03	628.23	21.46	25.59
37.00	6.93	478.67	380.03	659.64	21.61	25.71
38.00	7.16	482.81	380.03	691.05	21.77	25.83
39.00	7.40	486.47	380.03	722.46	21.94	25.94
40.00	7.63	489.71	380.03	753.88	22.01	26.06
41.00	7.87	492.61	380.03	785.29	22.03	26.17
42.00	8.10	495.21	380.03	816.70	22.06	26.28
43.00	8.34	497.55	380.03	848.11	22.08	26.39
44.00	8.57	499.67	380.03	879.52	22.10	26.50
45.00	8.81	501.60	380.03	910.93	22.13	26.61
46.00	9.04	503.36	380.03	942.34	22.15	26.72
47.00	9.28	504.98	380.03	973.76	22.17	26.83
48.00	9.51	506.46	380.03	1005.17	22.20	26.94
49.00	9.78	522.23	380.03	1036.58	22.22	27.05
50.00	10.04	534.76	380.03	1067.99	22.25	27.16
51.00	10.36	570.44	380.03	1099.40	22.29	27.28
52.00	10.71	612.19	380.03	1130.81	22.33	27.39
53.00	11.16	696.65	380.03	1162.23	22.38	27.52
54.00	11.71	814.71	380.03	1193.64	22.45	27.65
55.00	12.38	959.27	380.03	1225.05	22.55	27.79
56.00	13.14	1124.78	380.03	1256.46	22.68	27.94
57.00	14.04	1320.72	380.03	1287.87	22.84	28.10
58.00	15.16	1579.18	380.03	1319.28	23.02	28.27
59.00	16.64	1970.42	380.03	1350.70	23.12	28.48

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
60.00	26.90	6874.77	380.03	1382.11	23.34	29.25
61.00	29.84	6799.21	380.03	1413.52	23.82	29.66
62.00	31.19	5968.57	380.03	1444.93	24.17	29.78
63.00	32.04	5071.87	380.03	1476.34	24.41	29.84
64.00	32.83	4348.63	380.03	1507.75	24.61	29.88
65.00	33.31	3625.96	380.03	1539.17	24.79	29.90
66.00	33.79	3063.17	380.03	1570.58	24.93	29.91
67.00	34.26	2624.89	380.03	1601.99	25.06	29.93
68.00	34.74	2283.59	380.03	1633.40	25.16	29.93
69.00	35.06	1938.03	380.03	1664.81	25.26	29.93
70.00	35.38	1668.92	380.03	1696.22	25.34	29.93
71.00	35.70	1459.34	380.03	1727.64	25.40	29.93
72.00	36.01	1296.13	380.03	1759.05	25.46	29.92
73.00	36.01	1009.43	380.03	1790.46	25.52	29.90
74.00	36.01	786.14	380.03	1821.87	25.55	29.87
75.00	36.01	612.25	380.03	1853.28	25.58	29.85
76.00	36.01	476.82	380.03	1884.70	25.61	29.83
77.00	36.01	371.35	380.03	1916.11	25.62	29.82
78.00	36.01	289.21	380.03	1947.52	25.64	29.80
79.00	36.01	225.23	380.03	1978.93	25.65	29.79
80.00	36.01	175.41	380.03	2010.34	25.65	29.78
81.00	36.01	136.61	380.03	2041.75	25.66	29.77
82.00	36.01	106.39	380.03	2073.17	25.66	29.76
83.00	36.01	82.86	380.03	2104.58	25.66	29.75
84.00	36.01	64.53	380.03	2135.99	25.66	29.74
85.00	36.01	50.26	380.03	2167.40	25.66	29.74
86.00	36.01	39.14	380.03	2198.81	25.66	29.73
87.00	36.01	30.48	380.03	2230.22	25.66	29.72
88.00	36.01	23.74	380.03	2261.63	25.66	29.72
89.00	36.01	18.49	380.03	2293.04	25.66	29.72
90.00	36.01	14.40	380.03	2324.45	25.65	29.71
91.00	36.01	11.21	380.03	2355.87	25.65	29.71
92.00	36.01	8.73	380.03	2387.28	25.65	29.71
93.00	36.01	6.80	380.03	2418.69	25.64	29.70
94.00	36.01	5.30	380.03	2450.10	25.64	29.70
95.00	36.01	4.13	380.03	2481.51	25.64	29.70
96.00	36.01	3.21	380.03	2512.92	25.63	29.70
97.00	36.01	2.50	380.03	2544.33	25.63	29.70
98.00	36.01	1.95	380.03	2575.74	25.63	29.69
99.00	36.01	1.52	380.03	2607.15	25.62	29.69
100.00	36.01	1.18	380.03	2638.57	25.62	29.69
101.00	36.01	0.92	380.03	2669.98	25.62	29.69
102.00	36.01	0.72	380.03	2701.39	25.61	29.69
103.00	36.01	0.56	380.03	2732.80	25.61	29.69
104.00	36.01	0.43	380.03	2764.21	25.61	29.69
105.00	36.01	0.34	380.03	2795.62	25.60	29.69
106.00	36.01	0.26	380.03	2827.03	25.60	29.69
107.00	36.01	0.21	380.03	2858.44	25.59	29.69
108.00	36.01	0.16	380.03	2889.85	25.59	29.69
109.00	36.01	0.12	380.03	2921.27	25.59	29.69
110.00	36.01	0.10	380.03	2952.68	25.58	29.68
111.00	36.01	0.08	380.03	2984.09	25.58	29.68
112.00	36.01	0.06	380.03	3015.50	25.58	29.68
113.00	36.01	0.05	380.03	3046.91	25.57	29.68
114.00	36.01	0.04	380.03	3078.32	25.57	29.68
115.00	36.01	0.03	380.03	3109.73	25.56	29.68
116.00	36.01	0.02	380.03	3141.14	25.56	29.68
117.00	36.01	0.02	380.03	3172.55	25.56	29.68
118.00	36.01	0.01	380.03	3203.97	25.55	29.68
119.00	36.01	0.01	380.03	3235.38	25.55	29.68
120.00	36.01	0.01	380.03	3266.79	25.55	29.68

Structure: 2

From Basin: Reservoir

To Basin: Offsite Receiving Water
Structure Type: Gravity
  Weir: None
  Bleeder: Inv-Tri, Invert Elev = 23 ft NGVD, Height = 3 ft
    Width = 5.6 ft
    Default Coefs: Weir Coef = 2.5, Orifice Coef = 0.6
  Pipe: None

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	23.00	20.00
1.00	0.16	48.53	0.00	0.00	23.01	20.00
2.00	0.32	48.70	0.00	0.00	23.02	20.00
3.00	0.48	48.73	0.00	0.00	23.04	20.00
4.00	0.64	48.74	0.00	0.00	23.05	20.00
5.00	0.81	48.74	0.00	0.00	23.06	20.00
6.00	0.97	48.74	0.00	0.00	23.08	20.00
7.00	1.13	48.75	0.01	0.00	23.09	20.00
8.00	1.29	48.75	0.01	0.00	23.10	20.00
9.00	1.45	48.75	0.01	0.00	23.12	20.00
10.00	1.61	48.75	0.01	0.00	23.13	20.00
11.00	1.77	48.75	0.02	0.00	23.15	20.00
12.00	1.93	48.75	0.02	0.01	23.16	20.00
13.00	2.10	48.75	0.03	0.01	23.18	20.00
14.00	2.26	48.75	0.12	0.02	23.30	20.00
15.00	2.42	48.75	0.26	0.03	23.42	20.00
16.00	2.58	48.75	0.49	0.06	23.54	20.00
17.00	2.74	48.75	0.81	0.12	23.65	20.00
18.00	2.90	48.75	0.95	0.20	23.70	20.00
19.00	3.06	48.75	1.00	0.28	23.71	20.00
20.00	3.22	48.75	1.05	0.36	23.73	20.00
21.00	3.39	48.75	1.30	0.46	23.79	20.00
22.00	3.55	48.75	1.84	0.59	23.91	20.00
23.00	3.71	48.75	2.49	0.77	24.03	20.00
24.00	3.87	48.75	3.26	1.02	24.14	20.00
25.00	4.10	71.12	4.21	1.33	24.27	20.00
26.00	4.34	71.12	5.31	1.73	24.39	20.00
27.00	4.57	71.12	6.56	2.23	24.51	20.00
28.00	4.81	71.12	7.96	2.84	24.63	20.00
29.00	5.04	71.12	9.53	3.58	24.76	20.00
30.00	5.28	71.12	11.27	4.45	24.88	20.00
31.00	5.52	71.12	13.17	5.48	25.00	20.00
32.00	5.75	71.12	15.24	6.67	25.12	20.00
33.00	5.99	71.12	17.49	8.04	25.24	20.00
34.00	6.22	71.12	19.91	9.60	25.36	20.00
35.00	6.46	71.12	22.51	11.37	25.48	20.00
36.00	6.69	71.12	25.28	13.37	25.59	20.00
37.00	6.93	71.12	28.22	15.61	25.71	20.00
38.00	7.16	71.12	31.34	18.09	25.83	20.00
39.00	7.40	71.12	34.63	20.84	25.94	20.00
40.00	7.63	71.12	41.36	24.05	26.06	20.00
41.00	7.87	71.12	43.53	27.58	26.17	20.00
42.00	8.10	71.12	45.58	31.28	26.28	20.00
43.00	8.34	71.12	47.54	35.14	26.39	20.00
44.00	8.57	71.12	49.41	39.17	26.50	20.00
45.00	8.81	71.12	51.21	43.34	26.61	20.00
46.00	9.04	71.12	52.93	47.66	26.72	20.00
47.00	9.28	71.12	54.60	52.12	26.83	20.00
48.00	9.51	71.12	56.21	56.71	26.94	20.00
49.00	9.78	80.14	57.80	61.44	27.05	20.00
50.00	10.04	80.14	59.34	66.29	27.16	20.00
51.00	10.36	96.16	60.90	71.27	27.28	20.00
52.00	10.71	112.13	62.43	76.38	27.39	20.00
53.00	11.16	144.19	64.03	81.62	27.52	20.00
54.00	11.71	176.24	65.70	87.00	27.65	20.00
55.00	12.38	208.30	67.43	92.51	27.79	20.00
56.00	13.14	240.35	69.21	98.17	27.94	20.00
57.00	14.04	288.37	71.06	103.99	28.10	20.00

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
58.00	15.16	352.49	73.05	109.96	28.27	20.00
59.00	16.64	512.41	75.29	116.10	28.48	20.00
60.00	26.90	5384.46	83.26	122.61	29.25	20.00
61.00	29.84	611.10	87.25	129.75	29.66	20.00
62.00	31.19	368.92	88.33	137.02	29.78	20.00
63.00	32.04	240.53	88.88	144.35	29.84	20.00
64.00	32.83	240.41	89.29	151.71	29.88	20.00
65.00	33.31	144.24	89.45	159.10	29.90	20.00
66.00	33.79	144.24	89.57	166.50	29.91	20.00
67.00	34.26	144.24	89.67	173.91	29.93	20.00
68.00	34.74	144.24	89.76	181.33	29.93	20.00
69.00	35.06	96.16	89.74	188.75	29.93	20.00
70.00	35.38	96.16	89.70	196.16	29.93	20.00
71.00	35.70	96.16	89.68	203.58	29.93	20.00
72.00	36.01	96.16	89.65	210.99	29.92	20.00
73.00	36.01	0.00	89.43	218.39	29.90	20.00
74.00	36.01	0.00	89.20	225.77	29.87	20.00
75.00	36.01	0.00	89.01	233.13	29.85	20.00
76.00	36.01	0.00	88.83	240.48	29.83	20.00
77.00	36.01	0.00	88.68	247.81	29.82	20.00
78.00	36.01	0.00	88.54	255.13	29.80	20.00
79.00	36.01	0.00	88.41	262.45	29.79	20.00
80.00	36.01	0.00	88.31	269.75	29.78	20.00
81.00	36.01	0.00	88.21	277.04	29.77	20.00
82.00	36.01	0.00	88.12	284.33	29.76	20.00
83.00	36.01	0.00	88.05	291.61	29.75	20.00
84.00	36.01	0.00	87.98	298.88	29.74	20.00
85.00	36.01	0.00	87.92	306.15	29.74	20.00
86.00	36.01	0.00	87.86	313.42	29.73	20.00
87.00	36.01	0.00	87.82	320.68	29.72	20.00
88.00	36.01	0.00	87.77	327.93	29.72	20.00
89.00	36.01	0.00	87.73	335.19	29.72	20.00
90.00	36.01	0.00	87.70	342.44	29.71	20.00
91.00	36.01	0.00	87.67	349.68	29.71	20.00
92.00	36.01	0.00	87.64	356.93	29.71	20.00
93.00	36.01	0.00	87.62	364.17	29.70	20.00
94.00	36.01	0.00	87.60	371.41	29.70	20.00
95.00	36.01	0.00	87.58	378.65	29.70	20.00
96.00	36.01	0.00	87.56	385.89	29.70	20.00
97.00	36.01	0.00	87.55	393.13	29.70	20.00
98.00	36.01	0.00	87.53	400.36	29.69	20.00
99.00	36.01	0.00	87.52	407.60	29.69	20.00
100.00	36.01	0.00	87.51	414.83	29.69	20.00
101.00	36.01	0.00	87.50	422.06	29.69	20.00
102.00	36.01	0.00	87.49	429.30	29.69	20.00
103.00	36.01	0.00	87.49	436.53	29.69	20.00
104.00	36.01	0.00	87.48	443.76	29.69	20.00
105.00	36.01	0.00	87.47	450.99	29.69	20.00
106.00	36.01	0.00	87.47	458.22	29.69	20.00
107.00	36.01	0.00	87.46	465.45	29.69	20.00
108.00	36.01	0.00	87.46	472.68	29.69	20.00
109.00	36.01	0.00	87.45	479.91	29.69	20.00
110.00	36.01	0.00	87.45	487.13	29.68	20.00
111.00	36.01	0.00	87.45	494.36	29.68	20.00
112.00	36.01	0.00	87.44	501.59	29.68	20.00
113.00	36.01	0.00	87.44	508.82	29.68	20.00
114.00	36.01	0.00	87.44	516.05	29.68	20.00
115.00	36.01	0.00	87.44	523.27	29.68	20.00
116.00	36.01	0.00	87.44	530.50	29.68	20.00
117.00	36.01	0.00	87.43	537.73	29.68	20.00
118.00	36.01	0.00	87.43	544.95	29.68	20.00
119.00	36.01	0.00	87.43	552.18	29.68	20.00
120.00	36.01	0.00	87.43	559.41	29.68	20.00

Structure: 3

From Basin: Reservoir
To Basin: Farm
Structure Type: Gravity
  Weir: Broad Crested, Crest Elev = 28.6 ft NGVD, Length = 100 ft, Weir Coef = 2.6
  Bleeder: None
  Pipe: None

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	23.00	20.00
1.00	0.16	48.53	0.00	0.00	23.01	20.00
2.00	0.32	48.70	0.00	0.00	23.02	20.00
3.00	0.48	48.73	0.00	0.00	23.04	20.00
4.00	0.64	48.74	0.00	0.00	23.05	20.00
5.00	0.81	48.74	0.00	0.00	23.06	20.03
6.00	0.97	48.74	0.00	0.00	23.08	20.09
7.00	1.13	48.75	0.00	0.00	23.09	20.19
8.00	1.29	48.75	0.00	0.00	23.10	20.34
9.00	1.45	48.75	0.00	0.00	23.12	20.54
10.00	1.61	48.75	0.00	0.00	23.13	20.77
11.00	1.77	48.75	0.00	0.00	23.15	21.04
12.00	1.93	48.75	0.00	0.00	23.16	21.27
13.00	2.10	48.75	0.00	0.00	23.18	21.47
14.00	2.26	48.75	0.00	0.00	23.30	21.16
15.00	2.42	48.75	0.00	0.00	23.42	20.81
16.00	2.58	48.75	0.00	0.00	23.54	20.43
17.00	2.74	48.75	0.00	0.00	23.65	20.08
18.00	2.90	48.75	0.00	0.00	23.70	20.34
19.00	3.06	48.75	0.00	0.00	23.71	20.87
20.00	3.22	48.75	0.00	0.00	23.73	21.30
21.00	3.39	48.75	0.00	0.00	23.79	21.41
22.00	3.55	48.75	0.00	0.00	23.91	21.23
23.00	3.71	48.75	0.00	0.00	24.03	21.06
24.00	3.87	48.75	0.00	0.00	24.14	20.86
25.00	4.10	71.12	0.00	0.00	24.27	20.69
26.00	4.34	71.12	0.00	0.00	24.39	20.58
27.00	4.57	71.12	0.00	0.00	24.51	20.54
28.00	4.81	71.12	0.00	0.00	24.63	20.55
29.00	5.04	71.12	0.00	0.00	24.76	20.60
30.00	5.28	71.12	0.00	0.00	24.88	20.68
31.00	5.52	71.12	0.00	0.00	25.00	20.79
32.00	5.75	71.12	0.00	0.00	25.12	20.93
33.00	5.99	71.12	0.00	0.00	25.24	21.06
34.00	6.22	71.12	0.00	0.00	25.36	21.18
35.00	6.46	71.12	0.00	0.00	25.48	21.32
36.00	6.69	71.12	0.00	0.00	25.59	21.46
37.00	6.93	71.12	0.00	0.00	25.71	21.61
38.00	7.16	71.12	0.00	0.00	25.83	21.77
39.00	7.40	71.12	0.00	0.00	25.94	21.94
40.00	7.63	71.12	0.00	0.00	26.06	22.01
41.00	7.87	71.12	0.00	0.00	26.17	22.03
42.00	8.10	71.12	0.00	0.00	26.28	22.06
43.00	8.34	71.12	0.00	0.00	26.39	22.08
44.00	8.57	71.12	0.00	0.00	26.50	22.10
45.00	8.81	71.12	0.00	0.00	26.61	22.13
46.00	9.04	71.12	0.00	0.00	26.72	22.15
47.00	9.28	71.12	0.00	0.00	26.83	22.17
48.00	9.51	71.12	0.00	0.00	26.94	22.20
49.00	9.78	80.14	0.00	0.00	27.05	22.22
50.00	10.04	80.14	0.00	0.00	27.16	22.25
51.00	10.36	96.16	0.00	0.00	27.28	22.29
52.00	10.71	112.13	0.00	0.00	27.39	22.33
53.00	11.16	144.19	0.00	0.00	27.52	22.38
54.00	11.71	176.24	0.00	0.00	27.65	22.45
55.00	12.38	208.30	0.00	0.00	27.79	22.55
56.00	13.14	240.35	0.00	0.00	27.94	22.68
57.00	14.04	288.37	0.00	0.00	28.10	22.84

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
58.00	15.16	352.49	0.00	0.00	28.27	23.02
59.00	16.64	512.41	0.00	0.00	28.48	23.12
60.00	26.90	5384.46	135.41	3.26	29.25	23.34
61.00	29.84	611.10	285.36	23.81	29.66	23.82
62.00	31.19	368.92	332.95	49.92	29.78	24.17
63.00	32.04	240.53	358.48	78.80	29.84	24.41
64.00	32.83	240.41	378.14	109.42	29.88	24.61
65.00	33.31	144.24	385.90	141.11	29.90	24.79
66.00	33.79	144.24	391.55	173.29	29.91	24.93
67.00	34.26	144.24	396.56	205.91	29.93	25.06
68.00	34.74	144.24	400.99	238.91	29.93	25.16
69.00	35.06	96.16	399.92	272.02	29.93	25.26
70.00	35.38	96.16	398.35	305.00	29.93	25.34
71.00	35.70	96.16	396.97	337.86	29.93	25.40
72.00	36.01	96.16	395.76	370.61	29.92	25.46
73.00	36.01	0.00	384.82	402.81	29.90	25.52
74.00	36.01	0.00	374.03	434.07	29.87	25.55
75.00	36.01	0.00	364.57	464.51	29.85	25.58
76.00	36.01	0.00	356.28	494.23	29.83	25.61
77.00	36.01	0.00	348.99	523.31	29.82	25.62
78.00	36.01	0.00	342.58	551.83	29.80	25.64
79.00	36.01	0.00	336.92	579.86	29.79	25.65
80.00	36.01	0.00	331.93	607.46	29.78	25.65
81.00	36.01	0.00	327.52	634.67	29.77	25.66
82.00	36.01	0.00	323.62	661.55	29.76	25.66
83.00	36.01	0.00	320.17	688.12	29.75	25.66
84.00	36.01	0.00	317.11	714.43	29.74	25.66
85.00	36.01	0.00	314.40	740.51	29.74	25.66
86.00	36.01	0.00	312.00	766.37	29.73	25.66
87.00	36.01	0.00	309.86	792.05	29.72	25.66
88.00	36.01	0.00	307.97	817.57	29.72	25.66
89.00	36.01	0.00	306.28	842.94	29.72	25.66
90.00	36.01	0.00	304.78	868.18	29.71	25.65
91.00	36.01	0.00	303.45	893.31	29.71	25.65
92.00	36.01	0.00	302.27	918.33	29.71	25.65
93.00	36.01	0.00	301.21	943.26	29.70	25.64
94.00	36.01	0.00	300.27	968.11	29.70	25.64
95.00	36.01	0.00	299.44	992.89	29.70	25.64
96.00	36.01	0.00	298.70	1017.60	29.70	25.63
97.00	36.01	0.00	298.03	1042.26	29.70	25.63
98.00	36.01	0.00	297.44	1066.86	29.69	25.63
99.00	36.01	0.00	296.92	1091.42	29.69	25.62
100.00	36.01	0.00	296.45	1115.94	29.69	25.62
101.00	36.01	0.00	296.03	1140.42	29.69	25.62
102.00	36.01	0.00	295.66	1164.87	29.69	25.61
103.00	36.01	0.00	295.33	1189.29	29.69	25.61
104.00	36.01	0.00	295.03	1213.69	29.69	25.61
105.00	36.01	0.00	294.77	1238.06	29.69	25.60
106.00	36.01	0.00	294.54	1262.41	29.69	25.60
107.00	36.01	0.00	294.33	1286.75	29.69	25.59
108.00	36.01	0.00	294.14	1311.07	29.69	25.59
109.00	36.01	0.00	293.98	1335.37	29.69	25.59
110.00	36.01	0.00	293.83	1359.66	29.68	25.58
111.00	36.01	0.00	293.69	1383.94	29.68	25.58
112.00	36.01	0.00	293.58	1408.21	29.68	25.58
113.00	36.01	0.00	293.47	1432.47	29.68	25.57
114.00	36.01	0.00	293.38	1456.73	29.68	25.57
115.00	36.01	0.00	293.29	1480.97	29.68	25.56
116.00	36.01	0.00	293.22	1505.21	29.68	25.56
117.00	36.01	0.00	293.15	1529.44	29.68	25.56
118.00	36.01	0.00	293.09	1553.67	29.68	25.55
119.00	36.01	0.00	293.04	1577.89	29.68	25.55
120.00	36.01	0.00	292.99	1602.11	29.68	25.55

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	380.03	13.00	0.00	0.00
2	89.76	68.20	0.00	0.00
3	401.27	68.20	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Farm	25.66	84.00	20.00	0.00
Reservoir	29.94	68.20	23.00	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Farm	6266.73	1599.47	3263.23	0.00	4603.00	-0.03
Reservoir	899.75	3263.23	2158.08	0.00	2004.87	0.02

Design Example
for Exfiltration Trench

DESIGN EXAMPLE

FOR

EXFILTRATION TRENCH

I. Given

A. Proposed acreages

1.	Lake	=	1 ac
2.	Roofs	=	5 ac
3.	Other paving	=	8 ac
4.	Green areas	=	2 ac
5.	Total	=	16 ac

B. Other

1. An existing canal, along one border of the property, will be the receiving body.

2. The receiving body regulated stage is elevation 8.0' NGVD.

3. The existing average site grade is about elevation 17' NGVD.

4. The site soil drains well. Three percolation tests yield an average hydraulic conductivity of

1.2×10^{-4} cfs/(sq ft - ft of head).

5. Average wet season water table elevation is 8.25' NGVD.

6. Current zoning is "Commerical".

II. Design Criteria

A. Quality

1. If a wet detention system, then whichever is the greater of

   a. The first inch of runoff from the entire site.

   b. The amount of 2.5 in. times the percentage of impervious.

2. If a dry detention system, then 75% of the volume required for wet detention.

3. If a retention system, then 50% of the volume required.

4. Because the site zoning is "Commercial", at least 0.5 in. of retention or dry detention pretreatment shall be provided.

5. Any detention system shall be designed to discharge not more than 0.5 in. of the detained volume per day. A V-shaped configuration is desirable.

B. Quantity

1. The allowable discharge for the basin in which this project is located is 50 csm for a 25-year 3-day storm.

2. First floors are desired to be no lower than elevation 18.5' NGVD.

3. Parking areas.

a. Are proposed to range in elevation from 16.0' to 17.5' NGVD.

b. Shall be at least 2 ft above the control elevation.

III. Computations

A. Quality

1. Compute the first inch of runoff from the entire developed site.

= 1 in. x 16 ac x 1 ft/12 in.

= 1.3 ac-ft for the first inch of runoff.

2. Compute 2.5 in. times the percentage of imperviousness.

a. Site area, for water quality pervious/impervious calculation only

= Total project - (lake + roof)

= 16 ac - (1 ac + 5 ac)

= 10 ac site area, for water quality pervious/impervious.

b. Impervious area, for water quality pervious/impervious calculations only

= (Site area for water quality pervious/impervious) - pervious

= 10 ac - 2 ac

= 8 ac impervious area, for water quality pervious/impervious.

c. Percentage of imperviousness for water quality.

= Impervious area for water quality x 100%
Site area for water quality

= (8 ac/10 ac) x 100%

= 80% impervious

d. For 2.5 in. times the percentage impervious

= 2.5 in. x 0.80

= 2.00 in. to be treated

e. Compute volume required for quality detention

= inches to be treated x (total site - lake)

= 2.00 in. x (16 ac - 1 ac) x 1 ft/12 in.

= 2.00 in. x 15 ac x 1 ft/12 in.

= 2.5 ac-ft required detention storage

3. Since the 2.5 ac-ft are greater than the 1.3 ac-ft computed for the first inch of runoff, the volume of 2.5 ac-ft controls. (The system proposed is wet detention, so no volume reductions are possible.)

4. Because this is a project on commercial zoned land, 0.5 in. of dry retention/detention must be provided.

= 0.5 in. x (total site - lake)

= 0.5 in. x (16 ac - 1 ac) x 1 ft/12 in.

= 0.6 ac-ft required for pretreatment

5. Compute credit for placing some system inlets in grassed swales.

a. Given:

i. Each inlet in a grassed swale drains about 0.75 acre.

ii. A typical grassed swale will consist of an area about 15 ft long and 5 ft wide. The inlet will be considered a negligible part of the area.

iii. No other pervious areas drain into the grassed swale.

b. Compute ratio of impervious to pervious area.

i. Pervious area

= 15 ft x 5 ft

= 75 sq ft pervious area.

ii. Impervious area

= 0.75 ac x 43,560 sq ft/ac

= 32,670 sq ft impervious area.

iii. Compute Impervious : Pervious ratio

= 32,670 sq ft : 75 sq ft

= 436:1

A ratio of 436:1results in negligible credit.

6. It is proposed that the dry pretreatment be accomplished totally by exfiltration trench, and to utilize the lake for aesthetics and wet detention. Since the system should be designed to maintain the water table, and the average site grade is at elevation 17' NGVD, the control elevation shall be 11.0' NGVD. (Note: average wet season water table elevation is 8.25' NGVD.)

7. Compute volume to be treated in the lake

= Total Quality Volume - Dry Pretreatment Volume

= 2.5 ac-ft - 0.6 ac-ft

= 1.9 ac-ft to be detained in the lake.

B. Trench

1. Design Criteria

a. A minimum of 2 ft of paving and backfill will be required above the trench.

b. Minimum parking area elevation is 16.0' NGVD.

c. Trench width shall be 3 ft.

d. Since control elevation is 11.0' NGVD and average wet season water table is 8.25' NGVD, assume the water table in the vicinity of the trench, once the project is built, to be at elevation 10.5' NGVD.

e. For trench to be considered dry, the average wet season water table must be no higher than the invert of the trench pipe. For this system, the trench bed will extend down to elevation 11' NGVD. The pipe invert will be at elevation 12' NGVD.

f. A weir must be installed at the downstream end of the trench system, both to create true retention and to establish the value of H_2. The weir crest must be no lower than the top of the trench pipe.

The weir crest elevation will be 16.0' NGVD.

2. Compute trench length

a. $L = V/(K(H_2W + 2H_2Du - Du^2 + 2H_2D_s) + (1.39 \times 10^{-4})WDu)$

L = Length of trench required (feet)

V = Volume to be exfiltrated (ac-in.)

W = Trench width (feet)

K = Hydraulic conductivity (cfs/sq ft - ft head)

H_2 = Depth to water table (feet)

Du = Non-saturated trench depth (feet)

D_s = Saturated trench depth (feet)

b. In this project, L is to be determined

V = 0.6 ac-ft = 7.2 ac-in.

W = 3 ft

K = 1.2×10^{-4} cfs/(sq ft - ft of head)

*H_2 = 5 ft

**Du = 3 ft

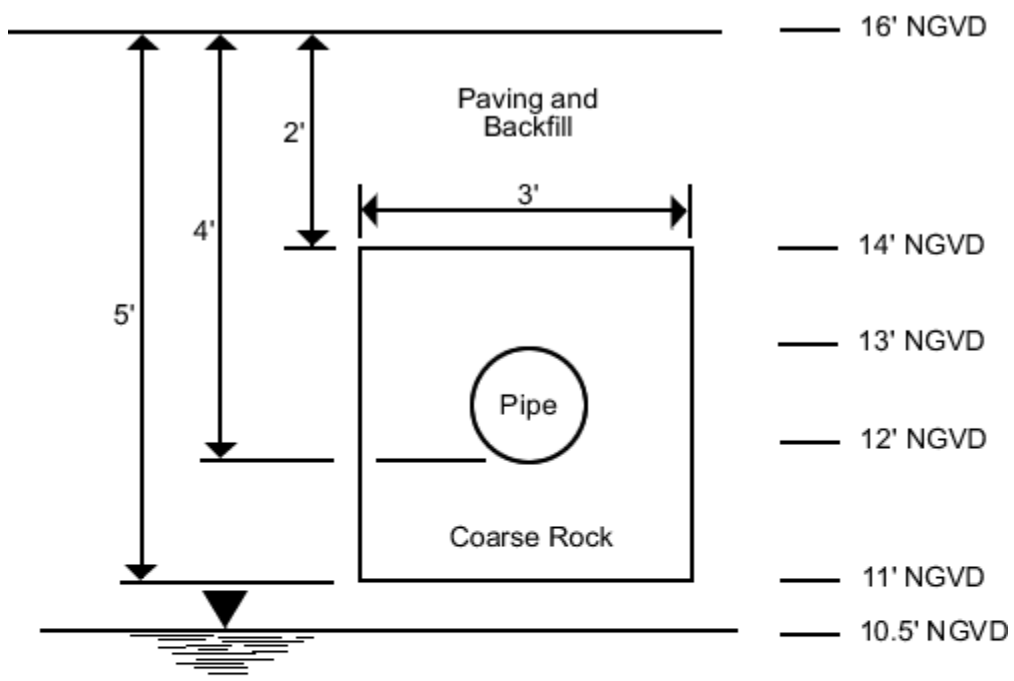
D_s = 0

*H_2 can extend no lower than the trench bottom.

**Du is the entire trench depth, from elevations 11 to 14' NGVD, because the water table is below the trench bottom.

c. $$L = \frac{7.2}{1.2\times10^{-4}\times((5\times3)+(2\times5\times3)-(3\times3)+(2\times5\times0))+((1.39\times10^{-4})\times3\times3)}$$

= 1,290, say 1,300 l.f. of trench for dry retention.



CROSS SECTION OF PROPOSED EXFILTRATION TRENCH

Figure XD-1

C. Other considerations

The proposed lake-trench system should be checked to be certain it provides adequate storage for road and parking lot protection, can meet design storm discharge criteria, and can provide adequate floor protection. This would include a control structure on the lake discharge route.

Design Example
for
Flood Plain Storage Compensation

DESIGN EXAMPLE

FOR

FLOOD PLAIN STORAGE COMPENSATION

The following design example is not intended to serve as a definitive analysis in situations where potential impacts to a floodplain area are considered. In addition to the basic calculation of runoff volume from a 100-year 3-day rainfall event and the on-site stage relative to the floodplain stage, other significant resource issues must be considered.

The impact on conveyance of flows in a floodplain is not covered in this example, but must be considered in the design of a particular surface water management system.

In addition, if a volume of runoff is proposed to be detained in a developed portion of a site, consideration must be given to the timing of the contribution of runoff to the floodplain from a project control structure. In many cases, determining that the on-site runoff volume can be detained for a period of time sufficient to protect the floodplain, while at the same time providing on-site flood protection, will be difficult.

The most straightforward approach to demonstrating that adverse impacts to a floodplain will not result, is to compensate for fill in the floodplain by creating storage accessible to the floodplain in another part of the project area. This can be accomplished by excavation, equivalent to the fill volume, between the water table and existing ground. Opportunities for excavation within the floodplain will be constrained by other resource considerations, such as wetland preservation.

I. General

In paragraph 6.6 of the *Basis of Review*, it is stated "No net encroachment into the floodplain, between the average wet season water table and that encompassed by the 100 year event, which will adversely affect the existing rights of others, will be allowed." With regard to runoff storage, this means the volume of useful storage available to the stream shall not be decreased as a result of the proposed development.

It should be noted that this policy is based on the assumption that flood plain conveyance can also be maintained, and any additional considerations, such as wetlands preservation, are not a complicating factor.

II. "Exporter" or "Importer"

A. To begin the analysis, there are three values which must be computed:

1. Site predevelopment 100-year 3-day storm runoff volume.

2. Site predevelopment storage available to the basin during the 100-year flood.

3. The difference between items 1 and 2 above.

B. If the difference is positive (runoff volume is larger than available storage), then the project site is contributing runoff to the basin. Such a site is called an <u>exporter</u> of basin runoff.

C. Example: A basin runoff volume exporter

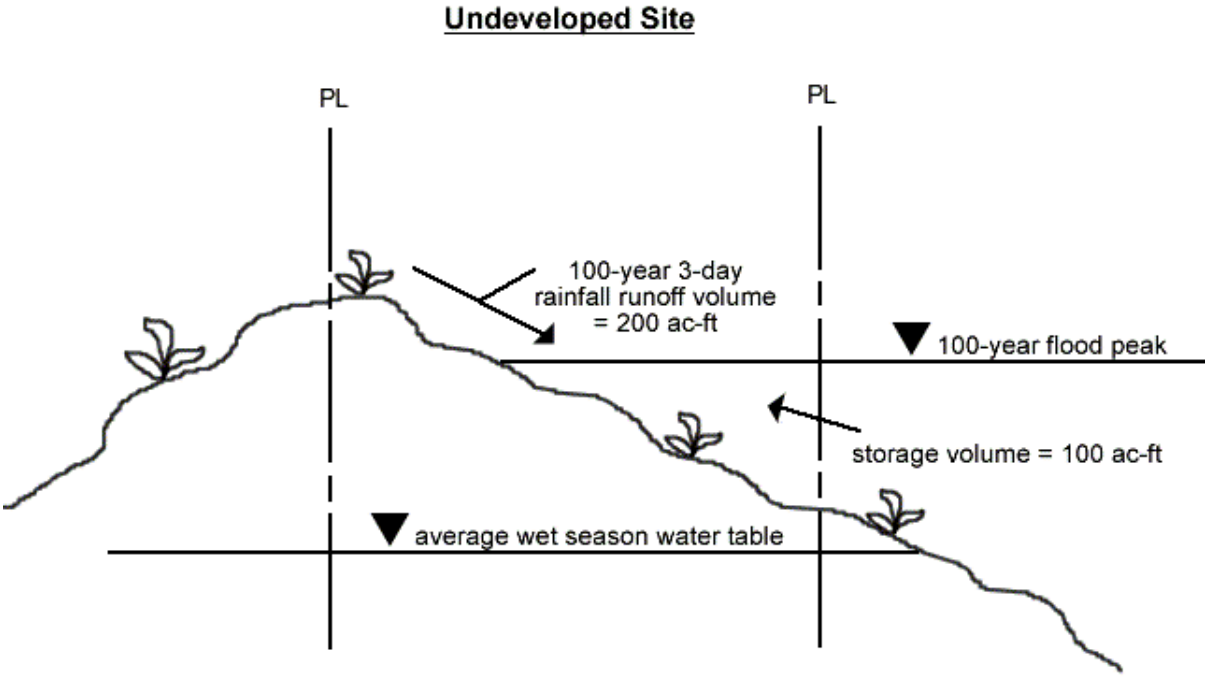


Figure XE-1

1. First, check to see if the site is an exporter or importer:

   (Site predevelopment runoff volume) - (Site predevelopment storage available to the stream)

   = (200 ac-ft) - (100 ac-ft)

   = + 100 ac-ft.

   The volume difference is positive; the undeveloped site is indeed a basin runoff volume exporter.

2. For a developed project on this exporting site, the volume exported after development should not exceed that which would have been exported from the undeveloped site.

   The design below meets that criteria.

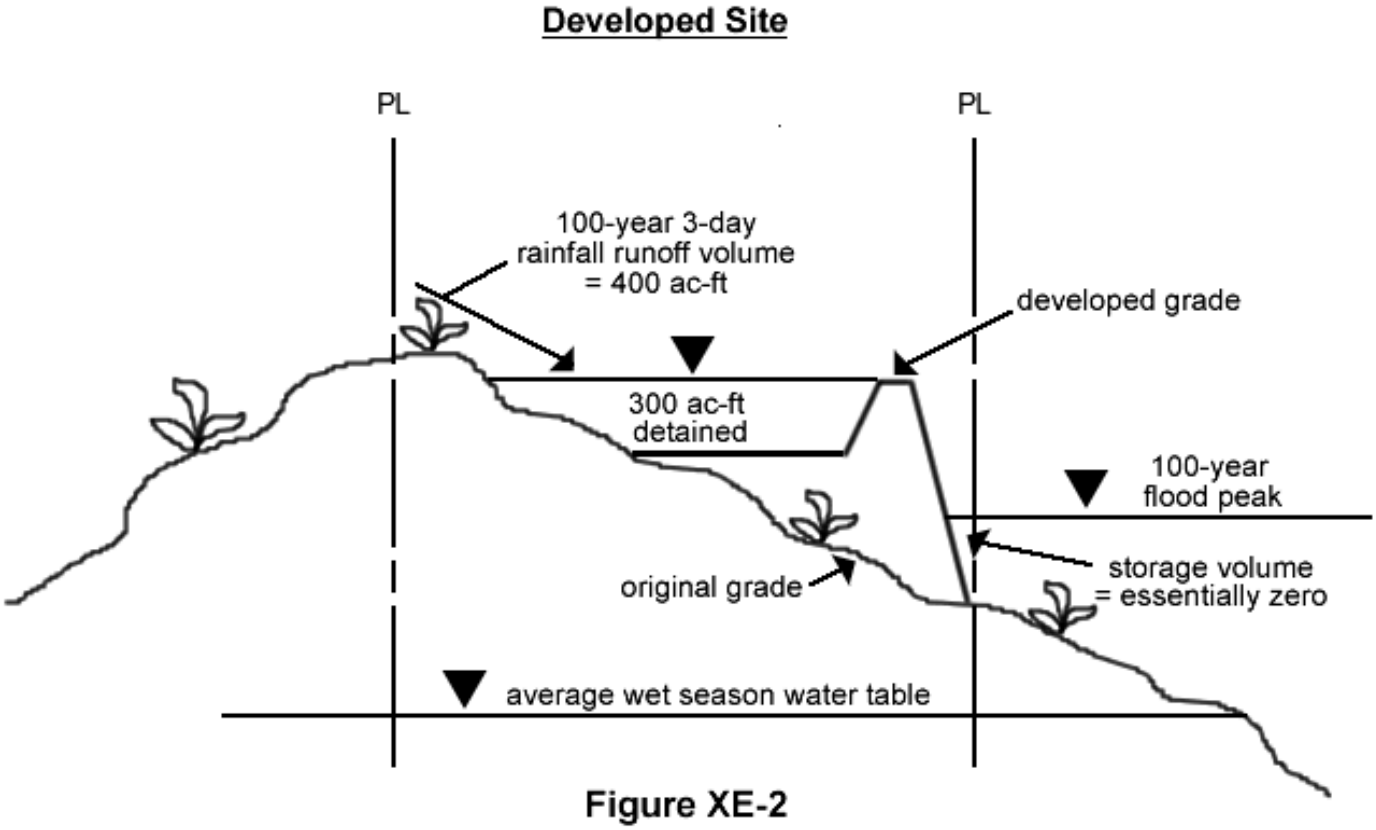


Figure XE-2

The site meets criteria because the site grading is such that, while the 100-year 3-day storm runoff volume is 400 ac-ft, the site is storing 300, so the net effect

of the project is the same: 100-ac-ft are contributed to the basin; all else from the site is stored on-site.

D. If the difference is negative (runoff volume is less than available storage), then the project site is accepting runoff from the basin and is, therefore, an importer of basin runoff.

E. Example: A basin runoff volume importer.

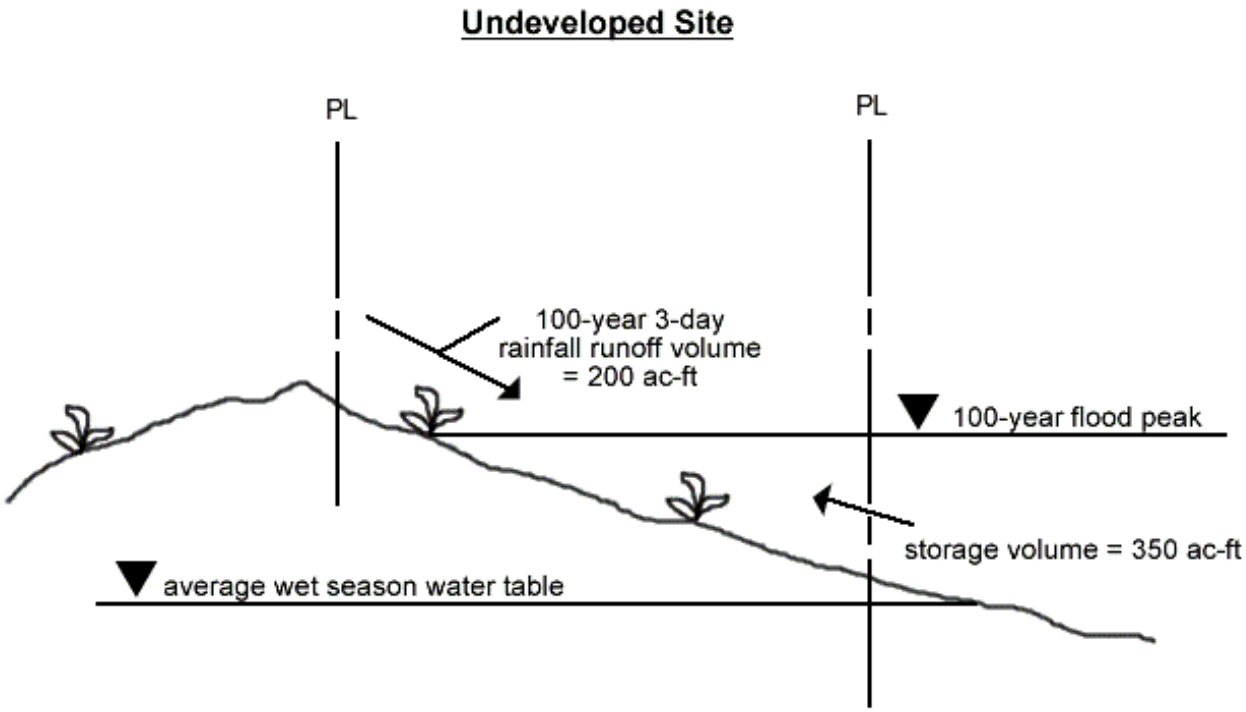


Figure XE-3

1. First check to see if the site is an exporter or importer:

   (Site predevelopment runoff volume) - (Site predevelopment storage available to the stream)

   = (200 ac-ft) - (350 ac-ft)

   = -150 ac-ft.

   The volume difference is negative; the undeveloped site is indeed a basin runoff volume importer.

2. Since the 150 ac-ft were available to the basin prior to site development, 150 ac-ft must be available to the basin after development. (Also, as was stated before, any wetlands must be preserved and flood plain conveyance may not be reduced.)

3. The developed site must then be divided into two parts.

   a. One part must be hydraulically contiguous to the water body, and must be capable of storing at least the volume available to the basin prior to development – in this case, 150 ac-ft.

   b. The second part can be developed, but must be graded so that the runoff from the 100-year 3-day rainfall is detained, with no uncontrolled discharge.

4. The design below meets that criteria.

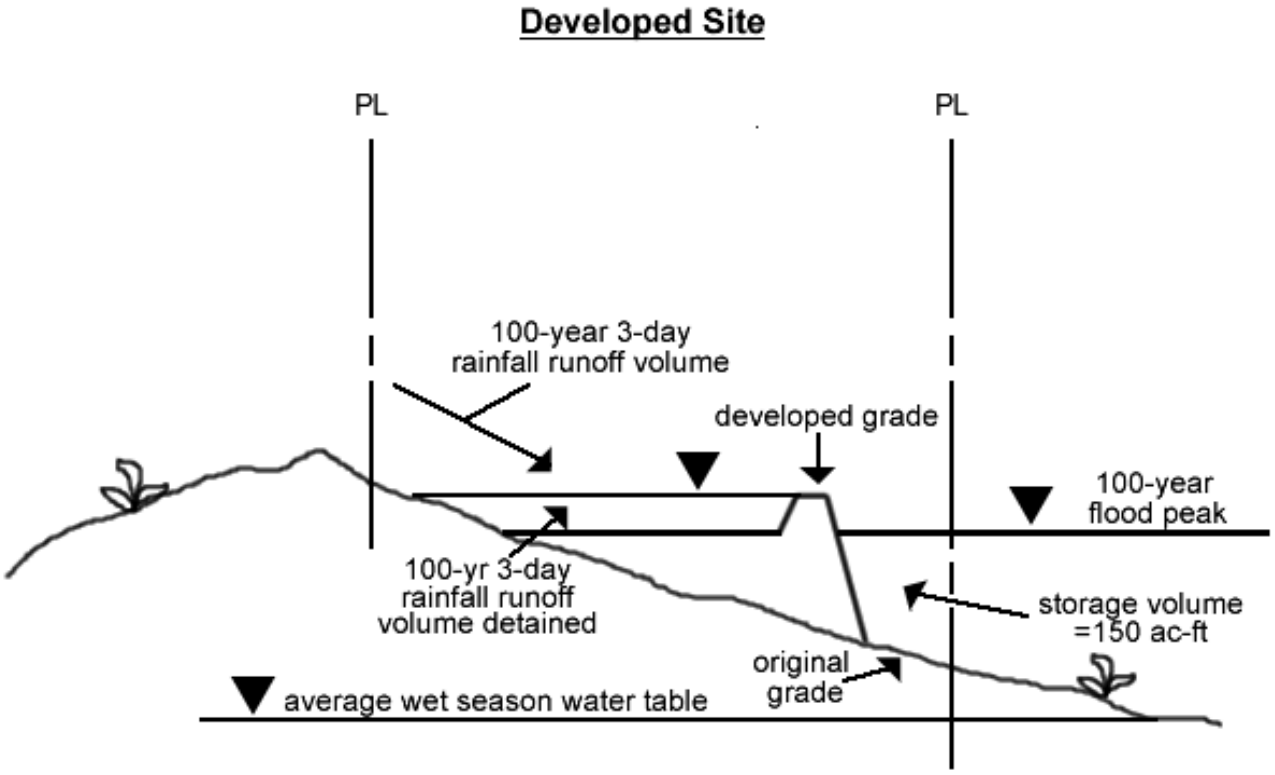


Figure XE-4

It is worth noting that in this case, because a substantial amount of the site had served as basin storage, some of the site had to remain as storage area, and the volume of developed-site runoff had to be reduced accordingly.

III. Design Example

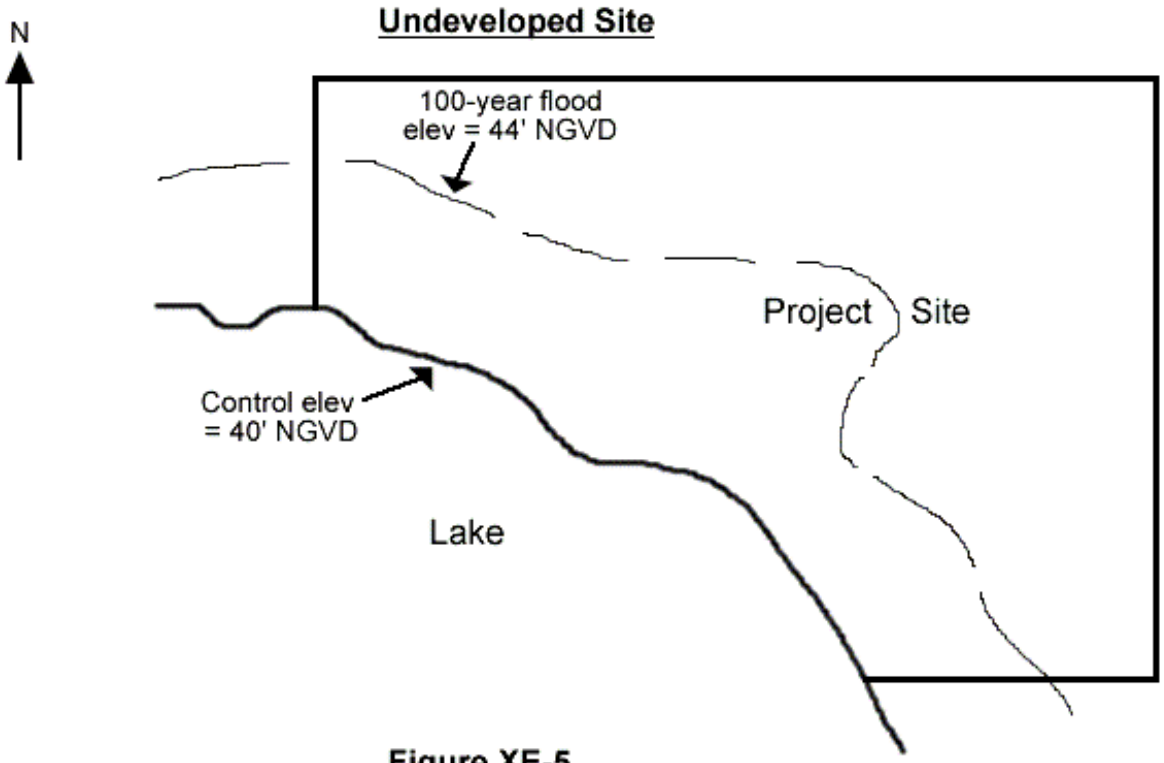


Figure XE-5

A. Given:

1. Receiving body control elevation = 40’ NGVD.
2. Receiving body 100-year flood elevation = 44’ NGVD.
3. On-site storage at peak of 100-year flood = 96 ac-ft.
4. The 100-year 3-day rainfall runoff volume = 32 ac-ft.

B. Check if the undeveloped site is a basin runoff volume importer or exporter

(Site predevelopment runoff volume) - (Site predevelopment storage available to the lake)

= (32 ac-ft) - (96 ac-ft)

= -64 ac-ft.

Since the difference is negative, the undeveloped project site is an importer.

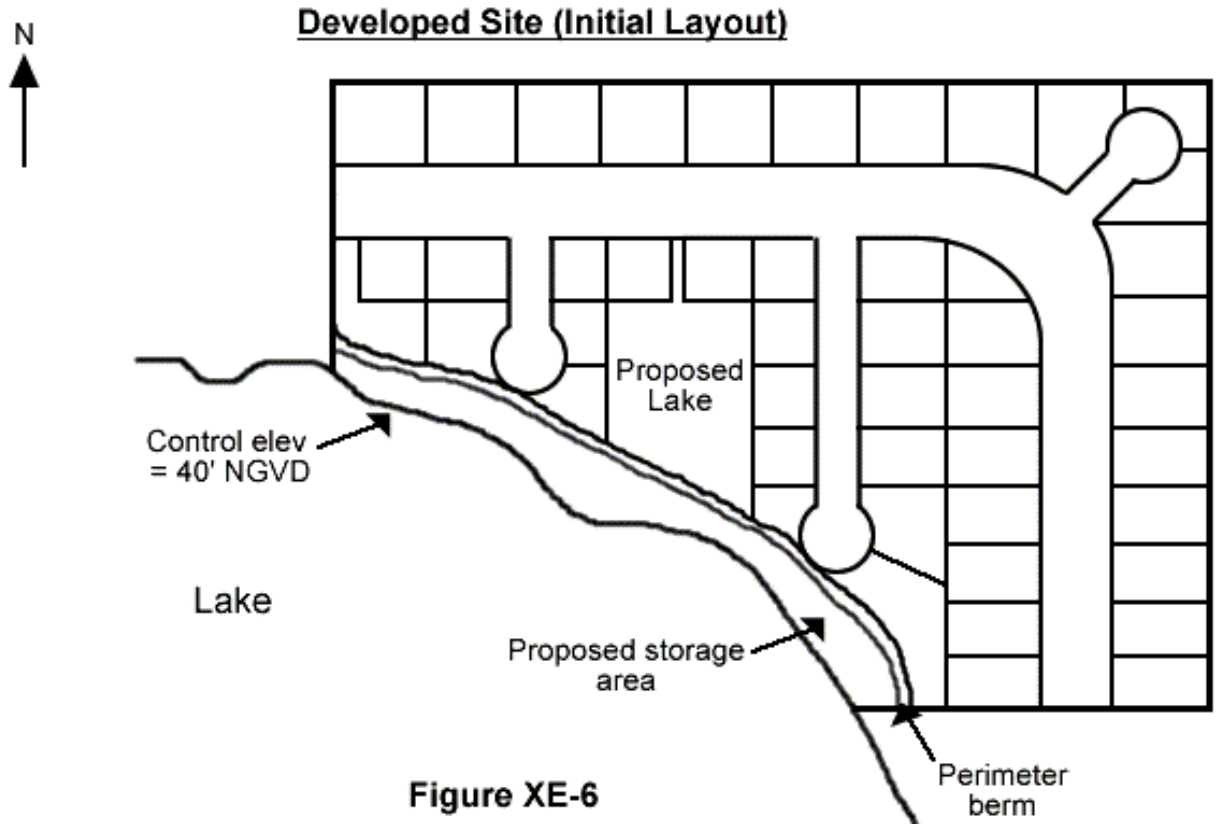


Figure XE-6

C. Initial Design Parameters

1. Site is less than 40% impervious.

2. The computed 100-year 3-day runoff volume is 50 ac-ft.

3. Site perimeter grading, lot grading, and the proposed lake configuration are such that 50 ac-ft can be detained above the control elevation of 40' NGVD before discharge into the lake via perimeter grade overtopping occurs. (This is based on zero discharge.)

D. Design Check

1. This import site must store at least 64 ac-ft in the proposed storage area between elevations 40' and 44' NGVD. If there are more than 64 ac-ft, a shifting of the perimeter berm lakeward – resulting in more developable land – could be warranted.

   If there are less than 64 ac-ft available in the proposed storage area, a shifting of the berm land-ward – resulting in less developable land and changed design parameters – would be necessary.

IV. Project Design

Whereas an exporter site merely must store some or all of its own rainfall contribution to the floodplain, an importer site must store all of its own rainfall plus off-site water which flows on to or backs up on to the site. Therefore, an exporter site has the choice of combining on-site storage in the developed area plus storage in undeveloped areas directly connected to the floodplain in any combination which equals the rainfall on the total site.

An importer site does not have the same choice because it must store the off-site generated floodwater in an area directly connected to the floodplain. This includes the rainfall on the undeveloped area. The runoff from the developed area can be stored either in the developed area or in the undeveloped area, however it will usually be more feasible to store all or most of it in the developed area.

The storing of water in separate areas creates two separate 100 year elevations, one the original floodplain elevation and the other the developed site elevation. The design of the separate systems must be done in such a way that the connection between the two is minimal, usually bleeddown only, so the developed area does not drain down to the floodplain area. Projects will require routing calculations to demonstrate that discharge is not excessive during the 100 year event, but still adequate for the discharge design storm and road protection events.

The only ways the floodplain storage area could be reduced in size and the developed area increased are:

1. by intercepting off-site upstream discharge to the floodplain on the developed site. This would cause an additional increase to the 100 year elevation on the developed site.

2. by excavating the undeveloped area down to the average water table elevation, if not in conflict with environmental constraints.

In summary, fill can only be brought into the floodplain from excavation above the water table elsewhere in the floodplain, or by compensation in an amount equal to a volume created by expanding the floodplain through dike removal, etc.

For a fairly level site where average elevations can be used, which is totally in the floodplain, which did not interrupt off-site flows, and which proposed to excavate the undeveloped area down to the average wet season water table (awswt), the maximum percentage of developable area (including on-site water storage area) would equal:

$$\frac{\text{Average existing site elevation - awswt}}{\text{100 year floodplain elevation - awswt}} \times 100\%$$

For the previous example in which the 100 year elevation was 44 and the average water table elevation was 40, if the average site elevation was 42, the maximum percent developable area including proposed lake would be:

$$\frac{42 - 40}{44 - 40} \times 100\% = 50\%$$

Design Example
for
An Industrial Site

DESIGN EXAMPLE

FOR

AN INDUSTRIAL SITE

SITE PLAN VIEW
N.T.S.

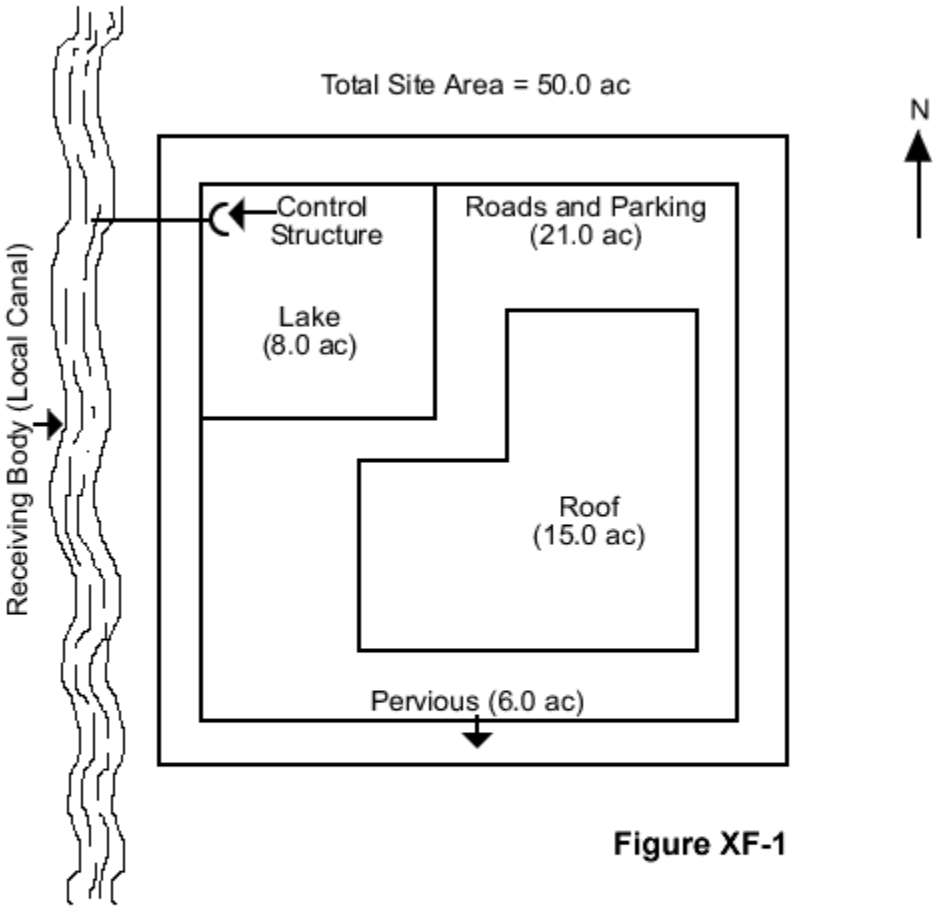


Figure XF-1

I. Given

A. Acreages

1. Total = 50.0 ac

2. Impervious

a. Building (roof) = 15.0 ac

b. Roads and parking = 21.0 ac

3. Lake = 8.0 ac

4. Pervious = 6.0 ac

B. Minimum elevations

1. Roads and parking = 14.0' NGVD

2. Floors = 16.5' NGVD

C. Zoning: "Industrial"

D. Allowable discharge: project is in a basin where the peak discharge is established by District criteria as 70 csm. No flows from or onto off-site areas need to be considered.

E. Water level elevations

1. Average wet season water table = 9.0' NGVD

2. Receiving canal water level = 8.5' NGVD

F. Design storm rainfall amounts

1. Roads (10-year 24-hour event) = 11.0 in.

2. Design (25-year 72-hour event) = 17.5 in.

3. Floors (100-year 72-hour event) = 24.5 in.

II. Design Criteria

A. Quality

1. If a wet detention system, then whichever is the greater of

a. The first inch of runoff from the entire site.

b. The amount of 2.5 inches times the percentage of imperviousness.

2. If a dry detention system, then 75% of the volume required for wet detention.

3. If a retention system, then 50% of the volume required.

4. Because the site zoning is "Industrial", at least 0.5 inch of dry retention or detention pretreatment shall be provided.

5. Any detention system shall be designed to discharge not more than 0.5 inch of the detained volume per day. A V-shaped configuration is desirable.

B. Quantity

1. Roads

a. Centerlines are desired to be no lower than elevation 14.0' NGVD.

b. Shall be at least 2 ft above the control elevation.

2. The allowable discharge for the basin in which this project is located is 70 csm for a 25-year 3-day storm.

3. First floors are desired to be no lower than elevation 16.5' NGVD.

III. Computations

A. Quality

1. Compute the first inch of runoff from the developed project:

= 1 in. x 50.0 ac x (1 ft/12 in.)

= <u>4.2 ac-ft</u> for the first inch of runoff.

2. Compute 2.5 inches times the percentage of imperviousness:

a. Site area for water quality pervious/impervious calculations <u>only</u>

= Total project - (water surface + roof)

= 50.0 ac - (8.0 ac + 15.0 ac)

= 50.0 ac - 23.0 ac

= <u>27.0 ac</u> of site area for water quality pervious/impervious.

b. Impervious area for water quality pervious/impervious calculations only

= (Site area for water quality pervious/impervious) - pervious

= 27.0 ac - 6.0 ac

= 21.0 ac of impervious area for water quality pervious/impervious.

c. Percentage of imperviousness for water quality

$$= \frac{\text{Impervious area for water quality}}{\text{Site area for water quality}} \times 100\%$$

= (21.0 ac/27.0 ac) x 100%

= 78% impervious.

d. For 2.5 inches times the percentage impervious

= 2.5 in. x percentage impervious

= 2.5 in. x 0.78

= 1.95 in. to be treated.

e. Compute volume required for quality detention

= inches to be treated x (total site - lake)

= 1.95 in. x (50.0 ac - 8.0 ac) x (1 ft/12 in.)

= 1.95 in. x 42.0 ac x (1 ft/12 in.)

= 6.8 ac-ft required detention storage.

3. Since the 6.8 ac-ft are greater than the 4.2 ac-ft computed for the first inch of runoff, the volume of 6.8 ac-ft controls.

(The system proposed is wet detention, so no volume reductions are possible.)

4. Compute 0.5 inch of pretreatment (which shall include roof areas)

= 0.5 in. x (total site - lake)

= 0.5 in. x (50.0 ac - 8.0 ac) x (1 ft/12 in.)

= 0.5 in. x 42.0 ac x (1 ft/12 in.)

= 1.8 ac-ft required for pretreatment.

This volume is required, regardless of whether dry retention or detention is utilized. It can be considered as available storage for the road, allowable discharge, and minimum floor storms only if it is achieved by a detention system, or exfiltration trench, or if the applicant can demonstrate that the site has excellent soil percolation rates which will remain excellent for an indefinite period of time. It will not be considered as available for storage if it is based on a retention system which relies only on natural percolation and evaporation as the mechanisms for re-achieving a dry state.

For this example, it is assumed that dry retention is achieved through exfiltration trench, the design of which will not be addressed herein.

5. Compute required lake volume

= Total required detention - pretreatment

= 6.8 ac-ft - 1.8 ac-ft

= 5.0 ac-ft required lake volume.

B. Project surface storage

1. Assumptions

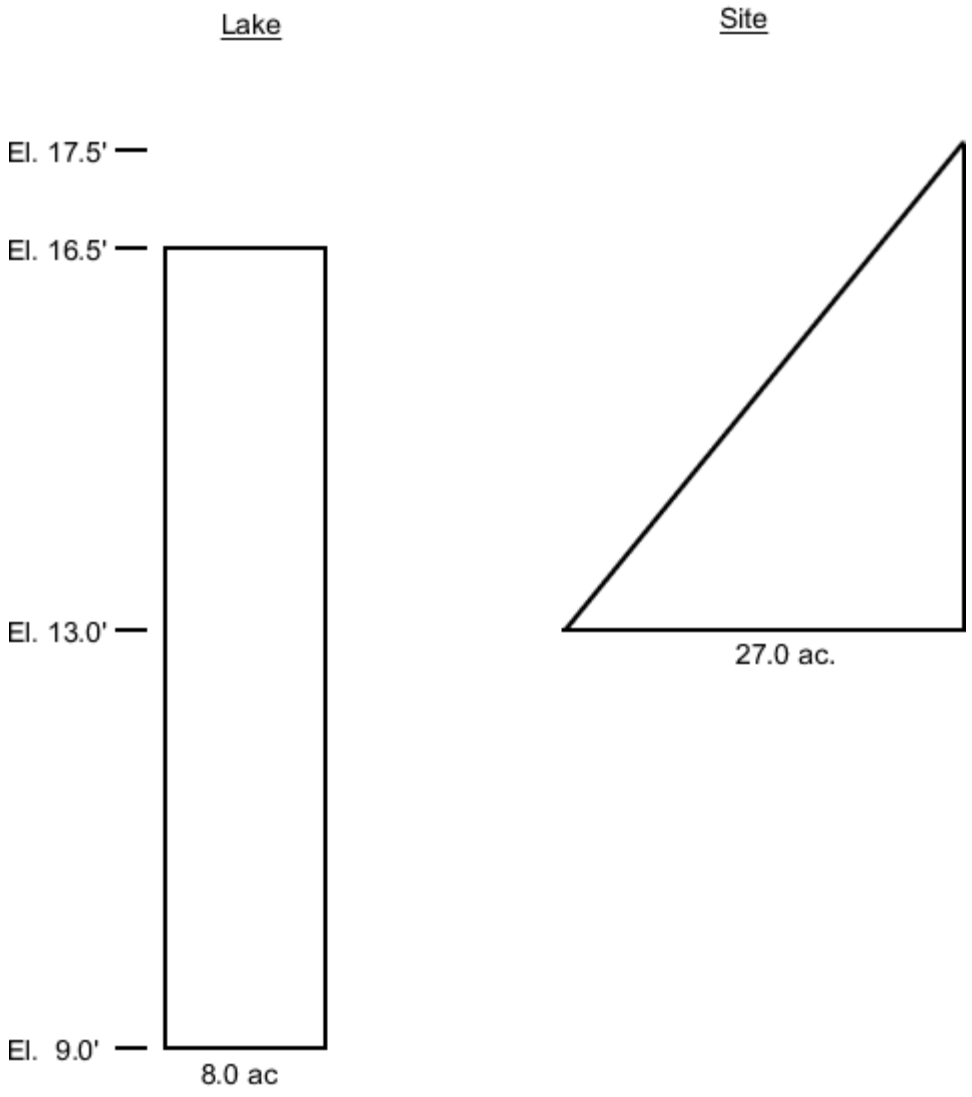
a. Lake storage begins at a control elevation which is the given average wet season water table elevation of 9.0' NGVD.

b. Lake storage is vertical over the 8.0 ac of lake surface area.

c. Site storage is linear, starting with some reaches of roadside swales which will be 1 foot lower than the road centerline. If the minimum road centerline elevation is 14.0' NGVD, the minimum elevation for computing site storage will then be 1 foot lower, or 13.0' NGVD. (Note: There may be isolated small areas at lower elevations, but such spots are not considered to be typical of the general site grading plan, for runoff-storage purposes.)

Some of the site will be graded as much as 1 foot higher than the minimum floor, or up to elevation 17.5' NGVD. Perimeter grading, including road access, will be at least as high as the peak of the 25-year 72-hour (design) storm.

SITE STORAGE DIAGRAMS



2. Develop project stage-storage curve.

Stage (ft NGVD)	Storage		
	Lake (ac-ft)	Site (ac-ft)	Project (ac-ft)
9.0	0	0	0
10.0	8.0 x 1.0 = 8.0	0	8.0
11.0	8.0 x 2.0 = 16.0	0	16.0
12.0	8.0 x 3.0 = 24.0	0	24.0
13.0	8.0 x 4.0 = 32.0	0	32.0
14.0	8.0 x 5.0 = 40.0	((1.0/4.5) x 27.0 ac) x (1.0 ft/2) = 3.0	43.0
15.0	8.0 x 6.0 = 48.0	((2.0/4.5) x 27.0 ac) x (2.0 ft/2) = 12.0	60.0
16.0	8.0 x 7.0 = 56.0	((3.0/4.5) x 27.0 ac) x (3.0 ft/2) = 27.0	83.0
16.5*	8.0 x 7.5 = 60.0	((3.5/4.5) x 27.0 ac) x (3.5 ft/2) = 36.8	96.8

*There is no need to extend the stage-storage curve beyond the minimum floor elevation, since no flooding higher than that is allowed.

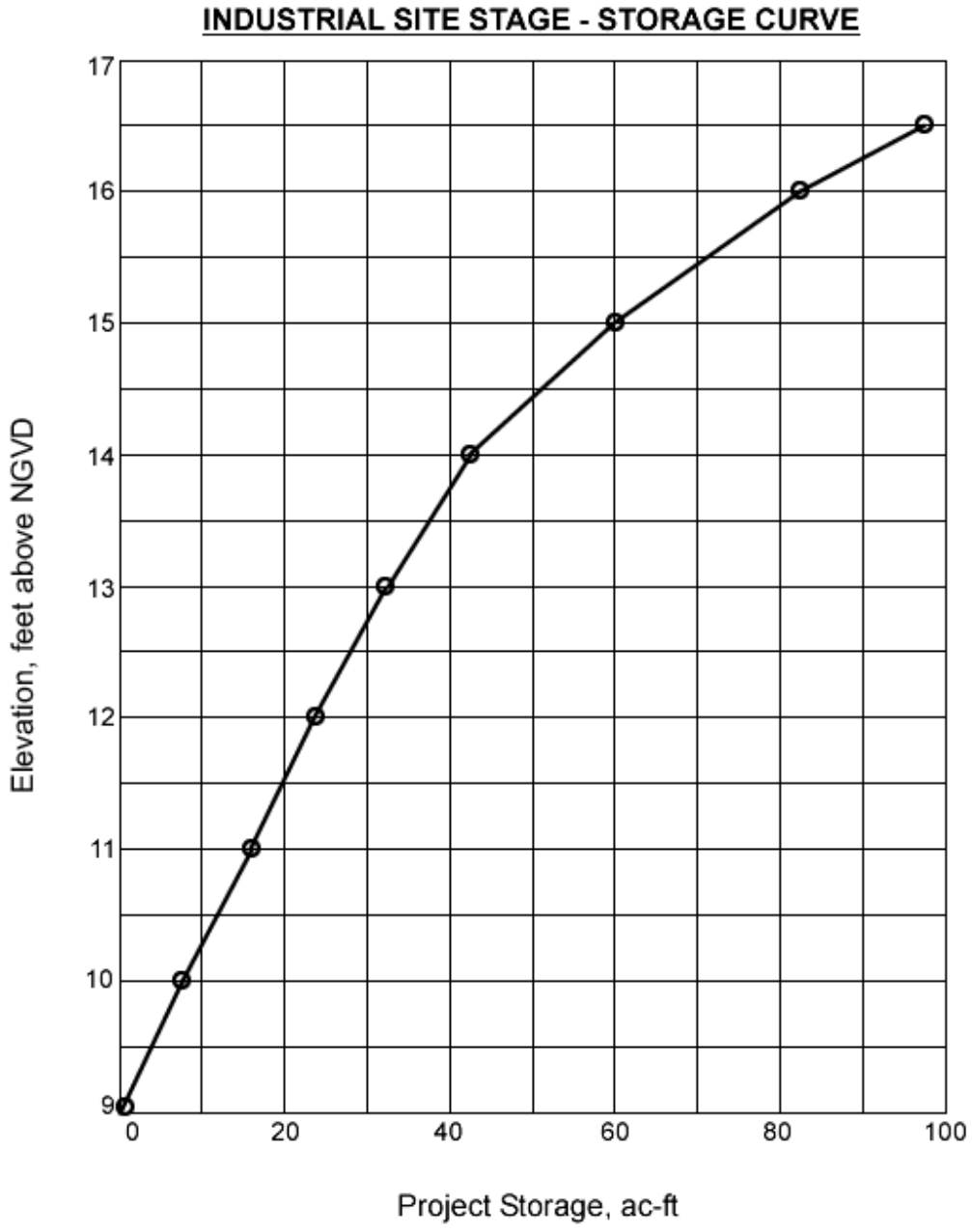

INDUSTRIAL SITE STAGE - STORAGE CURVE
Elevation, feet above NGVD
17
16
15
14
13
12
11
10
9
0
20
40
60
80
100
Project Storage, ac-ft

Figure XF-2

C. Control structure weir crest elevation.

1. Set the control structure weir crest high enough to store the lake volume quantity of 5.0 ac-ft required to meet quality criteria.

2. The weir crest should be set no lower than elevation 9.6' NGVD, according to the stage-storage curve.

D. Size the control structure detention discharge weir.

1. Assumptions

a. A V-notch weir is desirable.

b. The size shall be such as to discharge not more than 0.5 inch of the detained volume per day.

2. Computations

a. Volume to be discharged per day

= 0.5 in. x (total site area - lake)

= 0.5 in. x (50.0 ac - 8.0 ac) x (1 ft/12 in.)

= 0.5 in. x 42.0 ac x (1 ft/12 in.)

= 1.8 ac-ft maximum volume to be discharged per day.

b. Compute V-notch angle

$\theta = 2 (\tan^{-1} ((0.492\ V)/H^{2.5}))$

where:

θ = V-notch angle, degrees

V = Volume to be discharged in 24 hours, ac-ft

H = Head on vertex of notch, feet

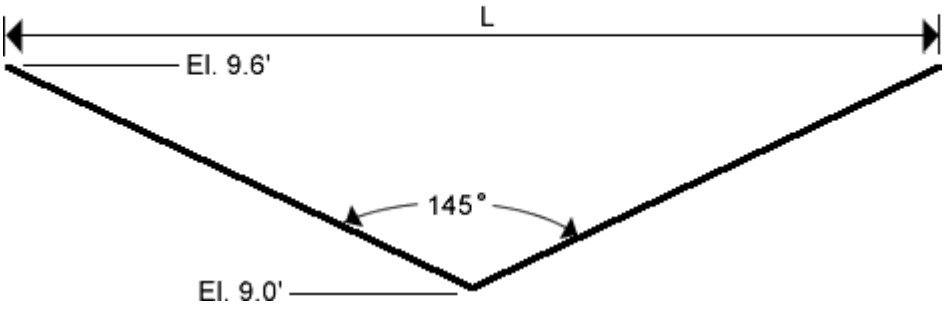
$= 2 \tan^{-1} ((0.492 \times 1.8 \text{ ac-ft})/(0.6 \text{ ft})^{2.5})$

$= 2 \tan^{-1} (3.18)$

= 2 x 72.5 degrees

= Say, 145 degrees for a V-notch angle.

Detention Discharge Weir



c. Compute the weir width (L) at elevation 9.6' NGVD

(L/2)/0.6' = tan (145°/2)

L/2 = 0.6' x tan 72.5°

L = 1.2' x tan 72.5°

= 3.8 ft (say, 46 inches) wide weir at elevation 9.6' NGVD.

E. Size the allowable peak discharge weir.

1. Allowable discharge is 70 csm

= (70 cfs/sq mi) x project size

= (70 cfs/sq mi) x 50.0 ac x (1sq mi/640 ac)

= 5.5 cfs (say, 6 cfs) allowable discharge for this project.

2. Determine soil storage for the developed site.

a. Compute impervious for soil storage

= Lakes (100%) = 8.0 ac
+ Buildings (100%) = 15.0 ac
+ Roads and parking (100%) = 21.0 ac
Total = 44.0 ac of impervious.

b. Compute pervious acreage

= Total acreage - impervious acreage

= 50.0 ac - 44.0 ac

= 6.0 ac of pervious.

c. Compute depth to average wet season water table

= Average finished site grade elevation - average wet season water table elevation

= 15' NGVD - 9' NGVD

= 6 feet.

d. Determine available soil moisture storage.

i. For these typical soils, depth of storage available through percolation during a 3-day event will be 4 feet.

ii. The pervious areas will have been compacted during site development, so a 25% reduction in naturally occurring void spaces will result.

iii. From Figure E-1, soil storage of 8.18 inches will be available under pervious areas.

e. Compute composite site soil moisture storage (S)

= (pervious acres/total site acres) x soil storage available under pervious areas

= (6.0 ac/50.0 ac) x 8.18 in.

= 1.0 in. of soil storage available over the entire site.

3. Determine the maximum possible stage (zero discharge) during a design storm (25-year 72-hour event).

a. Total rainfall (P) was given to be 17.5 inches.

b. Calculate total runoff in inches (Q)

$= (P - 0.2S)^2 / (P + 0.8S)$

$= \dfrac{(17.5 \text{ in.} - (0.2 \times 1.0 \text{ in.}))^2}{17.5 \text{ in.} + (0.8 \times 1.0 \text{ in.})}$

$= (17.3 \text{ in.})^2 / 18.3 \text{ in.}$

= 16.4 in. of total runoff (Q).

c. Calculate total runoff volume

= Q x Project acreage

= 16.4 in. x 50.0 ac x (1 ft/12 in.)

= 68.3 ac-ft of runoff.

d. The zero-discharge stage of the design storm is taken from the previously developed project stage-storage curve and is 15.4' NGVD.

4. Determine the peak discharge weir dimensions.

a. The maximum design head would be 15.4' NGVD - 9.6' NGVD

= 5.8'. Try a design head of 5.0 ft for sizing the weir.

b. Computer weir length.

i. Basic equation is $Q = 3.13LH^{1.5}$

ii. Rearranged, $L = Q/(3.13 \times (H)^{1.5})$

where:

L = weir length, ft

Q = design discharge, cfs

H = design head on weir, ft

iii. If Q = 6 cfs and H = 5.0 ft, then

$L = 6 \text{ cfs}/(3.13 \times (5.0 \text{ ft})^{1.5})$

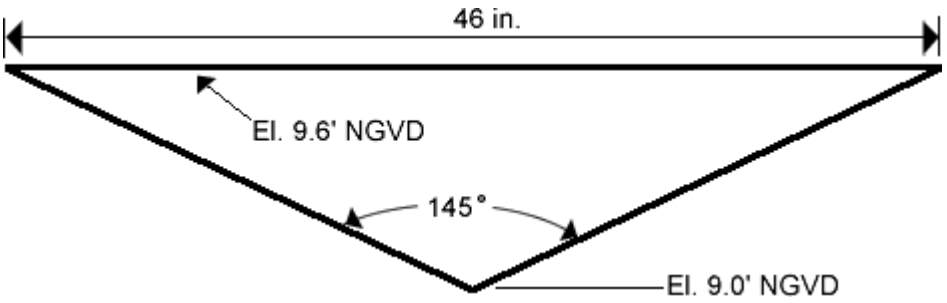
$= 6/(3.13 \times 11.2)$

$= 6/35.1$

= 0.17 ft, say 2 inches weir length

c. This is smaller than the topwidth of the detention discharge weir. Try using the detention discharge opening as the entire outflow control structure.

d. Sketch of trial outfall control structure



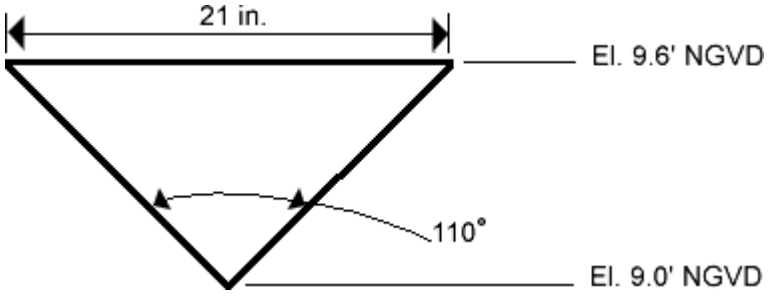
e. Check the allowable peak discharge.

i. The allowable discharge rate was previously computed to be about 6 cfs.

ii. The peak discharge of the routed 25-year 72-hour event was computed to be in excess of 11 cfs. (The computations are not included.) This is considerably more than allowable of 6 cfs, therefore, the trial outfall structure is not adequate.

f. Try using a smaller orifice angle. This will result in discharging less than 0.5 inch of the detained volume per day, which is certainly not in violation of District criteria.

g. Sketch of proposed outfall control structure.



h. The control structure shall include a baffle, to intercept debris before they flow into the receiving body or clog the discharge weir.

F. Check the proposed minimum building floor elevation.

1. By definition, the minimum building floor elevation shall be at least as high as the 100-year 72-hour storm zero discharge runoff.

2. Compute 100-year 72-hour zero discharge runoff volume.

a. Total rainfall (P) was given to be 24.5 inches.

b. Calculate total runoff in inches (Q)

$= (P - 0.2S)^2 / (P + 0.8S)$

$= \frac{(24.5 \text{ in.} - (0.2 \times 1.0 \text{ in.}))^2}{24.5 \text{ in.} + (0.8 \times 1.0 \text{ in.})}$

$= (24.3 \text{ in.})^2 / 25.3 \text{ in.}$

= 23.3 in. of total runoff (Q).

c. Calculate total runoff volume

= Q x Project acreage

= 23.3 in. x 50.0 ac x (1 ft/12 in.)

= 97.1 ac-ft of runoff.

d. From Figure XF-2, the zero discharge stage of the 100-year 72-hour storm is 16.5' NGVD.

e. Since the proposed minimum floor elevation is 16.5' NGVD,

the proposed minimum floor elevation is adequate.

G. Check the proposed minimum road elevation.

1. By definition, the minimum road elevation shall be at least as high as the routed 10-year 24-hour storm.

2. The routed 10-year, 24-hour storm peaked at elevation 13.34' NGVD. (See pages XF-16 and XF-17.) That is lower than the proposed minimum road elevation of 14.0' NGVD, therefore

the proposed minimum road elevation is adequate.

H. Check the allowable peak discharge.

1. The allowable discharge rate was previously computed to be about 6 cfs.

2. The routed 25-year, 72-hour event peaked at 5.9 cfs. (See pages XF-18, -19, and -20.) Therefore

the proposed outfall control structure is adequate.

I. The outfall pipe to the receiving body should be large enough so that the design storm discharge does not come under culvert control.

Project Name: Volume IV Examples
Reviewer: User
Project Number: Industrial Site
Period Begin: Jan 01, 2000;0000 hr End: Jan 02, 2000;0600 hr Duration: 30 hr
Time Step: 0.2 hr, Iterations: 10

Basin 1: Industrial Project

Method: Santa Barbara Unit Hydrograph
Rainfall Distribution: SFWMD - 24 hr
Design Frequency: 10 year
1 Day Rainfall: 11 inches
Area: 50 acres
Ground Storage: 1 inches
Time of Concentration: 0.5 hours
Initial Stage: 9 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
9.00	0.00
10.00	8.00
11.00	16.00
12.00	24.00
13.00	32.00
14.00	43.00
15.00	60.00
16.00	83.00
16.50	96.80

Offsite Receiving Body: Local Canal

Time (hr)	Stage (ft NGVD)
0.00	8.50
4000.00	8.50

Structure: 1

From Basin: Industrial Project
To Basin: Local Canal
Structure Type: Gravity
Weir: None
Bleeder: Inv-Tri, Invert Elev = 9 ft NGVD, Height = 0.6 ft
Width = 1.75 ft
Default Coefs: Weir Coef = 2.5, Orifice Coef = 0.6
Pipe: None

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	9.00	8.50
1.00	0.11	0.00	0.00	0.00	9.00	8.50
2.00	0.22	0.03	0.00	0.00	9.00	8.50
3.00	0.35	1.04	0.00	0.00	9.01	8.50
4.00	0.50	2.41	0.00	0.00	9.02	8.50
5.00	0.68	4.50	0.00	0.00	9.06	8.50
6.00	0.91	7.01	0.02	0.00	9.12	8.50
7.00	1.19	9.72	0.07	0.00	9.20	8.50
8.00	1.51	12.49	0.21	0.02	9.32	8.50
9.00	1.88	15.83	0.52	0.05	9.46	8.50
10.00	2.34	20.38	1.23	0.12	9.64	8.50
11.00	2.96	29.02	1.73	0.25	9.87	8.50
12.00	7.22	243.59	3.06	0.44	10.87	8.50
13.00	8.44	78.12	4.32	0.77	12.32	8.50

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
14.00	9.00	33.70	4.66	1.15	12.80	8.50
15.00	9.35	19.33	4.80	1.54	13.00	8.50
16.00	9.68	16.86	4.86	1.94	13.10	8.50
17.00	9.88	10.83	4.90	2.34	13.16	8.50
18.00	10.08	10.02	4.93	2.75	13.20	8.50
19.00	10.27	9.91	4.95	3.16	13.24	8.50
20.00	10.47	9.90	4.98	3.57	13.28	8.50
21.00	10.60	7.05	4.99	3.98	13.30	8.50
22.00	10.74	6.66	5.00	4.39	13.31	8.50
23.00	10.87	6.61	5.01	4.81	13.33	8.50
24.00	11.00	6.61	5.02	5.22	13.34	8.50
25.00	11.00	0.89	5.00	5.64	13.32	8.50
26.00	11.00	0.12	4.98	6.05	13.29	8.50
27.00	11.00	0.02	4.96	6.46	13.25	8.50
28.00	11.00	0.00	4.94	6.87	13.21	8.50
29.00	11.00	0.00	4.91	7.27	13.18	8.50
30.00	11.00	0.00	4.89	7.68	13.14	8.50

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	5.02	24.20	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Industrial Pro	13.34	24.20	9.00	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Industrial Pro	41.17	0.00	7.64	0.00	33.54	0.00

Project Name: Volume IV Examples
Reviewer: User
Project Number: Industrial Site
Period Begin: Jan 01, 2000;0000 hr End: Jan 04, 2000;1800 hr Duration: 90 hr
Time Step: 0.2 hr, Iterations: 10

Basin 1: Industrial Project

Method: Santa Barbara Unit Hydrograph
Rainfall Distribution: SFWMD - 3day
Design Frequency: 25 year
1 Day Rainfall: 13 inches
Area: 50 acres
Ground Storage: 1 inches
Time of Concentration: 0.5 hours
Initial Stage: 9 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
9.00	0.00
10.00	8.00
11.00	16.00
12.00	24.00
13.00	32.00
14.00	43.00
15.00	60.00
16.00	83.00
16.50	96.80

Offsite Receiving Body: Local Canal

Time (hr)	Stage (ft NGVD)
0.00	8.50
4000.00	8.50

Structure: 1

From Basin: Industrial Project
To Basin: Local Canal
Structure Type: Gravity
Weir: None
Bleeder: Inv-Tri, Invert Elev = 9 ft NGVD, Height = 0.6 ft
Width = 1.75 ft
Default Coefs: Weir Coef = 2.5, Orifice Coef = 0.6
Pipe: None

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	9.00	8.50
1.00	0.08	0.00	0.00	0.00	9.00	8.50
2.00	0.16	0.00	0.00	0.00	9.00	8.50
3.00	0.24	0.10	0.00	0.00	9.00	8.50
4.00	0.32	0.55	0.00	0.00	9.00	8.50
5.00	0.40	0.99	0.00	0.00	9.01	8.50
6.00	0.47	1.36	0.00	0.00	9.02	8.50
7.00	0.55	1.67	0.00	0.00	9.04	8.50
8.00	0.63	1.93	0.00	0.00	9.06	8.50
9.00	0.71	2.14	0.01	0.00	9.08	8.50
10.00	0.79	2.32	0.01	0.00	9.10	8.50
11.00	0.87	2.48	0.02	0.00	9.13	8.50
12.00	0.95	2.62	0.03	0.01	9.15	8.50
13.00	1.03	2.74	0.05	0.01	9.18	8.50

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
14.00	1.11	2.84	0.07	0.01	9.21	8.50
15.00	1.19	2.93	0.10	0.02	9.24	8.50
16.00	1.27	3.01	0.13	0.03	9.27	8.50
17.00	1.34	3.08	0.17	0.04	9.30	8.50
18.00	1.42	3.15	0.22	0.06	9.33	8.50
19.00	1.50	3.21	0.28	0.08	9.36	8.50
20.00	1.58	3.26	0.34	0.11	9.39	8.50
21.00	1.66	3.31	0.41	0.14	9.42	8.50
22.00	1.74	3.35	0.49	0.18	9.45	8.50
23.00	1.82	3.39	0.57	0.22	9.48	8.50
24.00	1.90	3.42	0.66	0.27	9.51	8.50
25.00	2.01	4.84	0.79	0.33	9.54	8.50
26.00	2.13	5.08	0.95	0.41	9.58	8.50
27.00	2.24	5.16	1.20	0.50	9.63	8.50
28.00	2.36	5.21	1.30	0.60	9.67	8.50
29.00	2.47	5.25	1.40	0.72	9.71	8.50
30.00	2.59	5.29	1.48	0.84	9.75	8.50
31.00	2.71	5.33	1.57	0.96	9.79	8.50
32.00	2.82	5.36	1.64	1.10	9.82	8.50
33.00	2.94	5.38	1.72	1.24	9.86	8.50
34.00	3.05	5.41	1.78	1.38	9.90	8.50
35.00	3.17	5.43	1.85	1.53	9.94	8.50
36.00	3.28	5.46	1.91	1.69	9.97	8.50
37.00	3.40	5.48	1.97	1.85	10.01	8.50
38.00	3.51	5.49	2.03	2.02	10.05	8.50
39.00	3.63	5.51	2.08	2.19	10.08	8.50
40.00	3.74	5.53	2.14	2.36	10.12	8.50
41.00	3.86	5.54	2.19	2.54	10.15	8.50
42.00	3.97	5.55	2.24	2.72	10.19	8.50
43.00	4.09	5.57	2.29	2.91	10.22	8.50
44.00	4.21	5.58	2.33	3.10	10.25	8.50
45.00	4.32	5.59	2.38	3.30	10.29	8.50
46.00	4.44	5.60	2.42	3.50	10.32	8.50
47.00	4.55	5.61	2.47	3.70	10.35	8.50
48.00	4.67	5.62	2.51	3.90	10.39	8.50
49.00	4.80	6.24	2.55	4.11	10.42	8.50
50.00	4.93	6.33	2.60	4.33	10.46	8.50
51.00	5.08	7.46	2.66	4.54	10.51	8.50
52.00	5.25	8.41	2.72	4.77	10.56	8.50
53.00	5.47	10.76	2.80	5.00	10.63	8.50
54.00	5.75	13.31	2.91	5.23	10.73	8.50
55.00	6.07	15.90	3.04	5.48	10.85	8.50
56.00	6.45	18.50	3.19	5.74	10.99	8.50
57.00	6.89	21.92	3.36	6.01	11.17	8.50
58.00	7.44	26.89	3.56	6.30	11.39	8.50
59.00	8.16	36.94	3.81	6.60	11.67	8.50
60.00	13.19	294.49	4.71	6.95	12.88	8.50
61.00	14.64	93.67	5.49	7.39	14.12	8.50
62.00	15.30	40.20	5.64	7.85	14.38	8.50
63.00	15.72	23.00	5.71	8.32	14.50	8.50
64.00	16.11	20.05	5.75	8.79	14.57	8.50
65.00	16.34	12.88	5.77	9.27	14.62	8.50
66.00	16.57	11.91	5.79	9.75	14.65	8.50
67.00	16.81	11.78	5.81	10.23	14.68	8.50
68.00	17.04	11.76	5.82	10.71	14.71	8.50
69.00	17.20	8.37	5.83	11.19	14.73	8.50
70.00	17.35	7.91	5.84	11.67	14.74	8.50
71.00	17.51	7.85	5.85	12.15	14.75	8.50
72.00	17.67	7.84	5.85	12.64	14.76	8.50
73.00	17.67	1.06	5.84	13.12	14.75	8.50
74.00	17.67	0.14	5.83	13.60	14.72	8.50
75.00	17.67	0.02	5.81	14.09	14.69	8.50
76.00	17.67	0.00	5.80	14.57	14.66	8.50
77.00	17.67	0.00	5.78	15.04	14.64	8.50
78.00	17.67	0.00	5.77	15.52	14.61	8.50
79.00	17.67	0.00	5.75	16.00	14.58	8.50

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
80.00	17.67	0.00	5.74	16.47	14.55	8.50
81.00	17.67	0.00	5.72	16.95	14.52	8.50
82.00	17.67	0.00	5.71	17.42	14.50	8.50
83.00	17.67	0.00	5.69	17.89	14.47	8.50
84.00	17.67	0.00	5.67	18.36	14.44	8.50
85.00	17.67	0.00	5.66	18.83	14.41	8.50
86.00	17.67	0.00	5.64	19.29	14.39	8.50
87.00	17.67	0.00	5.63	19.76	14.36	8.50
88.00	17.67	0.00	5.61	20.22	14.33	8.50
89.00	17.67	0.00	5.60	20.69	14.30	8.50
90.00	17.67	0.00	5.58	21.15	14.28	8.50

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	5.85	72.20	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Industrial Pro	14.76	72.20	9.00	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Industrial Pro	68.82	0.00	21.10	0.00	47.72	0.00

Design Example
for
A Multi-family Residential Site

DESIGN EXAMPLE

FOR

A MULTI-FAMILY RESIDENTIAL SITE

I. Given

A. Acreage

1. Total = 95.0 ac

2. Impervious

a. Buildings (roofs) = 9.3 ac

b. Roads and parking = 41.7 ac

3. Lakes = 10.0 ac

4. Pervious = 34.0 ac

B. Minimum elevations

1. Roads and parking = 9.0' NGVD

2. Floors = 11.5' NGVD

C. Design storm allowable discharge has been determined to be 37 cfs.

D. Water level elevations

1. Average wet season water table in the vicinity of the lakes = 5.5' NGVD.

2. Receiving body water level has been determined not to affect discharge rates.

(Note: Proposed minimum road grade (9.0' NGVD) is more than 2 ft above the average wet season water table, or control elevation, of 5.5' NGVD. This is a criteria which is occasionally overlooked in initial designs.)

E. Rainfall amounts (24-hour)

1. Roads (10-year) = 9.0 in.

2. Design (25-year) = 11.0 in. (this will be adjusted to a 72-hour event later)

3. Floors (100-year) = 14.0 in. (this will be adjusted to a 72-hour event later)

SITE PLAN VIEW
(N.T.S.)

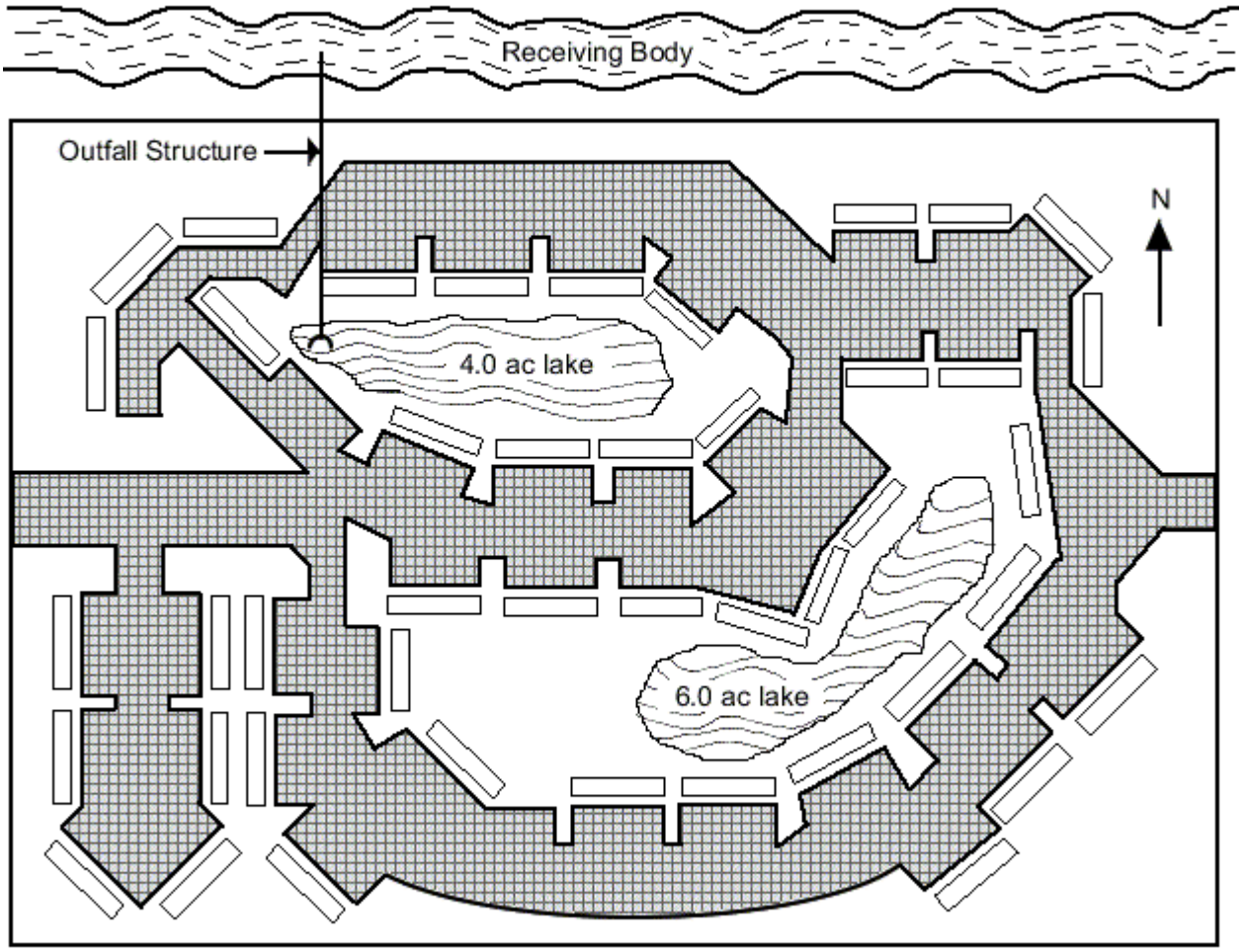


Figure XG-1

II. Design Criteria

A. Quality

1. Since this is proposed as a wet detention system, then whichever is the greater of:

a. The first inch of runoff from the entire site, or

b. The amount of 2.5 inches times the percentage of imperviousness.

2. If this residentially-zoned site were discharging directly into sensitive receiving waters (example: Outstanding Florida Waters), then it might have to provide at least 0.5 inch of dry detention or retention pretreatment. (This will be discussed later in more detail.)

3. Any detention system shall be designed to discharge not more than 0.5 inch of the detained volume per day. A V-shaped configuration is desirable.

B. Quantity

1. The allowable peak discharge is 37 cfs during a 25-year 3-day storm.

2. First floors are desired to be no lower than elevation 11.5' NGVD.

3. Roads and parking are desired to be no lower than elevation 9.0' NGVD.

III. Computations

A. Quality

1. Compute the first inch of runoff from the developed project:

= 1 in. x 95 ac x (1 ft/12 in.)

= 7.9 ac-ft for the first inch of runoff.

2. Compute 2.5 inches times the percentage of imperviousness:

a. Site area for water quality pervious/impervious calculations only:

= Total project - (water surface + roof)

= 95 ac - (10 ac + 9.3 ac)

= 95 ac - 19.3 ac

= 75.7 ac of site area for water quality pervious/impervious.

b. Impervious area for water quality pervious/impervious calculations only:

= (Site area for water quality pervious/impervious) - pervious

= 75.7 ac - 34.0 ac

= 41.7 ac of impervious area for water quality pervious/impervious.

c. Percentage of imperviousness for water quality:

= (Impervious area for water quality/Site area for water quality) x 100%

= (41.7 ac/75.7 ac) x 100%

= 55% impervious

d. For 2.5 inches times the percentage impervious:

= 2.5 in. x 0.55

= 1.38 in. to be treated.

e. Compute volume required for water quality detention:

= inches to be treated x (total site - lakes)

= 1.38 in. x (95 ac - 10 ac) x (1 ft/12 in.)

= 9.8 ac-ft required detention storage.

3. Since the 9.8 ac-ft are greater than the 7.9 ac-ft computed for the first inch of runoff, the volume of 9.8 ac-ft controls.

(Note: The system proposed is wet detention, so no volume reductions are possible.)

4. Sidelight: Pretreatment

a. If this project were discharging directly to a sensitive receiving body, it would have to provide at least 0.5 inch of dry detention or retention pretreatment, because it is more than 40% impervious. The receiving body is not a sensitive one, but the numbers will be computed now, strictly to illustrate the process.

b. Compute 0.5 inch of pretreatment

= 0.5 in. x (total site - lakes)

= 0.5 in. x (95 ac - 10 ac) x (1 ft/12 in.)

= 3.5 ac-ft required for pretreatment.

This volume would be required regardless of whether dry retention or detention were utilized. It would be considered as available storage for the road, design, and minimum floor storms if it were a detention system, or utilized properly-designed exfiltration trench. It would not be considered as available for storage if it were a retention system which relied only on natural percolation and evaporation as the mechanisms for re-achieving a dry state.

c. Compute the resulting lake volume:

= Total required detention - pretreatment

= 9.8 ac-ft - 3.5 ac-ft

= 6.3 ac-ft required lake volume.

B. SCS Curve Number

1. Even though the control elevation is 5.5' NGVD, it is assumed that the water table will vary from 5.5' NGVD at the lakes to about 7' NGVD at the project boundaries. Consequently an average site water table elevation of 6.25' NGVD will be assumed.

2. The average site finished grades will vary from the lowest inlets in the parking lots (9.0' NGVD), to a little above the 11.5' NGVD floor elevations (say 12' NGVD). Therefore, average site grade elevation will be 10.5' NVD.

3. The average depth to water table will be

= average site grade elevation - average site water table elevation

= 10.5' NGVD - 6.25' NGVD

= 4.25 ft; 4 ft is the maximum depth of percolation assumed possible in three days for the soils on this site.

4. From the soil storage table, assuming the 25% compaction and 4 ft to the water table, up to 8.18 inches of moisture can be stored in the soil under pervious areas.

5. Compute available soil storage

= storage available x pervious areas

= 8.18 in. x 34 ac x 1 ft/12 in.

= 23.2 ac-ft available soil storage onsite.

6. Convert available soil storage to site-wide moisture storage, S

S = available soil storage onsite/site area

= ((23.2 ac-ft)/(95 ac)) x (12 in./1 ft)

= 2.93 in. of site-wide soil storage, S

7. SCS Curve Number, CN

CN = 1000/(S + 10)

= 1000/(2.93 + 10)

= 77: SCS Curve Number

C. Project surface storage

1. Assumptions

a. Lake storage begins at a control elevation which is the given 5.5' NGVD.

b. Lake storage is vertical over the 10 ac of lake surface area.

c. Site storage is linear, starting at the minimum road elevation of 9.0' NGVD up through 12.0' NGVD.

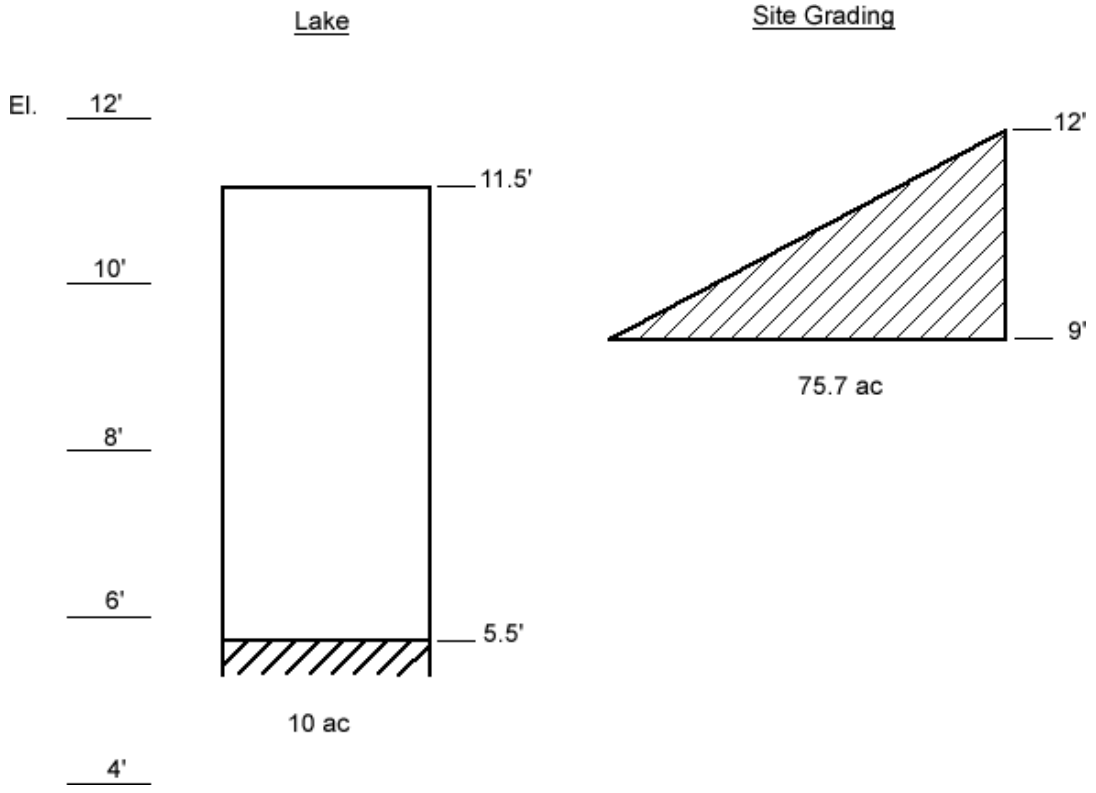
d. Area of developed site grading:

= Total area - (lakes + buildings)

= 95 ac - (10 ac + 9.3 ac)

= 75.7 ac for developed site grading.

2. Stage-Storage Schematic Diagrams



3. Stage-storage curve data

Stage (ft NGVD)	Storage		
	Lake (ac-ft)	Site Grading (ac-ft)	Total (ac-ft)
5.5	0' x 10 ac = 0	0	0
6.5	1' x 10 ac = 10	0	10
7.5	2' x 10 ac = 20	0	20
8.5	3' x 10 ac = 30	0	30
9.0	3.5' x 10 ac = 35	0	35
9.5	4' x 10 ac = 40	((0.5/3) x 75.7 ac) x (0.5 ft/2) = 3.2	43.2
10.0	4.5' x 10 ac = 45	((1.0/3) x 75.7 ac) x (1.0 ft/2) = 12.6	57.6
10.5	5' x 10 ac = 50	((1.5/3) x 75.7 ac) x (1.5 ft/2) = 28.4	78.4
11.0	5.5' x 10 ac = 55	((2.0/3) x 75.7 ac) x (2.0 ft/2) = 50.5	105.5
11.5	6' x 10 ac = 60	((2.5/3) x 75.7 ac) x (2.5 ft/2) = 78.8	138.8

MULTI-FAMILY RESIDENTIAL SITE
STAGE - STORAGE CURVE

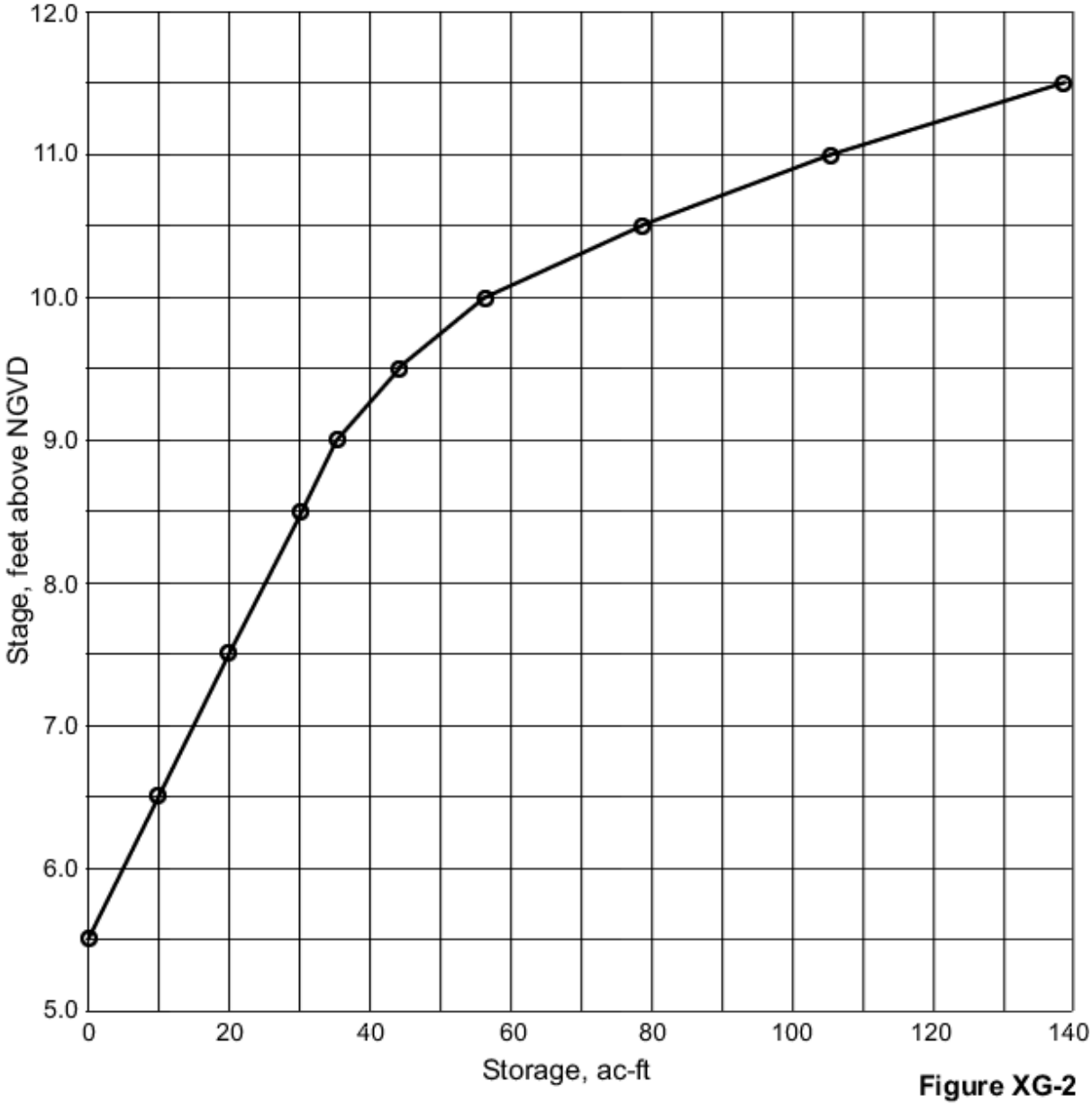


Figure XG-2

D. Control structure weir crest elevation.

1. Set the crest high enough to store the required quality volume quantity of 9.8 ac-ft.

2. From the stage-storage curve, the weir crest should be set at elevation 6.5' NGVD.

E. Control structure weir crest length.

1. Runoff from the design storm (25-year 3-day).

a. Rainfall amount for a three-day event

= 1-day rainfall x 1.359

= 11.0 in. x 1.359

= 14.95 in. rainfall in three days.

b. Runoff in inches (Q)

$Q = (P - (0.2 \times S))^2 / (P + (0.8 \times S))$

$= \frac{(14.95 \text{ in.} - (0.2 \times 2.93 \text{ in.}))^2}{(14.95 \text{ in.} + (0.8 \times 2.93 \text{ in.}))}$

$= (14.95 \text{ in.} - 0.59 \text{ in.})^2 / (14.95 \text{ in.} + 2.34 \text{ in.})$

$= (14.36 \text{ in.})^2 / 17.29 \text{ in.}$

= 11.9 in. of runoff from the 25-year 3-day storm.

c. Runoff volume

= inches of runoff x site area

= 11.9 in. x 95 ac x 1 ft/12 in.

= 94.2 ac-ft runoff volume.

2. The zero-discharge stage corresponding to 94.2 ac-ft is 10.8' NGVD.

3. The maximum design head would then be 10.8' NGVD - 6.5' NGVD = 4.3'. Therefore, try a design head of 4.0 ft for sizing the weir.

4. Compute weir length.

a. Basic equation is $Q = 3.13LH^{1.5}$

b. Rearranged, $L = Q/(3.13 \times (H)^{1.5})$

Where: L = weir length, ft
Q = design discharge, cfs
H = design head on weir, ft

c. If Q = 37 cfs and H = 4 ft, then

$L = 37 \text{ cfs}/(3.13 \times (4 \text{ ft})^{1.5})$

$= 37/(3.13 \times 8.0)$

$= 37/25.04$

= say, 1.5 ft weir length.

F. Size the control structure detention discharge weir.

1. Criteria

   a. A V-notch is desirable.

   b. A triangular or circular orifice may be necessary.

   c. Size the weir (or orifice), to discharge no more than 0.5 inch of the detention volume in 24 hours.

2. Volume to be discharged in the first 24 hours is 0.5 inch of the required detention.

   = 0.5 in. x (total site - lakes)

   = 0.5 in. x (95 ac - 10 ac) x (1 ft/12 in.)

   = 3.5 ac-ft.

3. Design head

   = weir crest elevation - control elevation

   = 6.5' NGVD - 5.5' NGVD

   = 1 ft.

4. From the "Required V-Notch Size" design aid, for a total head of 1 ft and a desired detention volume of 3.5 ac-ft to be discharged in 24 hours, an angle of about 120 degrees is required.

   This would result in a V-notch weir with a width at elevation 6.5' NGVD greater than the 1.5 ft required for the sharp-crested weir. For various reasons, it is deemed unacceptable to alter other segments of the project until all reasonable control structure design possibilities have been exhausted.

   One approach is to utilize the 1.5-ft long sharp-crested weir and a V-notch weir with an angle considerably less than the 120° required to obtain the maximum discharge rate of the required quality detention volume. This will result in a maximum discharge rate less than that allowed.

   Since the minimum acceptable V-notch invert angle is 20°, the structure will incorporate that feature.

5. In order to avoid culvert control of the discharge, the outfall pipe from the control structure to the receiving body is recommended to be sized so as to pass the allowable design flow at about one-half of the estimated design head. For this project, the design head is four feet, so the culvert will be sized to pass 37 cfs at two feet of head along about 400 l.f. of circular concrete pipe flowing full. From other sources, a 30" diameter culvert should be sufficient.

6. The outfall structure will consist of a baffle, a 20° V-notch weir, a 1.5 ft long sharp-crested weir, and 400 l.f. of RCP culvert, as shown in Figure XG-3.

IV. Check storm stages and discharges.

A. Minimum building floor elevation.

1. The rainfall of the 100-year 3-day storm

= (1-day amount) x 1.359

= 14.0 in. x 1.359

= 19.0 in.

2. Inches of runoff, Q

$= (P - (0.2 \times S))^2 / (P + (0.8 \times S))$

$= (19.0 \text{ in.} - (0.2 \times 2.93 \text{ in.}))^2 / (19.0 \text{ in.} + (0.8 \times 2.93 \text{ in.}))$

$= (19.0 \text{ in.} - 0.6 \text{ in.})^2 / (19.0 \text{ in.} + 2.3 \text{ in.})$

$= (18.4 \text{ in.})^2 / 21.3 \text{ in.}$

= 15.89 in. of runoff.

3. Volume of runoff

= (in. of runoff) x (project area)

= 15.89 in. x 95 ac x 1 ft / 12 in.

= 125.8 ac-ft required storage (zero discharge).

4. From the stage-storage curve, 125.8 ac-ft corresponds to an elevation of 11.3' NGVD. Since the proposed minimum floor elevation is 11.5' NGVD,

the proposed minimum floor is acceptable.

MULTI-FAMILY RESIDENTIAL SITE OUTFALL STRUCTURE
(N.T.S.)

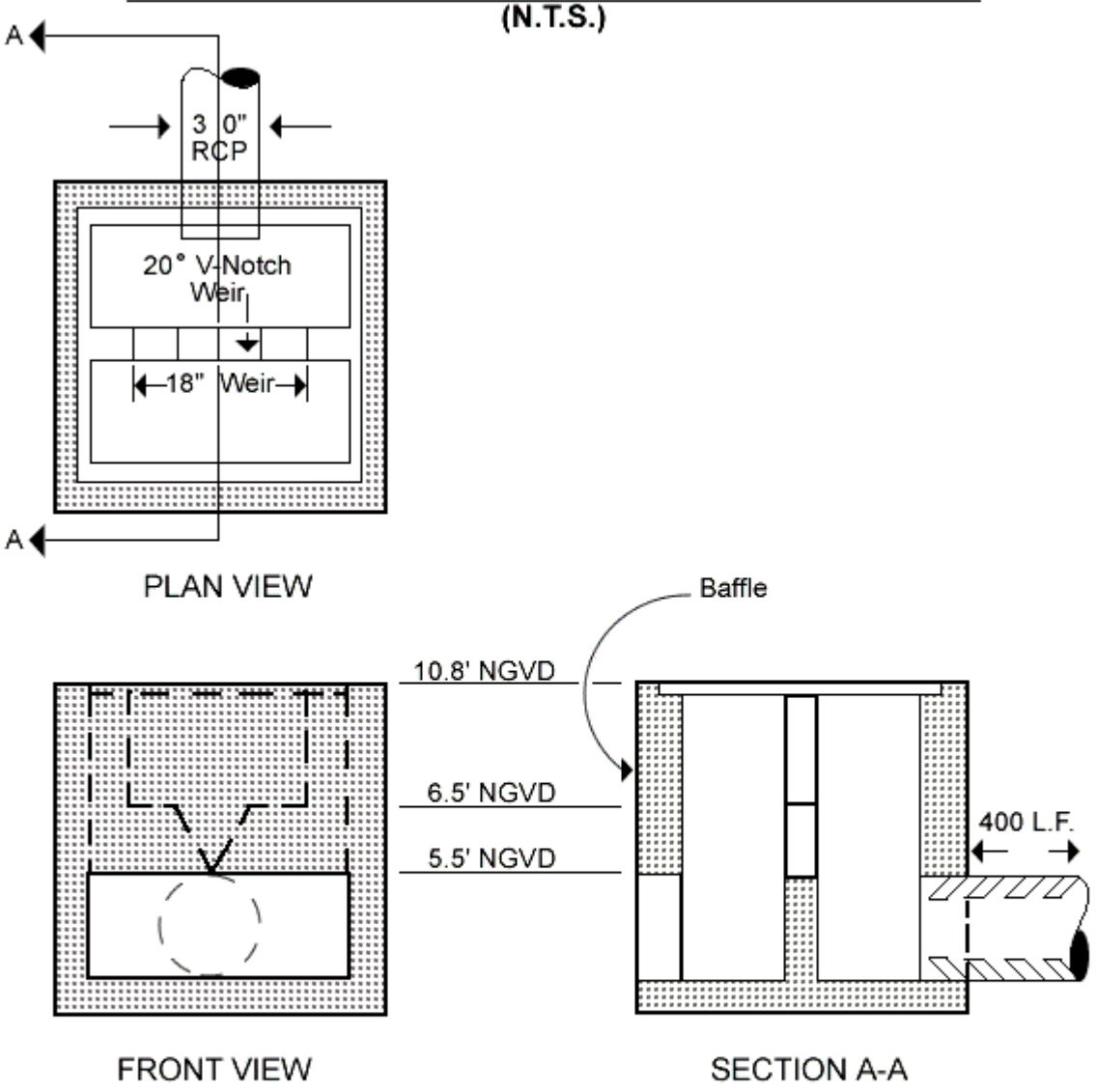


Figure XG-3

B. Roads versus local criteria

1. The minimum road grade must be at least 2 feet above control elevation, which is 5.5' NGVD. Since minimum proposed road elevation is 9.0' NGVD, the criteria are satisfied.

2. The minimum road grade must also be no lower than the peak of the 10-year 1-day storm, a local criteria. From the flood routing of that event, a peak elevation of 9.0' NGVD (to the nearest tenth of a foot) will occur. (See pages XG-14 and XG-15.) Since the proposed minimum road elevation is 9.0' NGVD,

<u>the proposed minimum road elevation is acceptable.</u>

C. Allowable peak discharge

1. The allowable peak discharge is 37 cfs. From the flood routing of that event, a peak discharge of 35.1 cfs will occur. (See pages XG-16, -17, and -18.) Since the routed peak discharge is less than that allowed,

<u>the proposed outfall structure design is adequate.</u>

Project Name: Volume IV Examples
Reviewer: User
Project Number: Multi-family Residential Site
Period Begin: Jan 01, 2000;0000 hr End: Jan 02, 2000;1100 hr Duration: 35 hr
Time Step: 0.2 hr, Iterations: 10

Basin 1: Multi-family Residential Project

Method: Santa Barbara Unit Hydrograph
Rainfall Distribution: SFWMD - 24 hr
Design Frequency: 10 year
1 Day Rainfall: 9 inches
Area: 95 acres
Ground Storage: 2.93 inches
Time of Concentration: 0.6 hours
Initial Stage: 5.5 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
5.50	0.00
6.50	10.00
7.50	20.00
8.50	30.00
9.00	35.00
9.50	43.20
10.00	57.60
10.50	78.40
11.00	105.50
11.50	138.80

Offsite Receiving Body: Receiving Body

Time (hr)	Stage (ft NGVD)
0.00	0.00
4000.00	0.00

Structure: 1

From Basin: Multi-family Residential Project
To Basin: Receiving Body
Structure Type: Gravity
Weir: Sharp Crested, Crest Elev = 6.5 ft NGVD, Length = 1.5 ft
Bleeder: V-Notch, Invert Elev = 5.5 ft NGVD, Top Elev = 6.5 ft NGVD
Angle = 20 deg
Default Coefs: Weir Coef = 2.5, Orifice Coef = 0.6
Pipe: Diameter = 2.5 ft, Manning's n = 0.012, Length = 400 ft
US Invert Elev = 3 ft NGVD, DS Invert Elev = 3 ft NGVD, no flap gate

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	5.50	0.00
1.00	0.09	0.00	0.00	0.00	5.50	0.00
2.00	0.18	0.00	0.00	0.00	5.50	0.00
3.00	0.29	0.00	0.00	0.00	5.50	0.00
4.00	0.41	0.00	0.00	0.00	5.50	0.00
5.00	0.56	0.00	0.00	0.00	5.50	0.00
6.00	0.75	0.88	0.00	0.00	5.50	0.00
7.00	0.97	3.31	0.00	0.00	5.52	0.00
8.00	1.23	6.58	0.00	0.00	5.56	0.00
9.00	1.54	10.83	0.00	0.00	5.63	0.00
10.00	1.92	16.79	0.01	0.00	5.74	0.00
11.00	2.42	27.47	0.05	0.00	5.92	0.00

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
12.00	5.90	283.20	1.42	0.04	6.79	0.00
13.00	6.90	114.34	12.39	0.72	8.28	0.00
14.00	7.36	52.68	17.65	2.04	8.79	0.00
15.00	7.65	29.87	19.51	3.61	8.96	0.00
16.00	7.92	24.87	20.09	5.25	9.01	0.00
17.00	8.08	16.28	20.05	6.91	9.01	0.00
18.00	8.24	14.68	19.66	8.55	8.97	0.00
19.00	8.41	14.41	19.20	10.16	8.93	0.00
20.00	8.57	14.39	18.78	11.72	8.89	0.00
21.00	8.68	10.51	18.18	13.24	8.84	0.00
22.00	8.78	9.79	17.47	14.71	8.77	0.00
23.00	8.89	9.66	16.81	16.12	8.71	0.00
24.00	9.00	9.65	16.20	17.48	8.66	0.00
25.00	9.00	1.82	15.25	18.78	8.57	0.00
26.00	9.00	0.34	14.08	19.98	8.45	0.00
27.00	9.00	0.07	12.98	21.09	8.34	0.00
28.00	9.00	0.01	11.98	22.11	8.24	0.00
29.00	9.00	0.00	11.08	23.06	8.14	0.00
30.00	9.00	0.00	10.27	23.93	8.05	0.00
31.00	9.00	0.00	9.53	24.74	7.97	0.00
32.00	9.00	0.00	8.87	25.50	7.90	0.00
33.00	9.00	0.00	8.26	26.20	7.83	0.00
34.00	9.00	0.00	7.71	26.85	7.76	0.00
35.00	9.00	0.00	7.21	27.47	7.70	0.00

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	20.13	16.40	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Multi-family R	9.01	16.40	5.50	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Multi-family R	49.39	0.00	27.40	0.00	21.99	0.00

Project Name: Volume IV Examples
Reviewer: User
Project Number: Multi-family Residential Site
Period Begin: Jan 01, 2000;0000 hr End: Jan 04, 2000;2300 hr Duration: 95 hr
Time Step: 0.2 hr, Iterations: 10

Basin 1: Multi-family Residential Project

Method: Santa Barbara Unit Hydrograph
Rainfall Distribution: SFWMD - 3day
Design Frequency: 25 year
1 Day Rainfall: 11 inches
Area: 95 acres
Ground Storage: 2.93 inches
Time of Concentration: 0.6 hours
Initial Stage: 5.5 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
5.50	0.00
6.50	10.00
7.50	20.00
8.50	30.00
9.00	35.00
9.50	43.20
10.00	57.60
10.50	78.40
11.00	105.50
11.50	138.80

Offsite Receiving Body: Receiving Body

Time (hr)	Stage (ft NGVD)
0.00	0.00
4000.00	0.00

Structure: 1

From Basin: Multi-family Residential Project
To Basin: Receiving Body
Structure Type: Gravity
Weir: Sharp Crested, Crest Elev = 6.5 ft NGVD, Length = 1.5 ft
Bleeder: V-Notch, Invert Elev = 5.5 ft NGVD, Top Elev = 6.5 ft NGVD
Angle = 20 deg
Default Coefs: Weir Coef = 2.5, Orifice Coef = 0.6
Pipe: Diameter = 2.5 ft, Manning's n = 0.012, Length = 400 ft
US Invert Elev = 3 ft NGVD, DS Invert Elev = 3 ft NGVD, no flap gate

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
0.00	0.00	0.00	0.00	0.00	5.50	0.00
1.00	0.07	0.00	0.00	0.00	5.50	0.00
2.00	0.13	0.00	0.00	0.00	5.50	0.00
3.00	0.20	0.00	0.00	0.00	5.50	0.00
4.00	0.27	0.00	0.00	0.00	5.50	0.00
5.00	0.33	0.00	0.00	0.00	5.50	0.00
6.00	0.40	0.00	0.00	0.00	5.50	0.00
7.00	0.47	0.00	0.00	0.00	5.50	0.00
8.00	0.54	0.00	0.00	0.00	5.50	0.00
9.00	0.60	0.01	0.00	0.00	5.50	0.00
10.00	0.67	0.20	0.00	0.00	5.50	0.00
11.00	0.74	0.45	0.00	0.00	5.50	0.00

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
12.00	0.80	0.71	0.00	0.00	5.51	0.00
13.00	0.87	0.94	0.00	0.00	5.52	0.00
14.00	0.94	1.17	0.00	0.00	5.52	0.00
15.00	1.00	1.38	0.00	0.00	5.53	0.00
16.00	1.07	1.57	0.00	0.00	5.55	0.00
17.00	1.14	1.76	0.00	0.00	5.56	0.00
18.00	1.20	1.94	0.00	0.00	5.58	0.00
19.00	1.27	2.10	0.00	0.00	5.59	0.00
20.00	1.34	2.26	0.00	0.00	5.61	0.00
21.00	1.41	2.41	0.00	0.00	5.63	0.00
22.00	1.47	2.55	0.00	0.00	5.65	0.00
23.00	1.54	2.68	0.01	0.00	5.67	0.00
24.00	1.61	2.81	0.01	0.00	5.69	0.00
25.00	1.70	4.07	0.01	0.00	5.72	0.00
26.00	1.80	4.49	0.02	0.00	5.76	0.00
27.00	1.90	4.75	0.02	0.00	5.80	0.00
28.00	2.00	4.97	0.03	0.01	5.84	0.00
29.00	2.09	5.16	0.04	0.01	5.88	0.00
30.00	2.19	5.34	0.05	0.01	5.92	0.00
31.00	2.29	5.51	0.07	0.02	5.97	0.00
32.00	2.39	5.67	0.08	0.02	6.01	0.00
33.00	2.48	5.82	0.10	0.03	6.06	0.00
34.00	2.58	5.96	0.13	0.04	6.11	0.00
35.00	2.68	6.09	0.15	0.05	6.15	0.00
36.00	2.78	6.22	0.18	0.07	6.20	0.00
37.00	2.88	6.33	0.22	0.08	6.25	0.00
38.00	2.97	6.44	0.26	0.10	6.31	0.00
39.00	3.07	6.55	0.30	0.13	6.36	0.00
40.00	3.17	6.65	0.35	0.15	6.41	0.00
41.00	3.27	6.74	0.40	0.19	6.46	0.00
42.00	3.36	6.83	0.50	0.22	6.51	0.00
43.00	3.46	6.92	0.61	0.27	6.57	0.00
44.00	3.56	7.00	0.76	0.33	6.62	0.00
45.00	3.66	7.07	0.92	0.40	6.67	0.00
46.00	3.75	7.15	1.11	0.48	6.72	0.00
47.00	3.85	7.22	1.31	0.59	6.77	0.00
48.00	3.95	7.28	1.52	0.70	6.82	0.00
49.00	4.06	8.11	1.76	0.84	6.87	0.00
50.00	4.17	8.32	2.01	1.00	6.92	0.00
51.00	4.30	9.80	2.32	1.18	6.98	0.00
52.00	4.44	11.12	2.67	1.39	7.04	0.00
53.00	4.63	14.27	3.15	1.63	7.12	0.00
54.00	4.86	17.87	3.80	1.92	7.23	0.00
55.00	5.14	21.64	4.66	2.28	7.36	0.00
56.00	5.46	25.53	5.76	2.72	7.51	0.00
57.00	5.83	30.57	7.14	3.26	7.69	0.00
58.00	6.29	37.93	8.96	3.94	7.91	0.00
59.00	6.91	52.27	11.50	4.80	8.19	0.00
60.00	11.16	406.34	23.03	6.15	9.26	0.00
61.00	12.39	156.72	32.73	8.63	10.02	0.00
62.00	12.95	69.97	34.62	11.45	10.16	0.00
63.00	13.30	38.96	35.07	14.34	10.20	0.00
64.00	13.63	32.11	35.06	17.24	10.20	0.00
65.00	13.83	20.94	34.79	20.12	10.18	0.00
66.00	14.02	18.84	34.38	22.98	10.15	0.00
67.00	14.22	18.45	33.96	25.80	10.12	0.00
68.00	14.42	18.39	33.55	28.59	10.08	0.00
69.00	14.55	13.42	33.06	31.34	10.05	0.00
70.00	14.69	12.48	32.53	34.04	10.01	0.00
71.00	14.82	12.31	31.82	36.70	9.96	0.00
72.00	14.95	12.28	31.10	39.29	9.90	0.00
73.00	14.95	2.32	30.17	41.82	9.83	0.00
74.00	14.95	0.44	29.10	44.26	9.75	0.00
75.00	14.95	0.08	28.06	46.61	9.67	0.00
76.00	14.95	0.02	27.06	48.88	9.59	0.00
77.00	14.95	0.00	26.10	51.07	9.51	0.00

Time (hr)	Cumulative Rainfall (in)	Instant Runoff (cfs)	Current Discharge (cfs)	Cumulative Discharge (acre-ft)	Head Water Stage (ft NGVD)	Tail Water Stage (ft NGVD)
78.00	14.95	0.00	24.64	53.16	9.39	0.00
79.00	14.95	0.00	23.18	55.12	9.27	0.00
80.00	14.95	0.00	21.84	56.97	9.16	0.00
81.00	14.95	0.00	20.60	58.71	9.05	0.00
82.00	14.95	0.00	19.11	60.35	8.92	0.00
83.00	14.95	0.00	17.45	61.85	8.77	0.00
84.00	14.95	0.00	15.97	63.21	8.63	0.00
85.00	14.95	0.00	14.65	64.47	8.51	0.00
86.00	14.95	0.00	13.48	65.62	8.39	0.00
87.00	14.95	0.00	12.43	66.68	8.28	0.00
88.00	14.95	0.00	11.48	67.66	8.19	0.00
89.00	14.95	0.00	10.63	68.57	8.09	0.00
90.00	14.95	0.00	9.86	69.41	8.01	0.00
91.00	14.95	0.00	9.16	70.19	7.93	0.00
92.00	14.95	0.00	8.53	70.91	7.86	0.00
93.00	14.95	0.00	7.96	71.59	7.79	0.00
94.00	14.95	0.00	7.44	72.22	7.73	0.00
95.00	14.95	0.00	6.96	72.81	7.67	0.00

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
1	35.09	63.40	0.00	0.00

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Multi-family R	10.20	63.40	5.50	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Multi-family R	94.41	0.00	72.74	0.00	21.67	0.00

Design Example
for
Distance from Public Water Supply Wells

DESIGN EXAMPLE

FOR

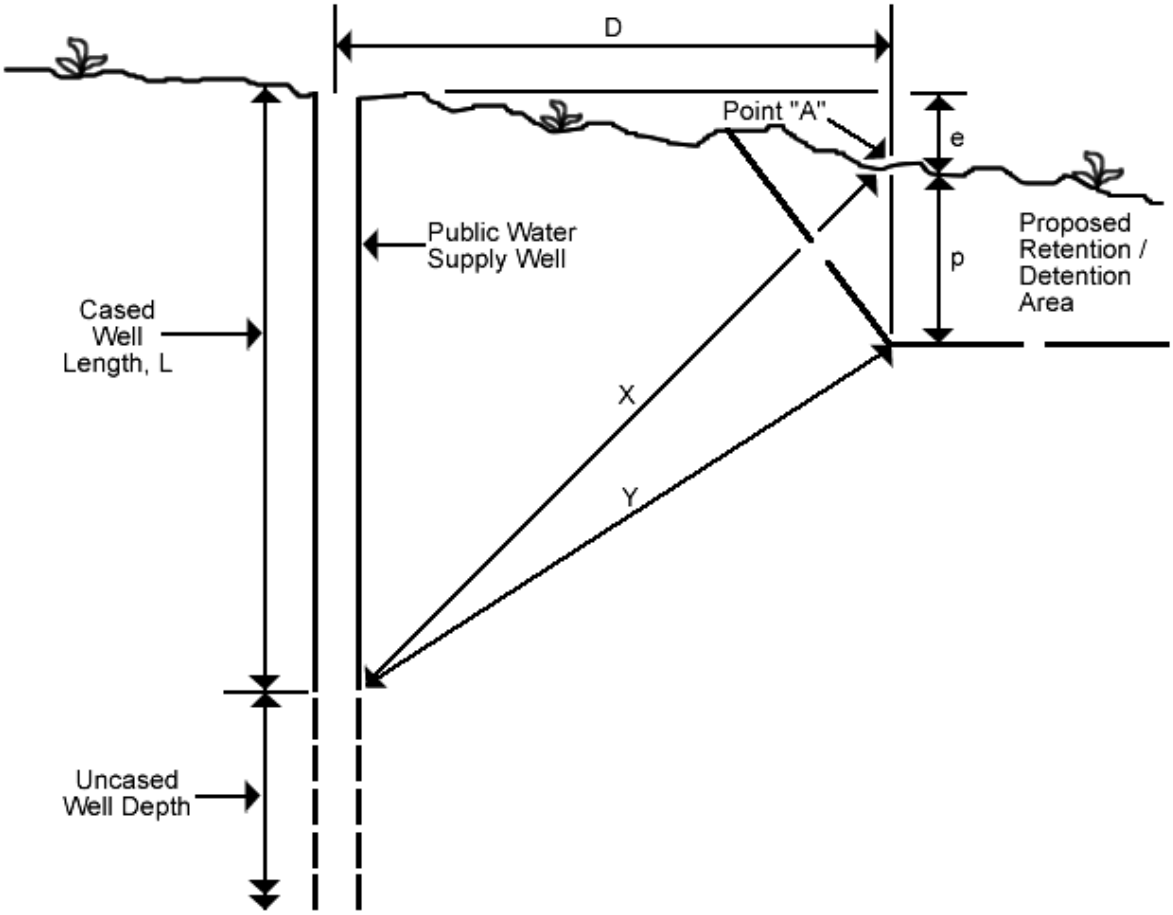
DISTANCE FROM PUBLIC WATER SUPPLY WELLS

In paragraph 5.2.2(e) of the *Basis of Review*, it is stated that:

> Retention/detention area locations shall not reduce hydraulic recharge distances to public water supply wells in excess of 2 percent, nor shall wet retention/detention areas be closer to public water supply wells than 300 feet.

Given below is an example of how to incorporate this criteria.

SITE ELEVATION VIEW
N.T.S.



I. Given

A. A public water supply well.

1. Cased a known length, L.

2. At a known ground surface elevation.

B. A proposed retention/detention area with a proposed maximum depth, p, measured at Point "A" nearest the well.

C. A difference, e, in elevation between the well top and Point "A".

D. No aquiclude interference.

II. Required

A. That D be at least 300 feet.

B. That Y be greater than, or equal to, 0.98 of X.

III. Computations

A. To assure that D be at least 300 feet is simply a matter of properly positioning the various elements of the project within the site.

B. Check that Y is greater than, or equal to, 0.98X.

1. Compute distance X.

a. If Point "A" is lower than the well top:
From the trigonometry of a right triangle:

$$X^2 = (L-e)^2 + D^2$$
so: $$X = ((L-e)^2 + D^2)^{0.5}$$

b. If Point "A" is higher than the well top:
From the trigonometry of a right triangle:

$$X^2 = (L+e)^2 + D^2$$
so: $$X = ((L+e)^2 + D^2)^{0.5}$$

2. Compute distance Y

a. If Point "A" is lower than the well top:
From the trigonometry of a right triangle:

$$Y^2 = (L - (p + e))^2 + D^2$$
so: $$Y = ((L - (p + e))^2 + D^2)^{0.5}$$

b. If Point “A” is higher than the well top:
From the trigonometry of a right triangle:

$$Y^2 = (L - (p - e))^2 + D^2$$

so: $$Y = ((L - (p - e))^2 + D^2)^{0.5}$$

3. Compute 0.98 of distance X.

4. If Y is greater than, or equal to, 0.98X, the retention/detention depth and location meet the criteria of paragraph 5.2.2(e).

5. If Y is less than 0.98X, a redesign of the retention/detention area is required. This could involve – among other things – any, or all, of the following:

   a. Move the area father from the well.

   b. Move the area to a place with different ground elevations.

   c. Design the lake less deep.

Post-permit Considerations

POST-PERMIT CONSIDERATIONS

POST-PERMIT CONSIDERATIONS

The section **Maintenance of Surface Water Management Systems** lists typical system components and provides some very generalized guidance on the maintenance of each one.

A section on the long-term **Management and Maintenance of Environmental Areas** is included to assist permittees with post-permit compliance issues associated with wetland preservation and mitigation areas.

A copy of the ***Environmental Monitoring Report Guidelines*** is included for ease of reference. This document has been in use for several years throughout the District and provides guidance for permittees in conducting wetland monitoring programs which have been required as a condition of an Environmental Resource Permit.

Maintenance of
Surface Water Management Systems

MAINTENANCE OF SURFACE WATER MANAGEMENT SYSTEMS

The efficiency of a surface water management system will normally decrease over time unless the system is periodically maintained. A significant reduction in flow capacity can usually be attributed to partial blockages of the conveyance system. Once flow capacity is compromised, flooding of the project may result. The following is a list of maintenance items that should be performed as necessary in order to ensure that the surface water management system operates as designed. This list, or one similar in nature, should be given to the property/homeowners association at the time they accept responsibility for operation and maintenance of the surface water management system.

SWALES

Once a grassed swale has been constructed properly, the only routine maintenance required is mowing. Additional work may be required since it is normal for the bottom of the swale to fill in slowly over time due to the accumulation of particulate matter settling out of the stormwater runoff. The centerline elevation of the swale should be maintained no higher than the minimum elevation of any upstream driveway aprons through the swale.

The optimum time to inspect the grade of a swale is during a rainfall event immediately after the swale has been mowed. If the swale bottom is too high, it can cause water to be ponded upstream. Water can also accumulate if the bottom of the swale is significantly lower than the elevation of any downstream aprons. Ponded water is not necessarily bad, unless soil conditions hinder percolation. If percolation is poor, swale maintenance is critical for proper operation of the drainage system.

Certain common practices can actually accelerate the need for swale maintenance. When a swale is planted with trees and shrubs, the plantings can impact the treatment volume and the rate of flow. Shrubs and trees placed in swales should be along the swale edges as opposed to along the centerline.

In many areas, individuals park vehicles within the swales. This practice can be detrimental in several ways. Petroleum products leaking from motor vehicles parked in swales can enter the water management system. If the grass dies from exposure to these products, soil erosion can result. Eroded areas should be resodded as soon as possible. In addition to contamination, the weight of a vehicle can alter the grade of the swale if the ground is saturated. If this occurs, the proper grade can usually be easily reestablished while the ground is still soft.

STORMWATER INLETS

Most stormwater inlets are fitted with a grate to prevent the introduction of debris into the stormwater pipe system. The grates should be inspected periodically and any accumulated debris removed. Over a period of time, sediment can build up within the bottom of inlet structures. If the sediment is not removed, it can migrate into the pipe system. Sediment can be easily removed from the inlet structure, but once it begins to build up in the pipe system, flushing or vacuuming may be required in order to remove it.

DETENTION/RETENTION AREAS

All pipe entrances and exits should be inspected to ensure that they are not buried beneath debris, soil or vegetation. Any blockages should be removed. If any bare soil is exposed, it should be stabilized (such as with sod, etc.) to prevent erosion. Dry water management areas should be mowed regularly. Water control structures should be inspected to ensure that any v-notches, slots, orifices or other control devices are not blocked by debris.

CULVERTS

The ends of culverts need to remain clear of blockages. If the culvert is crushed, it should be restored to original dimensions. Corrugated metal pipe culverts can rust over time. This is usually evident by the creation of a small depression immediately above the faulty pipe. The depression is caused by soil falling into the pipe. If the depression is filled, it will continue to reappear. When this situation occurs, the pipe should be excavated and repaired or replaced, depending on the extent of the corrosion.

OUTFALL STRUCTURES

Each outfall structure (also called the discharge control structure) and associated baffles or other trash collectors should be periodically inspected to ensure it is neither blocked by debris nor in need of repair. Any blockages should be removed. Structure elevations and dimensions should be annually compared to current permit information and restored to permitted conditions if needed.

(THIS SECTION RESERVED)

Management and Maintenance of Environmental Areas

MANAGEMENT AND MAINTENANCE OF ENVIRONMENTAL AREAS

After a project has been permitted and constructed with a designated environmental preserve area, that area will need to be managed and maintained. Environmental preserve areas may consist of wetland preservation areas, upland buffers, upland preservation areas, wetland mitigation areas, or a combination of these. The management and maintenance needs of environmental areas are not so different from other grounds or landscaped areas within the project, except that the maintenance will likely be much less frequent.

Management Plans

Often a permitted project is turned over to an operating entity other than the original permittee. The permit may require that monitoring reports on mitigation areas be submitted for a specified period of years, that exotic or nuisance vegetation be removed, that a minimum coverage of wetland vegetation be maintained, or that other special conditions be met during the phase of the project for which the operating entity will be responsible. The operating entity should be advised of all permit requirements and financial responsibilities associated with the environmental preserve areas which remain in effect during the operation phase of the project.

It is wise to develop an overall management plan for the preserve areas in the same manner as plans are developed for the maintenance of any common grounds or landscaped areas. Preserve area management plans should specify the responsible entity for implementing the management plan and list all management and maintenance requirements of the environmental preserve areas. These requirements should be clearly spelled out for the operating entity and become a part of any property owners association documents. A management plan that is properly implemented will help to ensure that the project stays in compliance with the permit and special conditions, and help to prevent future problems due to a lack of understanding of the operating entity's responsibilities.

Maintenance

Preserve areas should be kept free from undesirable exotic and nuisance vegetation (such as those listed by the Exotic Pest Plant Council) which may appear over time or encroach from adjacent lands. Landscapes which contain exotic or nuisance vegetation will likely be a continual seed source of unwanted vegetation. If the seed source is not eliminated, it will continue to present a problem for the preserve area and be a continual maintenance issue.

Preserve areas should be kept free of trash and debris. There is a tendency for some people to use open areas, including preserve areas, as dumping grounds for yard trimmings and debris. Sometimes land owners do not know that an area within or adjacent to their property has been designated as an environmental preservation area. Property owners should be notified of the locations or boundaries of all environmental preserves and instructed in the types of activities that can and cannot be conducted there. Posting signs which indicate the

location of preserve areas is a simple and convenient method to reduce encroachment into the preserve areas. Figure PD-1 shows a typical preserve area notification sign and the placement at the preserve boundary

Conservation Easements

When an environmental preserve area is designated as a conservation easement, there are legal restrictions imposed on the activities that can be conducted within the boundaries of the easement. The restricted activities are specified in Subsection 704.06(1), F.S., and are as follows.

"(a) Construction or placing of buildings, roads, signs, billboards or other advertising, utilities, or other structures on or above the ground;
(b) Dumping or placing of soil or other substance or material as landfill or dumping or placing of trash, waste, or unsightly or offensive materials;
(c) Removal or destruction of trees, shrubs, or other vegetation;
(d) Excavation, dredging, or removal of loam, peat, gravel, soil, rock or other material in substance in such manner as to affect the surface;
(e) Surface uses except for purposes that permit the land or water area to remain predominantly in its natural condition;
(f) Activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation;
(g) Acts or uses detrimental to such retention of land or water areas; and
(h) Acts or uses detrimental to the preservation of the structural integrity or physical appearance of sites or properties of historical, architectural, archaeological, or cultural significance."

Environmental Education

Educational brochures, management plans incorporated into association documents, posted signs and the promotion of activities compatible with environmental purposes are useful tools in ensuring compliance with the permit conditions. When the preserve is promoted as an area for observing and photographing wildlife, enjoying the aesthetics and quiet of a natural area, watching butterflies, birding, hiking on nature trails, or other passive recreational activities, it becomes an attraction to be protected.

Providing information to operating entities and property owners via association documents on the types of activities that are permitted and are not permitted in the preserve is important. Notification and education can go a long way toward ensuring the long-term integrity of environmental preserve areas. If the areas are clearly identified, and if efforts are made to educate property and project owners about the importance of the preserve areas, compliance with the Environmental Resource Permit is much more likely.

Post Construction Measures to Prevent Impacts to Wetlands

Use of Signs to Notify Property Owners of Preserve Boundaries

PRESERVE BOUNDARY LINE

No alterations permitted to soil, vegetation or water.

Environmentally Sensitive Area

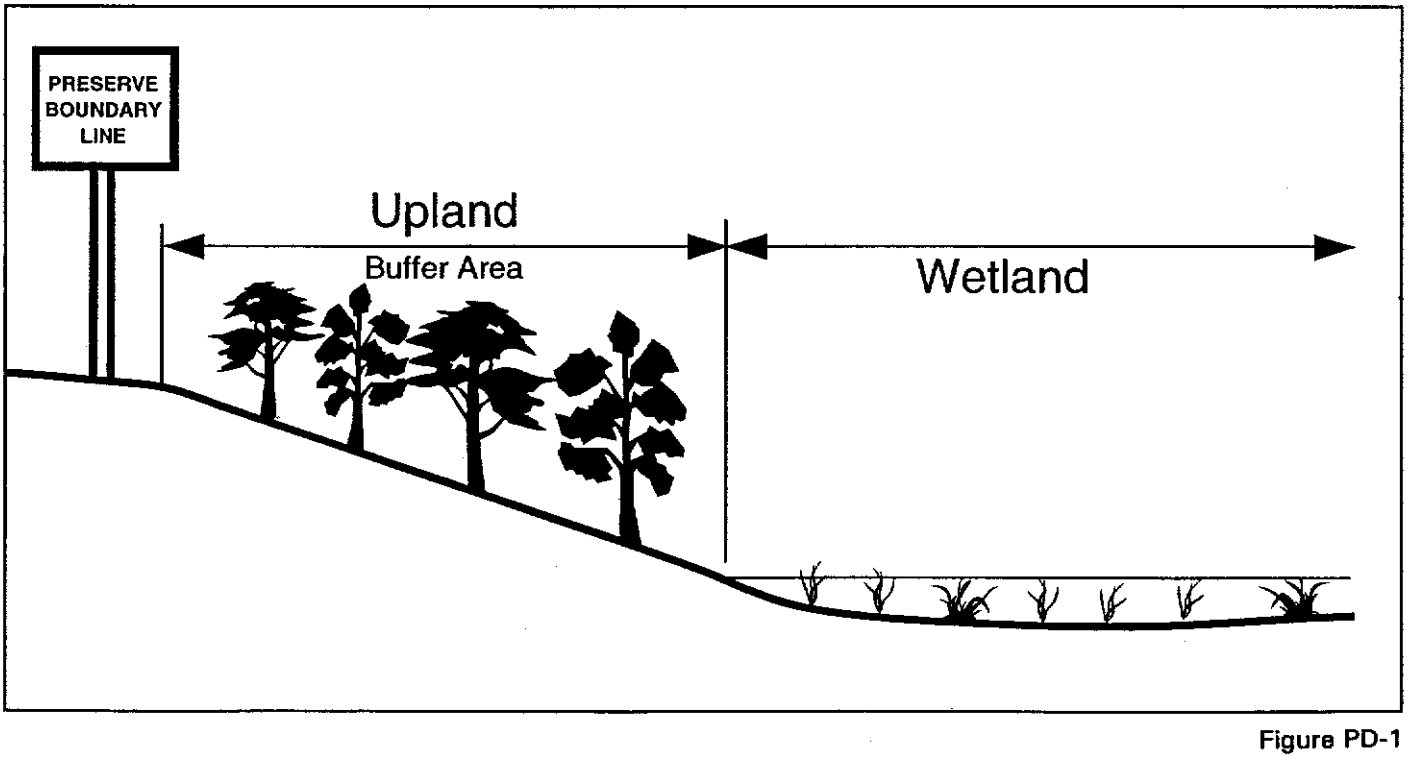


Figure PD-1

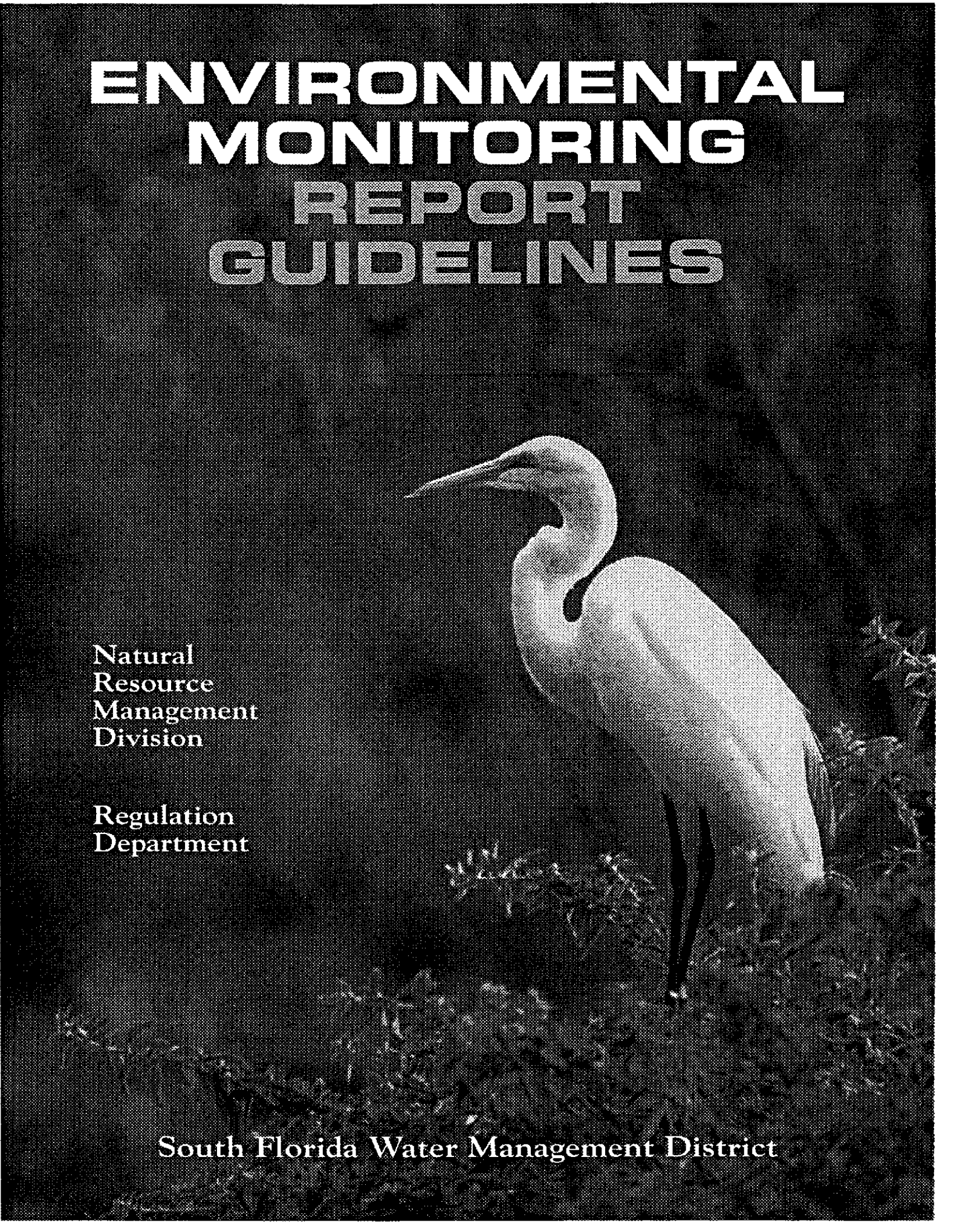
Environmental Monitoring Report Guidelines

INTRODUCTION TO *ENVIRONMENTAL MONITORING REPORT GUIDELINES*

As part of the reasonable assurance that a project with wetland mitigation or preservation will be successful, a permittee will likely be requested to monitor environmental areas within a permitted project. These monitoring requirements are requested pursuant to the *Basis of Review for Environmental Resource Permit Applications,* Section 4.3.4. Submittal of a proposed monitoring plan will typically be requested during the permit application review process. The permit special conditions will specify the length of time and frequency of monitoring for each project requiring environmental monitoring.

The following document contains both the District's recommended guidelines for preparing monitoring reports for environmental areas, and descriptions of the type of information necessary in order to ascertain the compliance status of a project. The guidelines, which have been used for several years throughout all areas of the District, are included here to assist permittees and their consultants in conducting monitoring events and in preparing the reports which are submitted to the District.

ENVIRONMENTAL MONITORING REPORT GUIDELINES



Natural
Resource
Management
Division

Regulation
Department

South Florida Water Management District

TABLE OF CONTENTS

Purpose 3

Typical Cover Page 4

Introduction 4

Site Location and Description 5

Site Location Map (Figure 1)

Detailed Site Map (Figure 2)

Field Sampling Design 6

Typical Wetland Area Monitoring Layout (Figure 3)

Wetland Plan View (Figure 4)

Transect-Elevation Cross-sectional View (Figure 5)

Sampling Methodology 9

Vegetative Sampling

Photographic Documentation

Aquatic Macrofauna Sampling

Fish and Wildlife Observations

Hydrology (Figure 6) (Annual Stage Rainfall & Hydrograph)

Results and Discussion 11

Project Maintenance

Appendices 12

Appendix 1- Water Level Readings Table

Appendix 2 - Photo Stations

PURPOSE

The development of these guidelines were initiated to establish accurate and consistent monitoring report guidelines for the South Florida Water Management District and to provide a standardized report format for the public. Specifically, the report guidelines provide:

- Standardized format which will allow for consistency in reviewing data
- Simplified entry of data into the District's post-permit compliance database
- Useful and consistent information that can be used in determining compliance status and overall success of mitigation projects

Additional enhancements will be added in the future that will provide efficient processing of monitoring reports. One of these enhancements will include the electronic submittal of monitoring reports by permittees.

TYPICAL COVER PAGE

Environmental Monitoring Report

Project name

Permit Number

County, Section, Township & Range

Permittee

Report Number

Date Submitted

Consultant

Consultant Telephone Number

INTRODUCTION

Project Objective (including pertinent environmental special conditions):

Permit Number, Application Number and Issue Date:

Project Construction Schedule:

Monitoring Report Schedule:

SITE LOCATION AND DESCRIPTION

Figure 1. Site Location Map

Map showing specific location and location in relation to regional features (i.e. roads, canals, etc.)

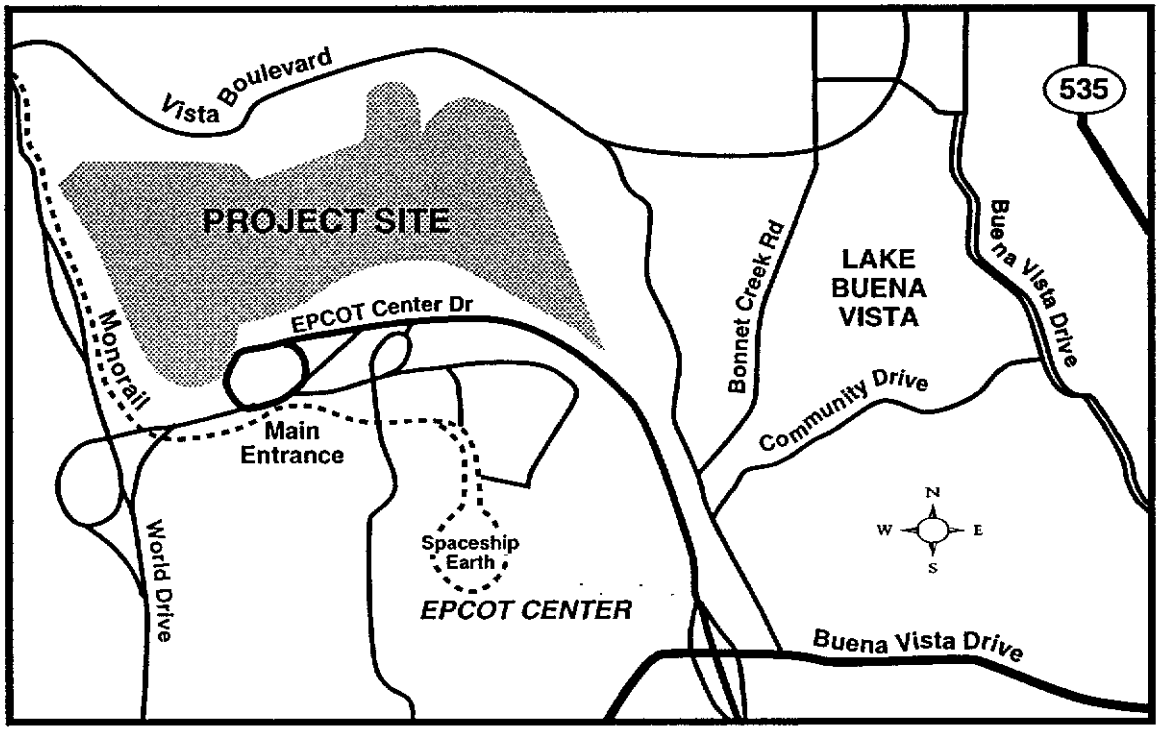
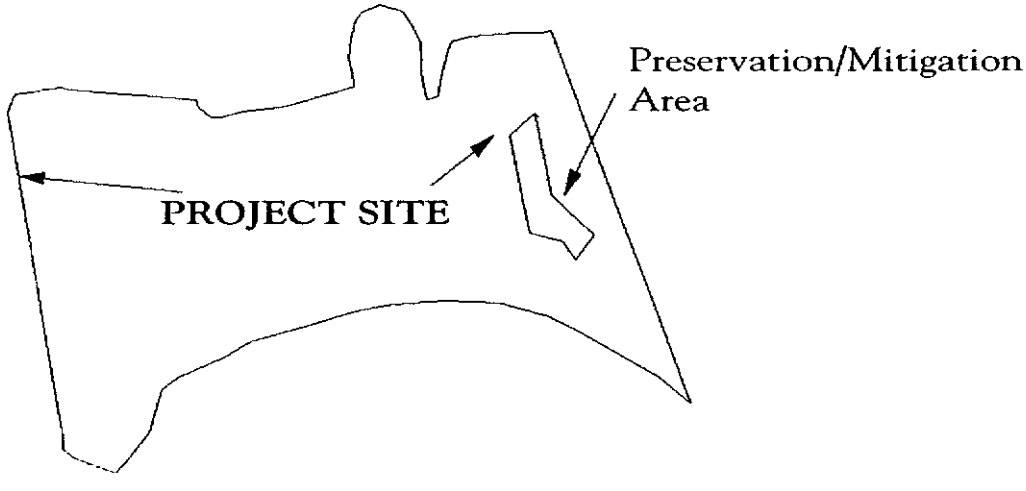


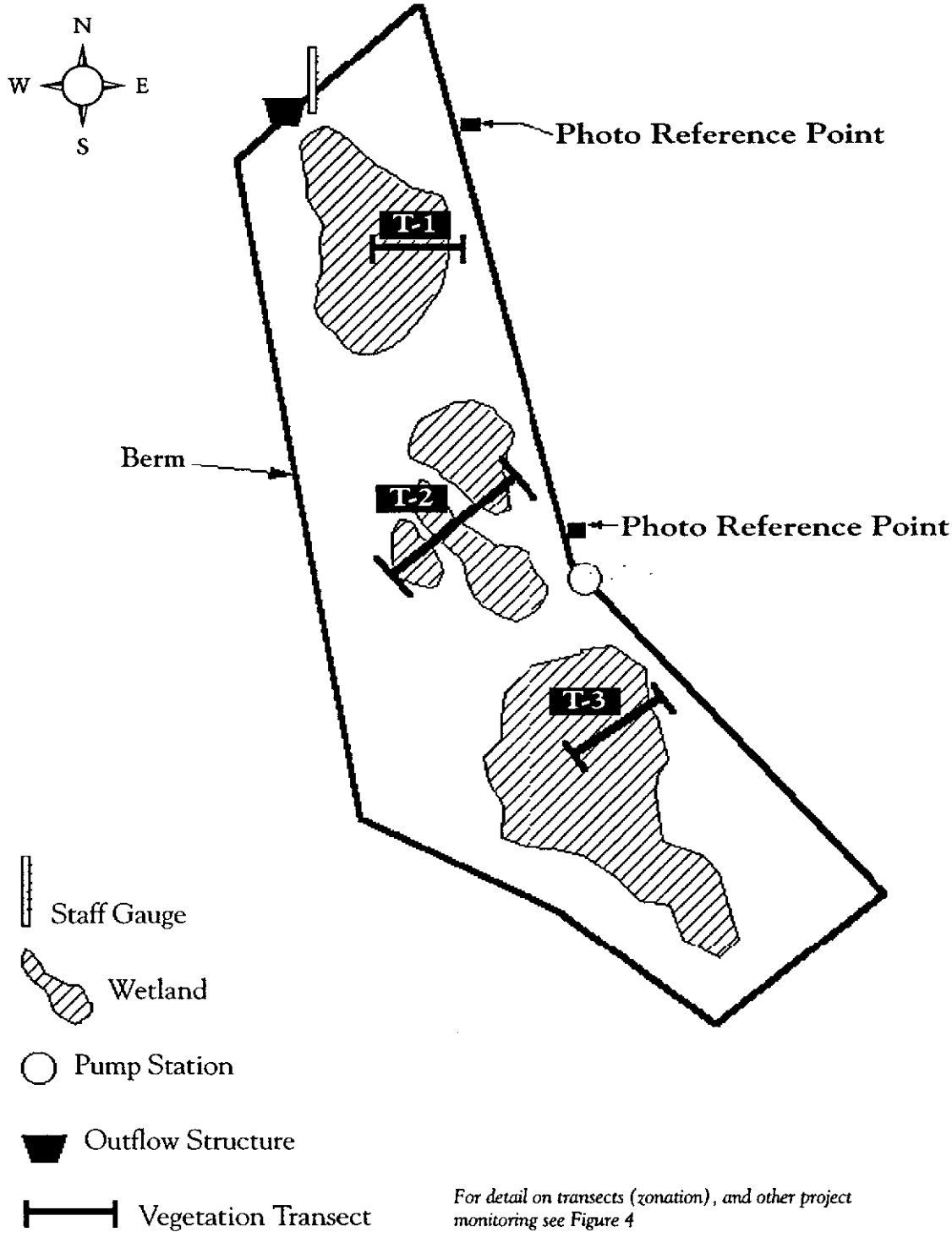
Figure 2. Detailed Site Map

Map showing location of wetland within project.



FIELD SAMPLING DESIGN

Figure 3. Typical Wetland Area Monitoring Layout (Example shows agriculture application.)



For detail on transects (zonation), and other project monitoring see Figure 4

Figure 4. Wetland Plan View showing location of transect through wetland areas to be monitored. (Location of rain gauge, and staff gauge(s) should be provided with each report, where applicable):

Note: For an example of a cross-sectional view see Figure 5

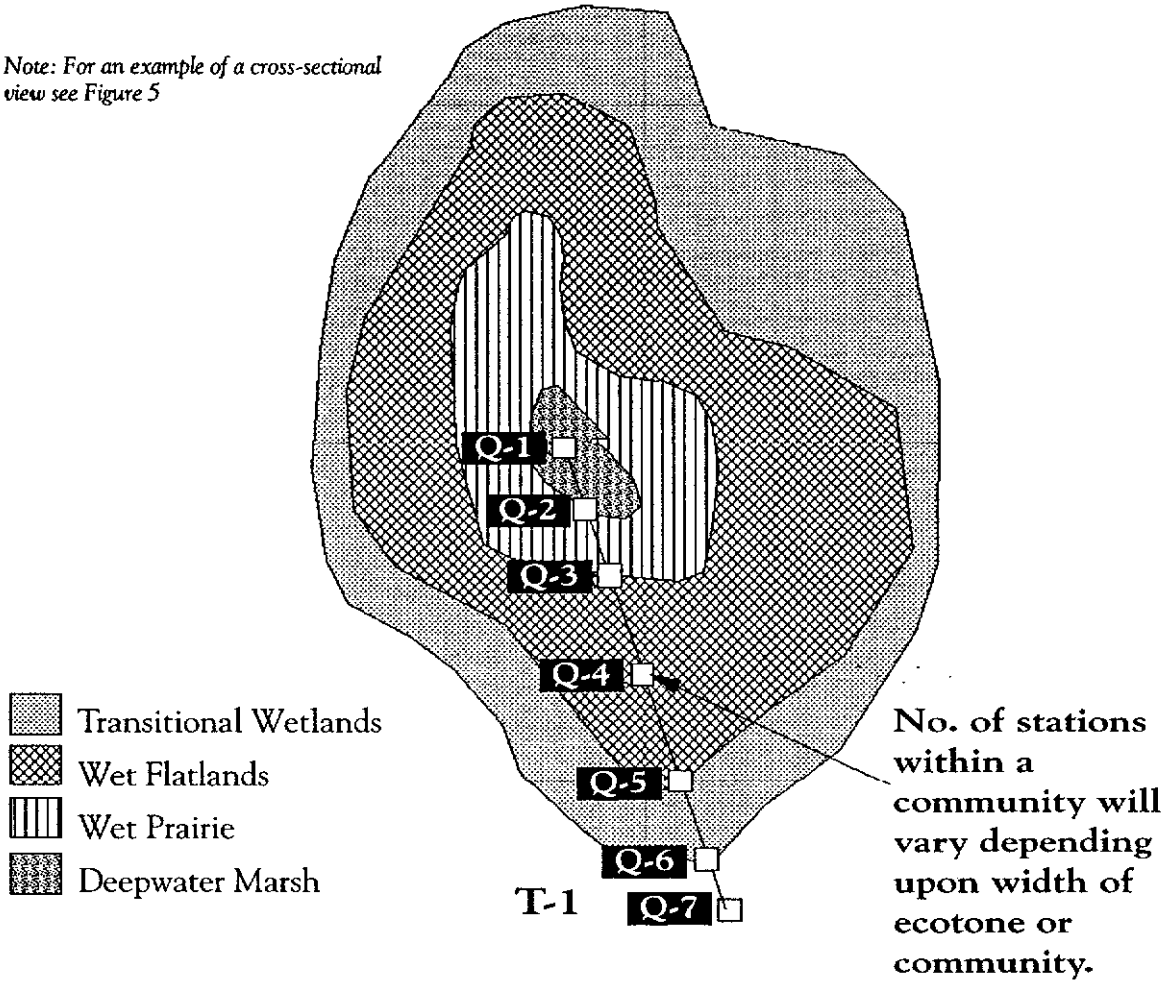
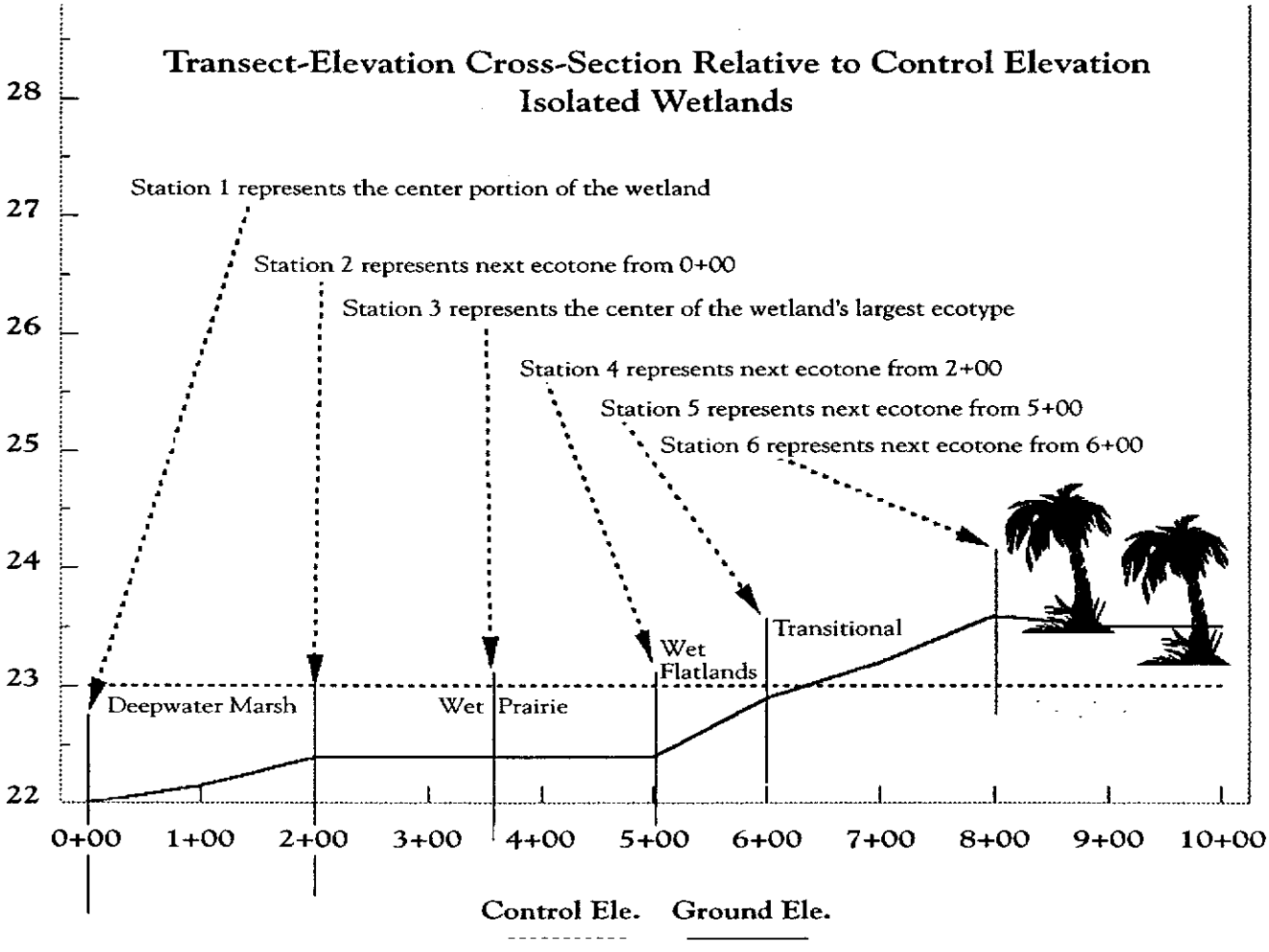


Table applies for each wetland and quadrat to be monitored.

Wetland "X"	Baseline	1st Annual	2nd Annual	3rd Annual	4th Annual	5th Annual
			COVERAGE			
T1-Q1						
Spp.1	%	%	%	%	%	%
Spp.2	%	%	%	%	%	%
Spp.3	%	%	%	%	%	%
Spp.4 (etc.)	%	%	%	%	%	%
T1-Q2 (etc.)						

Comments for Wetland "X": Comments should reflect overall condition of the wetland for each reporting period.

Figure 5. Transect-Elevation Cross-Section Relative to Control Elevation of Wetlands



SAMPLING METHODOLOGY

Each quadrat along the transect should be sized based on the type of community encountered within that ecotone. For example, a quadrat for a mature hardwood swamp should be considerably larger than a wet prairie. Size, location and number of quadrats should remain consistent through all monitoring reports.

Plant species should be categorized by:

*Dominant Species - Composition of 80% or greater
*Other Species - <20% Coverage
*Significant Indicator Species - Individuals or %

Additional Guidelines:

- Transect Stations should be set up from 0+00 to infinity, going from center of wetland out.
- Quadrats should be sized to accurately reflect the community type.
- Report should include survivorship data for planted tree species.
- Individual strata coverage should not exceed 100%

General Description of site condition:

- Land Use, adjacent land use, etc.

Unless specified otherwise by the permit conditions, sampling should be conducted, semiannually (April/May and Sept/October) and reports submitted annually.

Vegetation Sampling

Transect location and Length:
No. of Stations:
Percent Cover calculation methodology:
Community Types or Ecotones:
Water depth at each Station:

Detail: Each vegetative community type should be represented in transect(s). Establish one station at each interface to each ecotone. Depending on the width of the ecotone, intermediate stations may need to be established. Document natural ground elevation at each station. Vegetative species that may indicate shifts in community types (including exotic or invasive plant species) should also be noted. The same transects and stations should be used for all monitoring. Provide Common name, Genus and Species for each.

* *With a breakdown of each species & % coverage*

Photographic Documentation

Date stamped quality photographs should be taken at fixed stations at 90 degrees to the transect. For larger wetlands, panoramic photographs are required. Photographs should be taken during both sampling events.

Aquatic Macrofauna Sampling

Fish (summary):
Macro-invertebrates (summary):
(Include fish and macroinvertebrate tables in appendix)

Detail: Qualitative samples of small forage fishes and aquatic macroinvertebrates (if requested) should be obtained with a dip net, throw net, traps or small seine from inundated portions of the wetland at each habitat category or zone along transect (minimum 2 samples) to document the presence and relative abundance of food chain organisms. Identification to species level for macroinvertebrates and fishes. Macroinvertebrate data collected at the beginning and end of wet season and submitted with monitoring reports.

Fish and Wildlife Observations

Observation type: (i.e. observations, roosting, calls, rooting, rubs, scats & tracks). Observation should be site specific. Utilization of the area by wading birds and other organisms higher in the food chain.

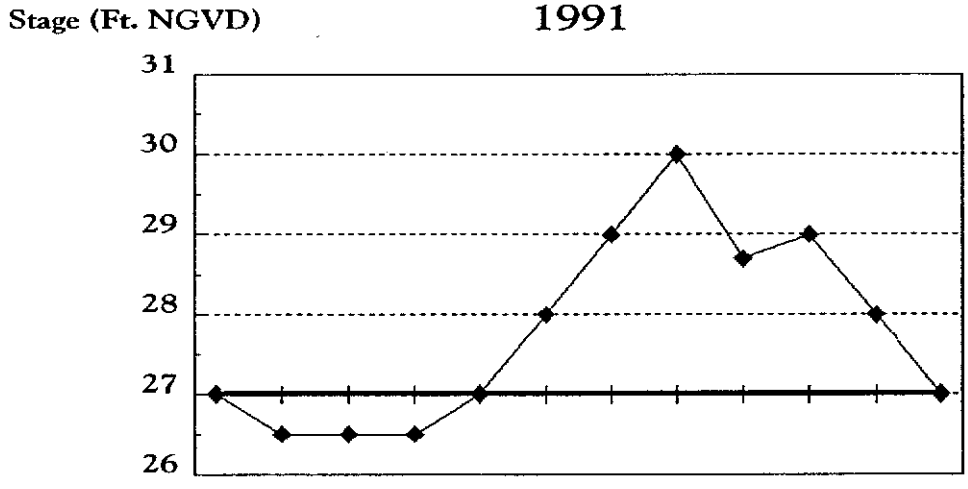
Detail: Provide table in appendix by Common Name, Genus and Species.

Hydrology

Source: (i.e. Rainfall, Surface Water, Pump System, Groundwater)
Total Monthly Rainfall: Rain Gauges should be located on project site or close proximity to site and recorded on a weekly basis (minimum)
Staff Gauge(s) should be located near the water control structure and set to NGVD (at base of staff gauge - Weekly readings)
Hydrographs: See figure 6 (only associated with those projects with control elevations)

Detail: Rainfall should be recorded on a weekly basis with the total monthly provided in the report.

Figure 6. Annual Stage/Rainfall Hydrograph



MONTH	J	F	M	A	M	J	J	A	S	O	N	D
Control Elevation +	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
Water Elevation ◆	27.0	26.5	26.5	26.5	27.0	28.0	29.0	30.0	28.7	29.0	28.0	27.0

For illustration purposes only

Results and Discussion

The results and discussion section should provide a summary of the overall data (i.e. Vegetation, Aquatic Macrofauna, Wildlife and Hydrology, if applicable). Summary should indicate vegetative coverage % of species across entire transect(s). If applicable, survivorship data should be submitted for planted tree species. Summary may also be broken down into the community types or ecotones. Provide an overall summary of site conditions.

Project Maintenance: Wetland maintenance methodology should be submitted with the baseline report* or with the time-zero report upon completion of the mitigation objective (creation, restoration, enhancement or preservation). The plan should address removal of exotic and nuisance plant species (total eradication of exotic plant species and minimum of 10% of all nuisance plant species) and assure an 80% coverage or appropriate survival rate for planted or recruited species. An evaluation of the success of the maintenance effort must be conducted and discussed in the monitoring report. Report should discuss any remediation efforts implemented to bring the project into compliance.

* *Baseline Report - Monitoring conducted prior to construction*
Time Zero Report - Monitoring conducted after completion of initial mitigation planting

Appendix 1. Water Level Reading Table (NGVD)

Weekly Water Level Data (Example)

1994 Wetland1-Staff Gauge 1

June 7 .....25.36
June 14 .....25.82
June 21 .....25.91
June 28 .....28.89

Wetland1-Staff Gauge 1

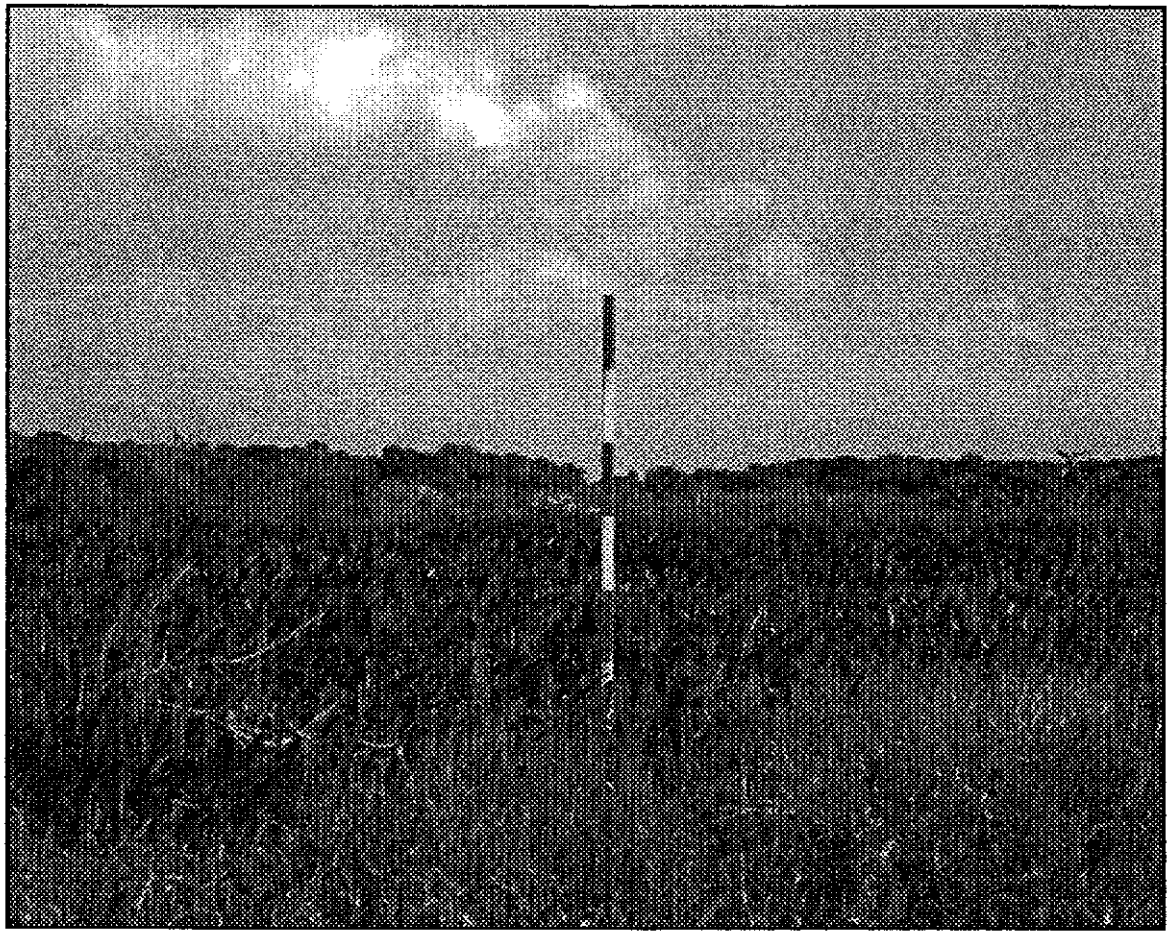
July 5 .....27.05
July 12 .....26.36
July 19 .....27.15
July 26 .....27.06

Wetland1-Staff Gauge 1

Aug 2 .....27.00
Aug 9 .....28.85
Aug 16 .....28.80
Aug 23 .....28.20
Aug 30 .....28.15

Appendix 2. Example of Photo Station

Photo date and time:
Transect or Photo point ID:
Direction:



Index

Index

Above ground impoundments, XA-1, XB-1, XC-1, Appendix 6
  Design example, XC-1
  (See also "Major above ground impoundments" and "Minor above ground impoundments")
Acceptable operating entity, T5-1
Addresses, service centers, 7
Affidavit for Operating Entity Documents, T5-7
Agendas, 28-3
Agreement between SFWMD and DEP, T6-1
Agreement, Delegation of ERP to Broward County, T1-1
Agricultural project, XA-1, XB-1
  Design example, XB-1
  Design storm for flow leaving site, 77, XB-2
  Environmental preservation, XA-1
  Floodplain encroachment, XA-1
  General philosophy, XA-1
  Levee criteria, XB-2
  Non-urban gravity systems, 89
  Off-site flows, XA-2
  Preferred surface water management method, XA-2
  Quality criteria, XA-2
  System design details, XB-6, XB-9
Agricultural site design example, XA-1
  (See also "Major above ground impoundments")
Allowable discharge (See also "Quantity, water")
  C-51 Basin, 41-11
  Formulas, Appendix 2
  Non-urban gravity systems, 89
Application for Development Approval
  With application for conceptual approval, 7
Application processing fees, 1-20
Aquatic preserve(s)
  Water quality monitoring, 73
Aquatic species (See "Listed species")
Association legal requirements
  Condominium, 91
  Construction completion certification, 94
  Contents of required documents, 90
  Documents required, 90
  Homeowners, 90
  Master association, 93
  Necessary powers, 91
  Phased project requirements, 93
  Property owners, 90

Backpumping to Lake Okeechobee or Conservation areas
  Water quality monitoring, 73
Baffles on discharge structures, 82
  Multi-family residential design example, XG-11, XG-12
Bank, mitigation, 49
Bank storage, E-4
Basin maps, B-I
Basin storage, 78
Basis of Review for Environmental Resource Permit Applications Within the South Florida Water Management District, 1
  Above ground impoundments criteria, Appendix 6
  Allowable discharges for South Florida Water Management District canals, Appendix 2
  Antecedent conditions, 86
  Building floors, 77
  Control devices, 83
  Control elevation, 80
  Cumulative impacts, 25
  Definitions, 3
  Design storm, 77
  Detention, 69
  Development of Regional Impact, 7
  Discharge during 100-year storm, 87
  Discharge structures, 82
  Dry areas, 83
  Environmental review criteria, 9
  Exfiltration, 71
  Exfiltration criteria, 85
  Flood plain (conveyance) encroachment, 78
  Formal determination of landward extent of wetlands and other surface waters, 66
  Ground water storage beneath impervious surfaces, 87
  Ground water storage, compacted soils, 87
  Ground water storage, uncompacted soils, 87
  Incorporated by reference into Chapter 40E-4, F.A.C., 4-22
  Lake-wetland separation, 80
  Maintenance access, 84
  Minimum drainage, 78
  Mitigation, 30
  Mitigation banking, 49
  Operating entity requirements, 90
  Overdrainage, 79
  Parking lots, 77
  Passage of offsite flows, 78
  Pre-application meetings, 8
  Rainfall, 86
  Required design information and assumptions, 86
  Retention, 69
  Roads, 77
  Secondary impacts, 23
  Side slopes, 84
  Solid waste facilities, 74
  State standards, 69
  Storage loss (encroachment), 78
  Summary of amendments, i
  System certification and operation, 94
  System design and construction criteria, 82

NOTES:

1) Page numbers which are not hyphenated – for example, "7" or "82" – typically refer either to the "Introduction" section of this manual, or to the *Basis of Review*.
2) "f." means "follows page".

Water and wastewater facilities, 7
Water quality, 69
Water quality monitoring, 72
Water quantity, 77
Wet areas, 83
Wetlands and other surface waters, 9
Basis of Review, 1
Incorporated into Chapter 40E-4, 4-22
Best Management Practices, 72
At landfills, 75
Big Cypress area: water quality monitoring, 73
Big Cypress Basin, 2
Big Cypress Basin address and telephone number, 7
Binding Letter of Interpretation, 7
BOR (See "*Basis of Review for… District*")
Borrow pits at landfills, 75
Boundaries of the five water management districts (map), 6
Broad-crested weir flow
Agricultural site design example, XB-10
Major impoundment design example, XC-10
Broward County (east) basins map, B-1
Broward County Amended Deed of Conservation Easement, T3-23
Broward County ERP Delegation, T1-1
Broward County Water Preserve Area components, 41-13, (maps) f. 41-15
Broward County (west) basins map, B-2
Broward County Wellfield Protection Ordinances, 70
Broward Service Center address and telephone number, 7
Buffer zone, 23
Buffers, Water Preserve Areas (maps), f. 41-15
Bulkheads in wet retention/detention areas, 84
Bunkers, golf course, wet retention/detention area side slopes near, 84

C-51 Basin
Allowable discharge criteria, 41-11, (map) f. 41-15
Boundary legal descriptions, 41-9
Dry retention/detention in Western C-51, 41-12
Eastern C-51 Basin, 41-9
Eastern C-51 Basin (map), f. 41-15
Finished building floor elevation criteria, 41-12, (map), f. 41-15
Floodplain encroachment criteria, 41-12
General discussion, 41-iii
Rule, 41-iii, 41-8
Soil storage reduction criteria, 41-12
Western C-51 Basin, 41-8
Western C-51 Basin (map), f. 41-15
C-9 (See "Western Canal 9 Basin")
Canal storage (See "Surface storage")
Cascade 2001, A-2
Central and Southern Florida Flood Control District, 1
Central and Southern Florida Flood Control Project, 1
Certification, surface water management system, 94
Chapter 253, F.S., 2
Chapter 258, F.S., 2
Chapter 373, F.S., policy of the Legislature, 1
Chapter 403, F.S., 2, SM-i, 403-1
Chapter 40E-0, F.A.C., Exceptions to the Uniform Rules of Procedure, 3, 0-i, 0-1
Chapter 40E-1, F.A.C., General and Procedural, 3, 1-i, 1-1
Chapter 40E-4, F.A.C., 4-i, 4-1
Chapter 40E-40, F.A.C., 40-i, 40-1
Chapter 40E-41, 41-i, 41-1
Chapter 40E-400, F.A.C., 400-i, 400-1
Chapter 62-112, F.A.C., SM-i, 112-1
Chapter 62-302, F.A.C., SM-i, 302-1
Chapter 62-340, F.A.C., SM-i, 340-1
Chapters of Florida Administrative Code (F.A.C.)
Chapter 40E-0, 0-1
Chapter 40E-1, 1-1
Chapter 40E-4, 4-1
Chapter 40E-40, 40-1
Chapter 40E-41, 41-1
Chapter 40E-400, 400-1
Chapter 62-112, SM-i, 112-1
Chapter 62-302, SM-i, 302-1
Chapter 62-340, SM-i, 340-1
Section 62-302.300, FA-i, FA302-1
Subsections 62-4.242(1) and (2), FA-i, FA4-1
Title 28, 28-i
Charlotte County basins map, B-3
Checklist, operating entity, T5-11
Circular control device, 83
Class I and Class II Landfills, 75
Operating entity requirements, 90
Water quality monitoring, 73
Class I and Class II Waters
Dry pretreatment required, 70
Water quality monitoring, 73
Coastal zone consistency determinations, T8-1
Coastal Zone Management Act, T8-1
Coefficients
Weir flow, G-1, G-2
Collier County (east) basins map, B-4
Collier County (west) basins map, B-5
Collier County no notice general permit possible projects, 400-7, 400-8
Commercial projects
Pretreatment required, 69
Sub-divided: required master system, 79
Compensating storage (See "Floodplain Encroachment")
Components, Water Preserve Areas
Broward County, 41-13, (maps) f. 41-15
Palm Beach County, 41-13, (maps) f. 41-15

NOTES:
1) Page numbers which are not hyphenated – for example, "7" or "82" – typically refer either to the "Introduction" section of this manual, or to the *Basis of Review*.
2) "f." means "follows page".

Index

Conceptual agency review, 7, 4-3, 4-4, 4-27
Conceptual approvals (See also "Conceptual environmental resource permits"), 4-i, 4-27
  Conditions for issuance, 4-24
  Definition, 4-3
  District's interest, 7
  Duration, 4-30
  Effect on wetlands, 4-28
  Expiration, 4-30
  Issued only by Governing Board, 4-3
  Later review for construction and operation permits or modifications, 4-28
  Master plan, 7
  Mitigation banks, 4-8
  Modification, 4-28
Conceptual environmental resource permits, 1-i, 1-14
Conditions on permits
  General conditions, 4-35
  Special conditions, 4-39
Cones of depression of permitted public water Wells: dry pretreatment, 70
Conservation of water encouraged, 79
Conservation easements
  Broward County only, T3-23
  District-wide, T3-3
  Overview, T3-1
Construction completion certification, 94
Content of permit applications, 4-22
Control device
  Definition, 3
  Dimensional criteria, 83
  Volume discharged, 83
Control elevation
  Achieving, 80
  Definition, 3
  Mechanisms involved, 83, G-3
  Near roadways, 78
  Wetlands, 80
Coordinated reviews (See "Simultaneous reviews")
Credit for inlets in grassed areas, 69
Criteria flexibility, 2
Culverts, maintaining, PB-2
Cumulative impacts, 25, L-1
Curve number, SCS, D-2

Dams (See "Above ground impoundments")
Deed of conservation easement
  Broward County, joint, T3-23
  Enforcement form, T3-19
  Passive recreation form, T3-13
  Riparian rights form, T3-7
  Standard form, T3-3
Deep lakes, 83
Delegation of ERP to Broward County, T1-1
Delineation of the landward extent of wetlands and surface waters, unified statewide methodology, SM-i, 340-1
Deminimis effects, 12
Denial of permits, 1-28, 1-16, 4-4
  Of noticed or standard general, 4-4
Department of Transportation Standard exfiltration trench test, F-6
Dependent species (See "Listed species")
Depression storage, D-5, D-22
Depth of water: above ground impoundments, Appendix 6
Depth of wet retention/detention areas, 83
  Distance from public water supply wells, 71, XH-1
Design aids
  Environmental, J-1
  Surface water management, A-1
Design criteria for wetlands
  Protection, 82
Design example (See "Project design examples")
Design storm (See also "Quantity, water")
  C-51 Basin projects, 41-11
  Kissimmee River Basin projects, 41-8
Detention
  Agricultural site design example, XB-5
  Amount of runoff treated (dry system), 69
  Amount of runoff treated (wet system), 69
  Definition, 3
  Discharge equation, G-3
  Industrial site design example, XF-2, XF-3
  Major impoundment design example, XC-5
  Multi-family residential site design example, XG-3
  Required v-notch nomograph, G-4
Detention volume, 69
Development of Regional Impact (See also "*Basis of Review for ... District"*)
  Application for Development Approval, 7, 4-28
  Binding Letter of Interpretation, 7
  Conceptual approval, conceptual agency review, 4-28
  Development Order, 7
  District conceptual review, 4-28
  ERP application, 4-28
  Kissimmee River floodplain, 41-7
  Preliminary Development Agreement, 7
Development Order, 7
  Projects in Kissimmee River floodplain, 41-7
Dewatering at landfills, 75
Dikes
  Major above ground impoundments, Appendix 6
  Minor above ground impoundments, Appendix 6
Direct discharge, 82
Discharge formulas, Appendix 2
Discharge structure
  Agricultural site design example, XB-6
  Baffles, 82
  Berms unacceptable, 82
  Industrial site design example, XF-12

NOTES:
1) Page numbers which are not hyphenated – for example, "7" or "82" – typically refer either to the "Introduction" section of this manual, or to the *Basis of Review*.
2) "f." means "follows page".

Index

Major impoundment design example, XC-5
Multi-family residential site design example, XG-10
Safety devices, 82
Spreader swales, 82
DOT Standard exfiltration trench test, F-6
Drainage basin maps, B-i
Broward County (east), B-1
Broward County (west), B-2
Charlotte County, B-3
Collier County (east), B-4
Collier County (west), B-5
Glades County, B-6
Hendry County, B-7
Highlands County, B-8
Lee County, B-9
Martin County, B-10
Miami-Dade County (north), B-11
Miami-Dade County (south), B-12
Monroe County, B-13
Okeechobee County, B-14
Orange County, B-15
Osceola County (north), B-16
Osceola County (south), B-17
Palm Beach County (east), B-18
Palm Beach County (west), B-19
Polk County, B-20
St. Lucie County, B-21
Drainage districts as operating entities, 90
Drainage easement, T5-2
DRI (See "Development of Regional Impact")
Dry pretreatment, 69
Dry retention/detention (See "Retention/detention area (dry)")
Duration
Conceptual approval, 4-30
Individual permit, 4-31
Modifications, 4-31
Noticed general permit, 4-31
Standard general permit, 4-31, 40-6
Standard general permit authorizing incidental site activities, 4-31, 40-3

Early work (See "Incidental site activities")
Easement, drainage, T5-2
Easements around wet retention/detention areas, 84
Easements, conservation
Broward County only, T3-23
Enforcement form deed, T3-19
Overview, T3-1
Passive recreation form deed, T3-13
Riparian rights form deed, T3-7
Standard form deed, T3-3
Eastern C-51 Basin (See "C-51 Basin")
Education, environmental, PD-2
Elevation, 3
Eliminating wetland impacts, L-1
Emergency authorization, 4-39, 1-31
Emergency meetings, 28-4
Encroachment (See "Floodplain encroachment")
Endangered species, 15, 12, 14, 27, 28
Enforcement action, 1-36
Enforcement form deed of conservation easement, T3-19
Entity requirements
Acceptable operating entities, 90
Documents, 91
Master association, 93
Phased projects, 93
Powers, 91
Environmental areas (See "Wetlands")
Environmental criteria, 9
Abundance and habitats of fish, wildlife, and listed species, 11
Class II waters, 21
Creation, 32
Cumulative impacts, 25
Eliminate or reduce impacts, 10
Enhancement, 32
Listed species, 24, (table), 29
Melaleuca eradication, 42
Mitigation, 30
Mitigation banking, 49
Mitigation proposals, 36
Mitigation ratios, 31
Preservation, 33
Proposals, mitigation, 36
Public interest test, 14
Restoration, 32
Seawalls, 22
Secondary impacts, 23
Water quality, 18
Environmental design aids overview, J-1
Environmental education, PD-2
Environmental Monitoring Report Guidelines, PE-1
Environmental Reorganization Act of 1993, 2
Environmental Resource Permit (ERP) (See also "Permits"), 2, 1-i, 4-4
Environmental resource standard general permits, 40-I
Eradication, melaleuca, 42
ERP (See also "Environmental Resource Permit"), 2
ERP BOR (See "*Basis of Review for… District"*)
Evapotranspiration, 87
Exceptions to the Uniform Rules of Procedure, 3, 28-35, 0-i, 0-1
Exemption for maintenance of works, T7-1
Exemptions, 4-i, 4-10, 4-19
Modification, 4-21
Western C-9 Basin, 41-3
Exfiltration trench, 85, F-1
As a retention system, 71
Design example, XD-1
Design of, special cases, F-11
Dry, 72
Falling-head test, F-4
Field test methods, F-1

NOTES:

1) Page numbers which are not hyphenated – for example, "7" or "82" – typically refer either to the "Introduction" section of this manual, or to the *Basis of Review*.
2) "f." means "follows page".

Florida Department of Transportation standard test, F-6
General requirements, 71
Hydraulic conductivity, F-8
Length calculation, F-10, F-11, F-12
Minimum dimensions, 85
Open-hole test, F-2
Percolation tests, F-1
Required length equation, F-10
Safety factor in design, 72
Typical cross section, F-12
Usual condition test, F-2
Existing water bodies: use of, 71
Exporter in floodplain encroachment, XE-1

F.A.C. (See "Florida Administrative Code (F.A.C.)")
Falling-head exfiltration trench test, F-4
Falling-head test for hydraulic conductivity, F-4
FDOT Standard exfiltration trench test, F-6
Fees, 1-20, 4-24
Financial responsibility, mitigation, T2-1
Fixed head loss, 82
Flexibility of criteria, 2
Flood protection, 77, 78
C-51 Basin, 41-12
C-51 Basin (map), f. 41-15
Industrial site design example, XF-14
Multi-family residential site design example, XG-11, XG-13
Flood routing, 87, A-2, I-1
Agricultural site design example, XB-8, XB-9, XB-11
Industrial site design example, XF-14, XF-15
Major impoundment design example, XC-8, XC-10
Multi-family residential site design Example, XG-13
Floodplain encroachment, 78
Allowable, 78
C-51 Basin, 41-12
Design example, XE-I
Example problem, XE-I
Exporter, XE-1
Importer, XE-3
Kissimmee River Basin, 41-8
Western C-9 Basin, 41-3
Florida Administrative Code (F.A.C.)
Chapter 40E-0, 0-1
Chapter 40E-1, 1-1
Chapter 40E-4, 4-1
Chapter 40E-40, 40-1
Chapter 40E-41, 41-1
Chapter 40E-400, 400-1
Chapter 62-112, SM-i, 112-1
Chapter 62-302, SM-i, 302-1
Chapter 62-340, SM-i, 340-1
Section 62-302.300, FA-i, FA302-1
Florida Department of Transportation Standard Exfiltration trench test, F-6
Florida Environmental Reorganization Act of 1993, 2
Florida Keys Area of Critical State Concern, 1-32, 112-1
Florida Keys Service Center address and Telephone number, 7
Florida Statutes
Chapter 403, SM-I, 403-1
Florida Water Resources Act of 1972, 1
Flow
Coefficient, G-1
Orifice, G-5
V-notch, G-3
Weir (See also "Weir flow"), G-1
Form 0444, 40-ii, 40-3
Form 0971, 4-ii, 4-23, 40-i
Form 0972 "Petition for a Formal Wetland and Surface Water Determination", K-2
Form 1105 "Performance Bond to Demonstrate Financial Assurance", f. T2-1
Form 1106 "Irrevocable Letter of Credit to Demonstrate Financial Assurance", f. T2-1
Formal determination, 66, 4-i, 4-9
Application, K-2
Application Form 0972, K-2
Approximate, 67, K-3
Certified survey, K-2
District report, K-4
Duration, 68
Existing: renewed, 68
Fees, 1-20
Non-binding, 68
Procedure, 66
Survey, 67
Types, 66
Forms, 1-33
Forms for mitigation financial responsibility
Irrevocable letter of credit, f. T2-1
Performance bond, f. T2-1
Fort Myers Service Center (See "Lower West Coast Service Center")
Freeboard, above ground impoundments, Appendix 6
F.S. (See "Florida Statutes")

General and Procedural (See "Chapter 40E-1, F.A.C.")
General conditions, 4-35, 40-7
General environmental resource permits, 1-i, 1-14, 4-4, 40-i, 40-1
Glades County basins map, B-6
Golf course wet retention/detention area side slopes, 84
Governing Board

NOTES:
1) Page numbers which are not hyphenated – for example, "7" or "82" – typically refer either to the "Introduction" section of this manual, or to the *Basis of Review*.
2) "f." means "follows page".

Index

Overall responsibilities, 2
Role in permitting, 4-3, 4-4, 4-29
Grandfathering, T4-1
Exempt from wetland resource permit, T4-1
Existing approved delineation, T4-4
Existing conceptual, general, or individual surface water management permit, T4-2
Existing wetland delineation within a jurisdictional declaratory statement, T4-5
Existing wetland resource permit, T4-1
Jurisdictional declaratory statement before October 1, 1984, and part of a master development order, T4-6
Jurisdictional declaratory statement between October 1, 1984, and October 3, 1995, T4-5
Mining, T4-9
Permit application pending on June 15, 1994, or complete before October 3, 1995, T4-8
Petition for a jurisdictional declaratory statement pending on June 1, 1994, T4-6
Revalidated jurisdictional determination With a master development order or Vested rights determination, T4-7
Validated jurisdictional determination Originally issued before October 1, 1984, T4-7
Greens, golf course, wet retention/detention area side slopes near, 84
Ground storage (See also “Soil storage”)
Compacted soils, E-1
Depressional soils, E-2
Flatwoods soils, E-2
Uncompacted soils, E-1

Headquarters address and telephone number, 7
Hendry County basins map, B-7
Highlands County basins map, B-8
Historic discharge, 77, 78
Definition, 3
Hydraulic conductivity
Computation of: from field data, F-8
DOT Standard test, F-6
Equations, F-3, F-5, F-7
Falling-head test, F-4
Field tests to determine, F-1
Usual open-hole test, F-2
Hydrogeologic information at landfills, 76
Hydrographs (See also “Flood routing”), H-1
Other methods, H-1, A-2
Santa Barbara Urban Hydrograph, H-1
SCS computational procedure, A-2
Hydroperiods, 13, O-1
Hydroperiods, wetland, protection of, O-1

Impacted wetlands, 10
Mitigation, 30
Impacts, wetland, reducing or eliminating, L-1
Impervious surfaces (See also “Soil storage”)
Definition, 4
Impervious, 4
Best Management Practices, 72
Calculating for water quality, 71, XD-2, XF-3, XG-3
Definition, 4
Soil storage beneath, 87
Importer in floodplain encroachment, XE-3
Incidental site activities, 40-3
Conditions in permit, 40-7
Definition, 4-4, 40-3
Limiting conditions, 40-7
Required information, 40-3
Standard general permit, 40-2
Individual environmental resource permit, 1-i, 1-14, 4-i, 4-5, 4-7
District right to require, 4-1, 4-2
In WPA Rule, 41-14
Thresholds, 4-8, 40-2
Industrial sites
Design example, XF-1
Pretreatment required, 69
Subdivided: required master system, 79
Water quality monitoring, 73
Inflow hydrograph, H-3, I-1
Inflow water quality, wetland, protection, P-1
Informal wetland determinations, K-1
Information, ERP application, 4-22
Inlets in grassed areas: credit for, 69
Irrevocable letter of credit form (Form 1106), f. T2-1
Issuing environmental resource permits
Conceptual approvals, 4-3
Denials, 40-5, 4-4
Incidental site activities, 40-4
Individual, 4-5
No notice, 4-4
Noticed, 4-4
Standard General, 4-4, 40-4

Joint Amended Deed of Conservation Easement and Agreement [Broward County], T3-23

Kissimmee River Basin, 41-4
Boundary legal description, 41-4
Detailed technical criteria, 41-8
General discussion, 41-ii
Maps, f. 41-15
Project as DRI, 41-7
Rule, 41-ii, 41-4

NOTES:
1) Page numbers which are not hyphenated – for example, “7” or “82” – typically refer either to the “Introduction” section of this manual, or to the *Basis of Review*.
2) “f.” means “follows page”.

Index

Lake (See "Retention/detention area (wet)")
Lake Okeechobee: water quality monitoring, 73
Lake storage (See "Surface storage")
Lake-wetland separation (See "Separation of excavations from wetlands")
Landfills
  Benches, 75
  Best Management Practices, 75
  Borrow pit, 75
  Dewatering, 75
  Erosion, 75
  Hydrogeologic information, 76
  Leachate, 75, 76
  Operation entity, 90
  Runoff velocities, 75
  Slopes, 75
  Special criteria, 74
  Swales, 75
  Technical Advisory Committee, 76
Leachate from landfills, 75, 76
Lee County basins map, B-9
Legal information for ERP application, 90
Legal/Institutional items, T5-1
  Drainage easements, T5-2
  Operating entity, T5-1
  Operating entity affidavit, T5-7
  Operating entity checklist, T5-11
  Post-permit, T5-1
  Transfer to operating entity, T5-2
Letter of conceptual approval (See "Conceptual environmental resource permits")
Limiting conditions
  Individual permits, 4-35
  No notice general permits, 400-5
  Noticed general permits, 400-5
  Standard general permits, 40-7
Listed species, 24, (table), 29
Littoral zone, 83
Local government units as operating entities, 90
Lower Kissimmee River: water quality monitoring, 73
Lower West Coast Service Center address and telephone number, 7

Maintenance
  Easements, 84, PD-2
  Environmental areas, PD-1
  Plans, PD-1
  Surface water management systems, PB-1
  Wetlands, PD-1
Maintenance of works, exempt from permitting, T7-1
Major above ground impoundments, Appendix 6
  Design example, XC-1
  Design water depth, Appendix 6
  Dikes, Appendix 6
  Freeboard, Appendix 6
  Maximum water depth, Appendix 6
Mangrove Trimming and Preservation Act, SM-i, 403-i, 403-1
Maps, drainage basin, B-i
Martin County basins map, B-10
Martin/St. Lucie Service Center address and telephone number, 7
Master associations, 90, 93
Master drainage plan for ERP application, 7
Maximum slope of golf course wet Retention/detention area side slopes, 84
Maximum water depth
  Major above ground impoundments, Appendix 6
  Minor above ground impoundments, Appendix 6
Meeting agendas, 28-3
Melaleuca eradication, 42 through 48
Miami-Dade County (north) basins map, B-11
Miami-Dade County (south) basins map, B-12
Miami-Dade County no notice general permit Possible projects, 400-8
Miami-Dade County Wellfield Protection Ordinance, 71
Miami-Dade Regional Service Center address and telephone number, 7
Minimum depth of wet retention/detention Areas, 83
Minimum distance between public water supply Wells and retention/detention areas, 70
Minimum drainage, 78
Minimum side slopes of wet retention/detention Areas, 84
Minimum size of wet retention/detention Areas, 83
Minimum width of wet retention/detention Areas, 83
Minor above ground impoundments, Appendix 6
  Design example, XB-1
  Dikes, Appendix 6
  Freeboard, Appendix 6
  Maximum water depth, Appendix 6
Mitigation, 30
  Banking, 49 through 64
  Creation, 30, 32
  Enhancement, 30, 33
  Financial, 37 through 42, T2-1
  Information, required, 36
  Melaleuca eradication, 42 through 48
  Monitoring, 37, PE-1
  Preservation, 33 through 35
  Proposals, 36
  Protection, 37, PD-2, PD-3, O-1
  Ratio guidelines, 31, 32, 36
  Required information, 36
  Restoration, 30, 32
  Success, 37
  Types, 30
Mitigation bank permitting, 1-i, 1-14, 4-i, 4-8
Mitigation banking, 49 through 65
  Application processing fees, 1-22

NOTES:

1) Page numbers which are not hyphenated – for example, "7" or "82" – typically refer either to the "Introduction" section of this manual, or to the *Basis of Review*.
2) "f." means "follows page".

Applications, 50
Conceptual approval, 4-8, 61
Credits, 53
Criteria, 50
Definition, 4
Department of Environmental Protection banks, 63
Duration, 62
Financial issues, 57
Financial responsibility, 67
Individual permit, 61
Intent, 49
Mitigation service area, 55
Permitting, 1-14, 4-3, 4-8
Restrictions, 56
Uses, 49
Mitigation financial responsibility, T2-1
Modification
Conceptual approval, 4-32
Individual, 4-32
Letter, 4-32
Mitigation bank, 62
No notice, 400-6
Noticed, 400-6
Standard general, 4-32
Moisture storage in soils (See "Soil storage")
Monitoring mitigating/compensating wetlands, 37
Monitoring water quality, 72
Monitoring wetlands, PE-1
Monroe County basins map, B-13
Mosquito control ditches, 83
Multi-family residential site design example, XG-1

No notice general environmental resource permits, 4-2, 400-i, 400-7
No notice general permits, 400-7
Collier County projects, 400-7, 400-8
General conditions, 400-5
Miami-Dade County projects, 400-8
Modifications, 400-6
Projects which may qualify, 400-7, 400-8
Revocation, 400-6
Transfer, 400-6
Uplands, 400-7
Non-binding wetland determinations, 68, K-1
Non-profit corporations as operation entities (See also "Association legal requirements"), 90
Non-urban gravity systems, 89
Notice of Intent, 1-15
Form 0974, 400-30
Form 0980, 400-4
Noticed general environmental resource permits, 4-2, 400-ii, 400-8

OFW anti-degradation requirements (See also "Outstanding Florida Waters"), FA-i, FA4-1
Okeechobee Basin, 2
Okeechobee County basins map, B-14
Okeechobee Service Center address and telephone number, 7
One-day rainfall distribution, H-3
Open-hole exfiltration trench test, F-2
Open-hole test, F-2
Operating agreement between SFWMD and DEP, T6-1
Operating entity, acceptable, T5-1
Operating entity, affidavit, T5-7
Operating entity, checklist, T5-11
Operation entity (See "Entity requirements")
Operation permit, 4-5
Orange County basins map, B-15
Orange County rainfall distribution, A-1
Organization, 28-1
Orifice, orifice design
Agricultural site design example, XB-7
Flow equations, G-5
Industrial site design example, XF-12
Major impoundment design example, XC-6
Minimum dimensions, 83, G-3
Orlando Service Center address and telephone number, 7
Osceola County (north) basins map, B-16
Osceola County (south) basins map, B-17
Other applicable laws, 4-37
Other permits, 2, 4-37
Outflow hydrograph, I-1
Outstanding Florida Waters
Dry pretreatment required, 70
Water quality monitoring, 73
Anti-degradation requirements, FA-i
Overburden in Water Preserve Area Rule, 41-14, (maps) f. 41-15
Overdrainage prohibited, 79
Overflow elevation, Appendix 6
Definition, 4, Appendix 6
Overflow structure, XB-9, XC-9, Appendix 6
Overflow swales, 82
Overview of conservation easements, T3-1
Owner as permittee, 90

Palm Beach County (east) basins map, B-18
Palm Beach County Water Preserve Area Components, 41-13, (maps) f. 41-15
Palm Beach County (west) basins map, B-19
Parking lot protection (See "Road protection")
Passive recreation form deed of conservation Easement, T3-13
Percolation tests (See "Exfiltration trench")
Performance bond form (Form 1105), f. T2-1
Permit application
Contents, 4-22
Processing fees, 1-20
Submittal aids, PAS-I
Permit fees, 1-20, 4-24
Permit programs, 2

NOTES:
1) Page numbers which are not hyphenated – for example, "7" or "82" – typically refer either to the "Introduction" section of this manual, or to the *Basis of Review*.
2) "f." means "follows page".

Index

Permit thresholds, individual, 4-8, 40-2
Permits
- Application content, 4-22
- Application supplement, PAS-i
- Conceptual approvals, 4-27, 1-i, 1-14, 4-i, 4-3, 4-4
- Conditions for issuance, 4-24, 4-25, 40-6, 41-3, 41-8, 41-11, 41-14
- Denial, 1-28, 1-16, 4-4
- Duration, 4-30, 40-6
- Fees, 1-20, 4-24
- From other agencies, 4-37, 400-6
- Individual permits, 1-i, 1-14, 4-i, 4-4, 4-5
- Mitigation banks, 4-3, 4-4, 1-14
- Modification, 4-32, 40-6, 400-6, 1-29
- No notice general permits, 400-7, 4-8
- Noticed general permits, 400-8, 4-8
- Required, 4-7, 1-14
- Revocation, 4-33, 40-6 1-29
- Simultaneous ERP and Water Use, 7
- Standard general permits, 40-i, 40-1, 1-ii, 1-15, 1-17, 4-i, 4-4, 4-8
- Thresholds, 4-8, 40-2
- Transfer, 4-33, 400-6, 40-7, 1-30

Pervious surfaces (See “Soil storage”)
Petition for a Formal Wetland and Surface Water Determination Form 0972, K-2
Phased project master plan, 7
Polk County basins map, B-20
Post-permit submittals, T5-1
Pre vs post (See “Historic discharge”)
Pre-application meeting, 2, 8
Precipitation (See “Rainfall”)
Preliminary development agreement, 7
Pre-permit authorization (See “Incidental site activities”)
Preserving wetlands, 33, 30
Pretreatment
- Amount provided, 69
- Exfiltration trench design example, XD-4
- Industrial site design example, XF-4
- Near sensitive receiving waters, 70
- Projects which must provide, 70
- Western C-51 Basin, 41-12

Professional Engineer: signed and sealed plans, 4-23
Project design examples
- Agricultural projects overview, XA-1
- Agricultural site, XB-1
- Agricultural site with major impoundment, XC-1
- Distance from public water supply wells, XH-1
- Exfiltration trench, XD-1
- Flood plain storage compensation, XE-i
- Industrial site, XF-1
- Multi-family residential site, XG-1
- Overview, X-I

Property owner as permittee, 90
Protection from flooding
- Floors, 77
- Parking lots, 77
- Roads, 77

Protection of wetlands hydroperiods, O-1
- Definitions, O-1
- Design considerations, O-5
- Evaluating regimes, O-2

Protection of wetlands inflow water quality, P-1
Protective levee, 41-13
Public hearing, 28-7
Public highway project, 71
Public water supply wells: distance from retention/detention areas, 71, XH-1
Pumped control device, 83
Pumped discharge, 83
Pumps, Appendix 6

Quality, water, 69
- Agricultural site design example, XB-5, XB-6
- Class I and Class II landfills, 74
- Exfiltration trench design example, XD-1, XD-2
- Industrial site design example, XF-2, XF-3
- Industrial sites, 69
- Major impoundment design example, XC-5, XC-6
- Monitoring, 72
- Multi-family residential site design example, XG-3, XG-10
- Pretreatment, 69
- Reasons for monitoring, 73
- Sensitive areas, 73
- State standards, 69, 4-27, 400-6
- WPA’s, 41-15

Quantity, water, 77
- Agricultural site design example, XB-2, XB-8
- C-51 Basin, 41-11, (map), f. 41-15
- Floodplain encroachment, 78
- Floodplain encroachment design example, XE-1
- Floor protection, 77
- Industrial site design example, XF-10
- Industrial sites, 79
- Major impoundment design example, XC-2, XC-4, XC-7
- Multi-family residential site design example, XG-11
- Non-urban gravity systems, 89
- Off-site discharge (design storm) amount, 77
- Off-site discharge (design storm) frequency and duration, 77
- Road protection, 77

Quick reference checklist, PAS-I

NOTES:
1) Page numbers which are not hyphenated – for example, “7” or “82” – typically refer either to the “Introduction” section of this manual, or to the *Basis of Review*.
2) “f.” means “follows page”.

Index

Rainfall, A-1
- Amount, C-1
- Distribution, 86
- Major above ground impoundments, Appendix 6
- Maps, C-3
- Orange County distribution, A-1
- SFWMD distribution, 86

Rainfall, compute 3-day amount based on 1-day amount, C-1
Rainfall maps
- One-day 3-year, C-4
- One-day 5-year, C-5
- One-day 10-year, C-6
- One-day 25-year, C-7
- One-day 100-year, C-8
- One-hour 5-year, C-3
- Three-day 10-year, C-9
- Three-day 25-year, C-10
- Three-day 100-year, C-11

Ratios, mitigation, 31
Receiving body (See “Receiving water stage”)
Receiving water stage, 88
Reducing wetland impacts, L-1
Reporting
- Impoundment conditions, Appendix 6
- Wetland conditions, PE-1

Responsibility, mitigation, financial, T2-1
Retention
- Amount of runoff treated, 69
- Distance from public water supply wells, 71

Retention/detention area (dry)
- C-51 Basin, 41-12
- Definition, 5
- Design features, 83
- Distance to public water wells, 71, XH-1
- Distance to sewage treatment percolation ponds, 72
- Maintaining, 83, PB-2
- Required, 69

Retention/detention area (wet)
- Bulkheads, 84
- Definition, 5
- Depth, 83
- Distance to public water wells, 71, XH-1
- Distance to sewage treatment percolation ponds, 72
- Distance to wetlands, 80, N-1
- Golf course, 84
- Maintaining, PB-2
- Maintenance easement, 84
- Side slope, 84
- Size, 83
- Width, 83

Return overflow structure (See also “Overflow structure”), XB-9, XC-9, Appendix 6
Revocation of permits, 1-29
- Individual, 4-33
- No notice general, 400-6
- Noticed general, 400-6
- Standard general, 40-6

Riparian rights form deed of conservation easement, T3-7
Road protection, 77
- Industrial site design example, XF-14
- Near control structures, 77
- Multi-family residential site design example, XG-13

Roofs included for dry pretreatment, XD-3, XF-4, XG-4
Routing (See also “Flood routing”), I-1
Rule development, 28-5
Rulemaking, 28-5
Rules of the SFWMD (See “Title 40E, F.A.C.”)
Runoff, 88, D-1
- SCS equation, 88, D-1

Runoff curves (District), D-5
Runoff hydrographs (See also “Hydrographs”), H-1

Safety devices on discharge structures, 82
Santa Barbara Urban Hydrograph Method (See also “Hydrographs”), H-1
Savannas: water quality monitoring, 73
SBUH, H-1
SCS curve number, D-2, XB-3, XC-3, XG-5
SCS Runoff Equation, D-1
- Graphical solution, D-3, D-4
- In design examples, XB-6, XC-5, XF-11, XF-14, XG-9, XG-11

Seasonal high water level (SHWL), O-1, CA-1
Seasonal high water table (SHWT), CA-2, O-1
- Definitions, CA-4
- Determination procedures, CA-3
- Direct measurements, CA-2
- Field indicators, CA-2
- Soil surveys documents, CA-1

Secondary impacts, 23, L-1
Section 62-302.300, F.A.C., FA302-1
Sensitive receiving waters, 73
- Compute required dry pretreatment, XG-4

Separation of excavations from wetlands, 80, N-1
- Case I, N-2, N-4
- Case II, N-2, N-4
- Case III, N-2, N-4
- Definitions, N-2
- Restrictive soil layers, N-1

Service centers location map, 7
Setbacks, perimeter dikes, XB-2, XC-2, Appendix 6
Sewage treatment ponds: distance from water Bodies and dry areas, 72
SFWMD
- Authority, 1, 2
- Basins, 2, (map), 6
- Boundary map, 6
- Creation, 1
- Declaratory statements, 1-11
- Governing Board, 2

NOTES:

1) Page numbers which are not hyphenated – for example, “7” or “82” – typically refer either to the “Introduction” section of this manual, or to the *Basis of Review*.
2) “f.” means “follows page”.

Meetings, hearings, and workshops, 1-10
Permit programs, 1, 2, 1-13
Permits, 1-13
Proceedings, 1-11
Public information, 1-7
Rulemaking, 1-11
Rules, 3
Service Centers, 7
Workshops, 1-10
Sharp-crested weir flow, G-1
Commonly-used coefficients, G-1, G-2
Free discharge equation, G-1
Multi-family residential site design example, XG-9
Orifice flow, G-5, XB-7, XC-6, XF-13
Submerged discharge equation, G-1
Triangular orifice flow, G-5, XB-7, XC-7, XF-13
V-notch flow, G-3, XB-6, XC-6, XF-9, XG-10
V-notch minimum dimensions, 83
V-notch required size, XB-6, XC-6, XG-9, XG-10
V-notch required size nomograph, G-3, G-4
Sheetflow runoff curves, District, D-5
Limitations, D-6
SHWL (See "Seasonal high water level")
SHWT (See "Seasonal high water table")
Side slopes
Golf course wet retention/detention area, 84
Major above ground impoundment dikes, XC-2, Appendix 6
Minor above ground impoundment dikes, XB-2, Appendix 6
Wet retention/detention areas, 84
Simultaneous reviews, 2
Development of Regional Impact, 7
Landfills, 76
Six Mile Cypress: water quality monitoring, 73
Size of wet retention/detention areas, 83
Soil Conservation Service runoff equation, D-1
Soil moisture storage (S), D-1
In SCS runoff equation, D-1
Relation to initial abstraction (Ia), D-1
Weighted, D-1,
Soil storage, 87, D-1, E-1
Amount based on depth to water table, 87, E-1
Beneath impervious surfaces, 87
Effects of impervious surfaces, E-1
Effects of soil compaction, 87, E-1
In design examples, XB-3, XC-3, XF-10, XG-5
Solid waste facilities (See "Landfills")
South Florida Water Management District, 1
Sovereign submerged lands, 2, 1-14
Special assessment districts, 90
Special conditions on a permit, 4-39, 40-7
Spreader swales, 82
St. Lucie County basins map, B-21
Staff report
Definition, 5
Water quality monitoring, 74
Stage-storage curve, 87, E-4, XF-8, XG-8
Stagnant water, 72
Standard form deed of conservation easement, T3-3
Standard general environmental resource permits, 4-i, 40-1
Conditions for issuance, 40-6
Duration, 40-6
In the C-51 Basin, 41-10
In the Kissimmee River Basin, 41-7
In the Western C-9 Basin, 41-3
Incidental site activities, 40-3
Modifications, 40-6
Pre-permit authorization (See "Incidental Site activities")
Projects which may qualify, 40-2
Required information, 40-5
Revocation, 40-6
Submerged lands activities, 40-4
Thresholds, 40-2
Transfer, 40-7
Who may issue, 40-4
State water quality certification, T8-1
State water quality standards, T8-1
Statement of agency organization and operation, 28-1
Sub associations, 93
Submerged discharge equation, G-1
Submittals, post-permit, T5-1
Subsections 62-4.242(1) and (2), F.A.C., FA4-1
Surface storage, 87, E-4
Agricultural site design example, XB-4
In lakes and canals, E-4
Industrial site design example, XF-5
Major impoundment design example, XC-3
Multi-family residential site design Example, XG-6
On graded land, E-4, E-5
Surface water management design aids Overview, A-1
Surface water management system certification, 94
Surface water management system definition, 5
Surface water management systems (See "Protection from flooding", "Quality, water", and "Quantity, Water")
Surface water management systems Maintenance, PB-1
Surface water quality standards, SM-i, 302-1
Swales, maintenance, PB-1

Tailwater (See "Receiving water stage" and "Submerged discharge equation")
Technical Advisory Committee, 76
Tee areas, golf course wet retention/detention

NOTES:
1) Page numbers which are not hyphenated – for example, "7" or "82" – typically refer either to the "Introduction" section of this manual, or to the *Basis of Review*.
2) "f." means "follows page".

Index

area side slopes, 84
Telephone numbers, service centers, 7
Three-day rainfall distribution, 86
Thresholds, permit, 4-8
Title 28, F.A.C., 3, 28-I
Title 40E, F.A.C., 3, 4, 5
    Chapter 40E-0, 3, 0-i, 0-1
    Chapter 40E-1, 3, 1-i, 1-1
    Chapter 40E-4, 4, 4-i, 4-1
    Chapter 40E-40, 4, 40-i, 40-1
    Chapter 40E-41, 4, 41-i, 41-1
    Chapter 40E-400, 4, 400-i, 400-1
Transfer of permits, 1-30
    Individual, 4-33
    No notice, 400-6
    Noticed, 400-6
    Processing fee, 1-24
    Standard general, 40-7
Trash screens on discharge structures, 82
Trench (See "Exfiltration trench")
Triangular orifice
    Flow equation, G-3, G-5
    In design example, XB-7, XC-6, XF-13
    Minimum dimensions, 83, G-3

Unified statewide methodology for the delineation of the landward extent of wetlands and other surface waters, SM-i, 340-1
Uniform Rules of Procedure, Title 28, F.A.C., 3, 28-1
Urban retention/detention, Appendix 3
Usual condition exfiltration trench test, F-2
Usual open-hole test for hydraulic conductivity, F-2
    Discussion, F-8

Variances, 28-9
    From review criteria, 4-29, 0-6
    Processing fees, 1-24
Volume I, Preface
Volume II, Preface
Volume III, Preface
Volume IV, Preface
Volume V, Preface
Volume VI, Preface
V-notch flow, G-3
V-notch weir
    Design nomograph, G-4
    General flow equation, G-3
    In design example, XG-10, XG-11, XG-12
    In orifice flow, G-3, G-5, G-6
    Minimum dimensions, 83, G-3
    To meet detention requirements, 83, G-3, G-4
Waiver, 28-9
    Of fees for certain local governments, 1-27
Waiving permit processing fees, 1-27
Warren S. Henderson Wetlands Protection Act, 2
Water depth, maximum
    Major above ground impoundments, XC-11, Appendix 6
    Minor above ground impoundments, XB-9, Appendix 6
Water depth, minimum (See "Retention/detention area (wet)")
Water management areas
    Definition, 5
    Legally reserved, 92
    Maintenance easements, 84
Water management district boundaries (map), 6
Water Preserve Area (See "WPA's")
Water Preserve Area Basin (See "WPA's")
Water quality (See "Quality, water")
Water quality certification, T8-1
Water quantity (See "Quantity, water")
Water Resources Act of 1972, 1
Water table
    Effect on soil storage, 87, E-1, E-2, E-3
    Maintaining, 80
Water use, 7
Weir coefficient, G-1
Weir flow, G-1
    Coefficients, G-1, G-2
    Free, G-1
    Free discharge equation, G-1
    In design example, XB-10, XC-10, XG-9
    Orifice flow, G-3, G-4, G-5, G-6, XB-7, XC-6, XF-13
    Submerged, G-1
    Submerged discharge equation, G-1
    V-notch, G-3, G-4, G-5, G-6, XG-10
Wellfield protection ordinances, 70
Wells, public water supply
    Distance from retention/detention areas, 71, XH-1
    Dry pretreatment, 70
West Palm Beach Office (See "Headquarters")
Western C-51 Basin (See "C-51 Basin")
Western Canal 9 Basin
    Boundary legal description, 41-2
    Detailed technical criteria, 41-3
    Encroachment, 41-3
    Exemptions, 41-3
    General discussion, 41-I
    Map, f. 41-15
    Rule, 41-i, 41-2
Wet retention/detention (See "Retention/detention area (wet)")
Wetland boundary determinations
    Applying for, K-2
    District assistance, K-4
    Formal, K-2
    Informal, K-1
Wetland hydroperiods, protection of, 13, O-1
Wetland impacts, reducing or eliminating, L-1

NOTES:
1) Page numbers which are not hyphenated – for example, "7" or "82" – typically refer either to the "Introduction" section of this manual, or to the *Basis of Review*.
2) "f." means "follows page".

Index

Wetland inflow water quality, protection, P-1
Wetland, cumulative impacts on, 25, L-1
Wetland, secondary impacts on, 23, L-1
Wetlands, 9
    Class II waters, 21
    Conditions for issuance, 9
    Control elevation, 80
    Conservation easements, PD-2
    Cumulative impacts, 25, L-1
    Current condition and value, 17
    Definition, 4-6, 5
    Deminimis effects, 12
    Design modifications, practicable, 10
    Docking facilities, 19
    Education, PD-2
    Formal determinations, 66
    Hydroperiods, 13, O-1
    Listed species, 4, 12, (table), 27
    Livestock watering ponds, 12
    Maintenance, PD-1
    Management plan, PD-1
    Managing, PD-1
    Melaleuca eradication, 42 through 48
    Mitigation, 30
    Mitigation banking, 49 through 65
    Mixing zones, temporary, 21
    Monitoring, PE-1
    Present failure to meet state water quality standards, 21
    Preservation, 4, 30, 33
    Public health, safety, welfare, 15
    Public interest test, 14
    Reporting, PE-1
    Review criteria, 10
    Secondary impacts, 23, L-1
    Separation from lakes, 80
    Temporary mixing zones, 21
    Vertical seawalls, 22
    Water quality, 18
        Long term, 18
        Short term, 18
    Water quantity impacts, 13
    Wildlife survey, 12
Width of major above ground impoundment dikes, XC-2, Appendix 6
Width of minor above ground impoundment dikes, XB-2, Appendix 6
Width of wet retention/detention areas, 83
Works definition, 3
Workshops agendas, 28-3
WPA's
    Basin Boundaries, 41-13, (map) f. 41-15
    Buffers (maps), f. 41-15
    Conditions of permit issuance, 41-14
    Definitions, 41-13
    Figures, f. 41-15
    Individual permit required, 41-14
    Maps, f. 41-15
    Overburden, 41-14, (maps) f. 41-15
    Overview, 41-iv
    Rule implementation dates, 41-13
Zuider Zee formula, XC-11

NOTES:
1) Page numbers which are not hyphenated – for example, "7" or "82" – typically refer either to the "Introduction" section of this manual, or to the *Basis of Review*.
2) "f." means "follows page".