

WU BOR
June 2003
Eff. Jun 9, 2003 →
Aug 30, 2003

Rules of the South Florida Water Management District

BASIS OF REVIEW FOR WATER USE PERMIT APPLICATIONS WITHIN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT



Last Updated: June 9, 2003

**BASIS OF REVIEW FOR WATER USE
PERMIT APPLICATIONS WITHIN
THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT
JUNE 2003**

- 1.0 Permitting Procedures
- 2.0 Water Need and Demand Methodologies
- 3.0 Water Resource Evaluations
- 4.0 Monitoring Requirements
- 5.0 Permit Conditions

1.0 PERMITTING PROCEDURES

1.1 Objectives –

Chapter 373, Florida Statutes (F.S.), enables and directs the District to regulate the use of water within its jurisdictional boundaries. The purpose of the water use regulatory program is to ensure that those water uses permitted by the District are reasonable-beneficial, will not interfere with any presently existing legal uses of water, and are consistent with the public interest pursuant to Section 373.223, F.S. The District has adopted rules for regulating the consumptive use of water, which are set forth in Chapters 40E-2 and 40E-20, Florida Administrative Code. The Basis of Review is incorporated by reference into Chapter 40E-2. The Basis of Review must be read in conjunction with Chapters 40E-2 and 40E-20, as applicable. The objective of the Basis of Review is to further specify the general procedures and information used by District staff for review of water use permit applications. All criteria in the Basis of Review applies to processing individual permit applications, and specified criteria applies to processing of general permit notices of intent. The criteria contained herein are flexible, with the primary goal being to meet District water resource objectives.

In addition, procedures for processing water use permit applications are set forth in Rules 40E-1.603 and 40E-1.606. Rule 40E-1.610 provides procedures for permit renewals and Rule 40E-1.6107 sets forth procedures for permit transfers.

1.2 Pre-application Consideration –

If the application is for a project which involves complex issues or if an applicant requires assistance in completing an application, a pre-application meeting between the Applicant and District Staff may be useful. A pre-application discussion may aid in expediting the application evaluation process by identifying items and issues that need to be addressed in more detail. This process allows the Applicant to submit a more complete application and may prevent or avoid delays in processing the application.

1.3 Other Factors Influencing Permit Applications –

1.3.1 Third Party Interests

Frequently, other governmental entities, organizations, or affected citizens have an interest in the outcome of a permit action. Third party interests that would be substantially affected by issuance of a requested permit will have the opportunity to request an administrative hearing, pursuant to Rule 40E-1.521, prior to issuance of the permit. In order to obviate any delays in permit issuance, discussions with such entities regarding their water resource concerns prior to or during permit application review is encouraged. Issuance of a water use permit by the District does not relieve the Applicant of the responsibility to obtain all necessary federal, state, local, or other District permits or authorizations.

1.3.2 Competing Applications

Pursuant to Section 373.233, F.S., applications are considered to be competing when Staff evaluation indicates that the proposed use of water by two or more applicants will exceed the amount of water that is available for consumptive use due to water resource availability or interference with existing legal use concerns as defined in the Basis of Review. All permit applications that are pending at the same time prior to being deemed complete and are requesting water from a limited source will be considered competing. Once a competing application has been determined to be complete, such application will not be considered competing with applications filed after its completion date. Good faith effort must be shown by all applicants to complete pending, competing applications as expeditiously as possible. If good faith efforts are not made to complete the application, the application may be denied for lack of response pursuant to Rule 40E-1.603. Competing permit applications will be processed pursuant to Section 373.233, F.S.

1.3.3 Phased Projects

Many large-scale or long-term projects are developed over a number of years through a number of phases of development. The District encourages planning for long-term water needs in order to compare the projected demands of the project with water availability in a region. Applicants for projects that are to be developed in phases should consider their water needs for all phases of the proposed project. However, the District evaluates permit applications based on the demonstrated need of water for the project only through the recommended duration of the permit; therefore, applicants should focus their water use projections for the term of the permit and only for those phases of the project reasonably expected to utilize water under the permit during or prior to the permit expiration date. As additional phases are projected to be constructed, the existing water use permit can be modified to reflect the increasing demand associated with the new phase or phases pursuant to the criteria applicable at the time of the modification. The Permittee cannot rely on receiving permit authorization for unpermitted phases of a project due to issuance of a water use permit for a portion of the phased project.

1.4 Surface Water Management Concurrency –

If the proposed water use is associated with a project for which a modification to an existing surface water management system is required or for which a new surface water management system is required, the water use permit application will not be considered complete until the surface water management permit application is deemed complete. If a new or modified surface water management permit is required in conjunction with the proposed water use, the water use permit may only be issued concurrently with the applicable surface water management permit or permit modification. The impact of withdrawals on the Applicant's surface water management system must be evaluated and submitted with the water use permit application. The cumulative withdrawals as a result of the water use request must be evaluated in conjunction with the cumulative drainage effects of the surface water management system.

1.5 Application Support Information –

Pursuant to Rules 40E-1.603 and 40E-1.606, additional information may be required to be submitted in support of water use applications for projects located in areas where there is a lack of available hydrologic information or for projects in which there are concerns regarding water resource availability or potential impacts as a result of proposed withdrawals. The District shall require detailed site-specific information in support of the application in order to satisfy the conditions for permit issuance. The supporting information may include aquifer performance tests, water quality surveys, well inventories, and environmental assessments, as required. The need for supporting information will be based, in part, on the amount of the proposed withdrawal, characteristics of the requested water source in the region, potential for environmental harm, potential for interference with existing legal uses, and proximity of applicable and relevant existing data.

1.6 Professional Certification of Supporting Documents –

All final plans, calculations, analyses, or other documents, submitted as part of a permit application are required to be signed and sealed by an appropriate registered professional pursuant to Section 373.117, F.S.

1.7 Application Review Process –

The District has established two procedures for issuing permits based on the quantity of water permitted. These two procedures include permit issuance by (1) the Governing Board for individual permits and (2) District staff for general permits. Individual permits must be obtained for water use activities that are not exempt pursuant to Rule 40E-2.051 and that do not fall within the thresholds for general permits established in Rule 40E-20.302. The permit application will be processed pursuant to Rule 40E-1.603 for individual permits and pursuant to Rule 40E-1.606 for general permits. Specifically, these rules set forth procedures for filing applications, requests for additional information, permit application modification, public noticing of permit applications, and

requests for administrative hearings. A water user should obtain one permit for all withdrawals that are intended to serve contiguous property. For example, an agricultural operation that has multiple wells on a contiguous parcel of land shall apply for one permit. The application shall include information about each well or withdrawal facility. Applicants with legal control over multiple non-contiguous parcels in the same locale may apply for one permit encompassing all such parcels, provided that it is shown that the water use for each parcel is in the same water use classification. If multiple water use classifications, such as drinking water and landscape irrigation, are served by separate withdrawal facilities, separate water use permits shall be required for each use.

1.7.1 Proposed Water Uses

Proposed water uses for an individual permit must meet the conditions for issuance of permits pursuant to Rule 40E-2.301, and proposed water uses under a general permit must meet the conditions for issuance of authorization pursuant to Rule 40E-20.302. Applications for initial permits or permit renewals shall be processed as proposed water uses. Applications for existing unpermitted uses of water shall be processed as proposed water uses. An existing unpermitted use includes a use previously authorized by a permit that has expired due to failure to file an application for renewal prior to the permit expiration date. An application for a permit modification for an increased allocation will be processed as a proposed water use. Withdrawal facilities that have been constructed or that otherwise exist will not be taken into consideration in favor of issuance of a water use permit.

1.7.2 Basin Expiration Dates

The expiration dates for Individual Irrigation Use Class Water Use Permits for projects located within the identified basins are extended as follows:

Upper East Coast December 15, 2003
Lower West Coast June 15, 2004
Lower East Coast December 15, 2005
Kissimmee June 15, 2007

In addition, these basin expiration dates will be applied to individual irrigation use class water use permits issued or modified under this rule. For projects crossing multiple basin boundaries, the expiration date for the permit shall be the date associated with the basin containing the majority of the irrigated acreage. The basins are shown in Figure I-1 and contain the Surface Water Use Basins, as described in Rule 40E-21.631, F.A.C., listed below.

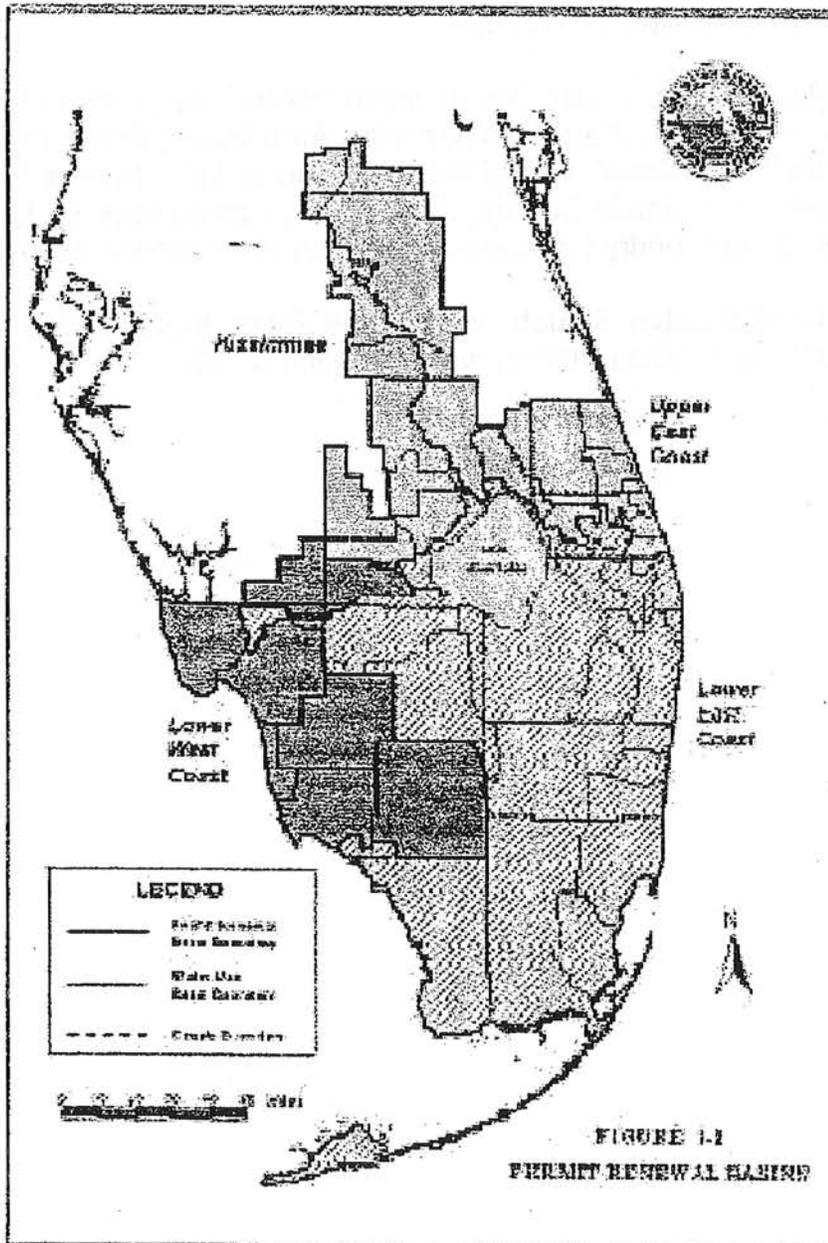
Upper East Coast: Northwest Loxahatchee River, Northwest Martin County, St. Lucie Agricultural Area, West Coastal Martin County, North Coastal Martin County, Stuart Peninsula, South Coastal Martin County, Interior Martin County, Port St. Lucie, and Coastal St. Lucie County.

Lower West Coast: Caloosahatchee River Basin Watershed – North, Caloosahatchee River Basin Watershed – South, Coastal Collier County, Fakahatchee North, Fakahatchee South, and Big Cypress Preserve.

Lower East Coast: South Dade, Water Conservation Areas/Everglades National Park, Water Conservation Area No. 3, Water Conservation Area No. 2, Water Conservation Area No. 1/West Palm Beach Canal, Everglades Agricultural Area, Interior Palm Beach County, M Canal, North Palm Beach County, C-18, Loxahatchee River, St. Lucie River, Lakeshore Perimeter, South Hendry County/L-28 Gap, and Caloosahatchee River.

Kissimmee: Taylor Creek/Nubbin Slough, Kissimmee River Valley, Upper Chain of Lakes, West Chain of Lakes, Indian Prairie, and Fisheating Creek.

Figure I-1 Irrigation Basins.



1.7.3 Permit Renewals

Applications for permit renewal shall be made pursuant to Rule 40E-1.610 any time within six months prior to permit expiration. Permittees are encouraged to apply for renewal at least 90 days prior to the expiration date. Permits for which renewal applications have been submitted shall remain in force past the expiration date until final agency action on the application is taken.

1.8 Definitions –

Allocation Coefficient - A multiplier used in calculating permit allocations which accounts for the irrigation system efficiency and the effects on the relevant water storage system (see Resource Efficiency).

Annual Withdrawal - The quantity of water permitted to be withdrawn during any 12 month time period.

Aquifer - A geologic formation, group of formations, or part of a formation that contains sufficient saturated, permeable material to yield significant quantities of water to wells and springs.

Aquifer Remediation - A use of water involving the withdrawal of ground water for the authorized removal of contaminants for the purposes of restoring water quality.

Aquifer Storage and Recovery - Projects involving approved Class V injection wells for the injection and recovery of fresh water into a ground water reservoir.

Cone of Depression - The conical shape taken by the potentiometric surface showing the variation of drawdown with distance due to pumping from a well or wellfield within its area of influence.

Confined Aquifer - An aquifer that contains ground water which is confined under pressure and bounded between significantly less permeable materials, such that water will rise in a fully penetrating well above the top of the aquifer. In cases where the hydraulic head is greater than the elevation of the overlying land surface, a fully penetrating well will naturally flow at the land surface without means of pumping or lifting.

Confining Unit - A body of significantly less permeable material than the aquifer, or aquifers, that it stratigraphically separates. The hydraulic conductivity (K) may range from nearly zero to some value significantly lower than that of the adjoining aquifers.

Conservation - The beneficial reduction of water use through voluntary or mandatory altering of water use practices, reduction of distribution losses or installation and maintenance of low-volume water use systems, fixtures, or devices.

Constant Drawdown - In dewatering systems, the practice of pumping the source unit to a static level for a long duration. Also used in context with aquifer performance tests associated with flowing wells.

Consumptive Use - Any use of water which reduces the supply from which it is withdrawn or diverted.

Demand Management - Reducing the demand for water through activities that alter water use practices, improve efficiency in water use, reduce losses of water, reduce waste of water, alter land management practices and/or alter land uses.

Desalination - The process of removing or reducing salts and other chemicals from seawater or other highly mineralized water sources.

Detention - The delay of stormwater runoff prior to discharge into receiving waters.

Drawdown - The vertical distance between the static water level and the surface of the cone of depression.

Effluent - Water that is not reused after flowing out of a wastewater treatment facility.

Elevation - The height in feet above mean sea level according to National Geodetic Vertical Datum (NGVD, 1929). May also be expressed in feet above mean sea level (MSL) as reference datum.

Evapotranspiration - The total loss of water to the atmosphere by evaporation from land and water surfaces and by transpiration from plants.

Existing Legal Use of Water - A water use that is authorized under a District water use permit or is existing and exempt from permit requirements.

Flow Meter - An instrument, when properly installed and calibrated, that is used for the accurate measurement of water flow through a closed pipe.

Freshwater - An aqueous solution with a chloride concentration equal to or less than 250 milligrams per liter (mg/L).

Heat Stress Damage - Exposure to high temperature extremes such that the crop or plant is economically damaged.

Hydraulic Conductivity (K) - For an isotropic medium and homogeneous fluid, the volume of water at the existing kinematic viscosity that will move in unit time under a unit hydraulic gradient through a unit area measured at right angles to the direction of flow.

Hydroperiod - The range of water level fluctuation coupled with the duration of the periods of inundation or saturation and drying in a wetland.

Irrigation Water Use - A water use classification which incorporates all uses of water for supplemental irrigation purposes including golf, nursery, agriculture, recreation and landscape.

Irrigation Return Flow - The flow of water under the influence of gravity, to a watercourse, which occurs as surface water flow or shallow ground water flow resulting from the application of water for supplemental irrigation purposes.

Irrigation System Efficiency - A measure of the effectiveness of an irrigation system in delivering water to a crop for irrigation and freeze protection purposes. It is expressed as the ratio of the volume of water used for supplemental crop evapotranspiration to the volume pumped or delivered for use.

Impoundment - Any lake, reservoir, or other containment of surface water occupying a depression or bed in the earth's surface and having a discernible shoreline.

Lake Recharge - The withdrawal of water for the purpose of replacing a volume of water removed from a lake system or other water body utilized as a source of water supply or indirectly as a source of wellfield recharge. Lake recharge does not include artificial maintenance of the water level of a surface water body at a desired elevation for aesthetic purposes, but may include augmentation of the volume of water stored within a surface water body that is effecting recharge to an adjacent wellfield.

Landscape Irrigation - The outside watering of shrubbery, trees, lawns, grass, ground covers, vines, gardens and other such flora, not intended for resale, which are planted and are situated in such diverse locations as residential and recreation areas, cemeteries, public, commercial and industrial establishments, and public medians and rights of way.

Leakance - The vertical movement of water from one aquifer to another across a confining zone or zones due to differences in hydraulic head. Movement may be upward or downward depending on hydraulic head potential in source aquifer and receiving aquifer. This variable is typically expressed in units of gpd/cu.ft.

Letter Modification - An administrative process that allows for the modification of an existing permit to account for minor changes that do not result in significant change to the terms and conditions of the permit.

Linear Move Irrigation System - A type of self-propelled overhead irrigation system that utilizes laterals which emit water under low pressure at a distance of 3 - 4 feet above the crop at a rate ranging from 4 to 16 gallons per minute.

Maximum Daily Allocation - The maximum quantity permitted to be withdrawn in any single 24 hour period.

Maximum Monthly Allocation - The maximum quantity of water assigned to the permit to be withdrawn during the month in the growing season when the largest supplemental crop requirement is needed by the specific crop for which the allocation is permitted.

Micro-irrigation - The application of small quantities of water on or below the soil surface as drops or tiny streams of spray through emitters or applicators placed along a water delivery line. Micro-irrigation includes a number of methods or concepts such as bubbler, drip, trickle, mist or microspray and subsurface irrigation.

National Geodetic Vertical Datum (NGVD) - A geodetic datum derived from a network of information collected in the United States and Canada. It was formerly called the "Sea Level Datum of 1929" or "mean sea level". Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Plume - A body of contaminated ground water originating from a specific source and influenced by such factors as the local ground water flow pattern, density of contaminant and character of the aquifer.

Portable Guns - Large sprinklers that discharge high volumes of water at high pressures through the air and are moved from location to location irrigating in a circular spray pattern and include truck or tractor mounted units.

Potable Water - Water that is suitable for drinking, culinary, or domestic purposes.

Potentiometric Surface - A surface which represents the hydraulic head in an aquifer and is defined by the level to which water will rise above a datum plane in wells that penetrate the aquifer.

Public Water Supply - Water that is withdrawn, treated, transmitted and distributed as potable or reclaimed water.

Reclaimed Water - Water that has received at least secondary treatment and is reused after flowing out of a wastewater treatment facility.

Reduced Threshold Area (RTA) - An area established by the District for which the threshold separating a General Permit from an Individual Permit has been lowered from a maximum limit of 100,000 gpd to 20,000 gpd. These areas are typically resource depleted areas where there has been an established history of sub-standard water quality, saline water movement into ground or surface water bodies or lack of water availability to meet projected needs of a region.

Resource Efficiency - The efficient use of water as measured in terms of the net impact on the relevant water storage system. A relevant water storage system will include the surface water and ground water bodies which are determined by the District

to provide storage, using the factors stated in criteria 2.3.3.2 of the Basis of Review for Water Use Permit Applications in the South Florida Water Management District - October 1997.

Restricted Allocation Area - Areas designated within the District for which allocation restrictions are applied with regard to the use of specific sources of water. The water resources in these areas are managed in response to specific sources of water in the area for which there is a lack of water availability to meet the projected needs of the region from that specific source of water.

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 evaporation processes.

Retrofit - The replacement or changing out of an existing irrigation system with a different irrigation system such as a conversion from an overhead sprinkler system to a micro-irrigation system.

Reuse - The deliberate application of reclaimed water, in compliance with FDEP and District rules, for a beneficial purpose.

Runoff - That component of rainfall which is not absorbed by soil, intercepted and stored by surface water bodies, evaporated to the atmosphere, transpired and stored by plants, or infiltrated to ground water, but which flows to a watercourse as surface water flow.

Saline Water - An aqueous solution with a chloride concentration greater than 250 mg/L and less than that of seawater.

Saline Water Interface - Hypothetical surface of chloride concentration between freshwater and saline water where the chloride concentration is 250 mg/L at each point on the surface.

Seasonal High Water Level - The elevation to which the ground water or surface water can be expected to rise due to a normal wet season.

Seawater - An aqueous solution with a chloride concentration equal to or greater than 19,000 mg/L.

Seepage Irrigation System - A means to artificially supply water for plant growth which relies primarily on gravity to move the water over and through the soil, and does not rely on emitters, sprinklers or any other type of device to deliver water to the vicinity of expected plant use.

Semi-Confined Aquifer - A completely saturated aquifer that is bounded above by a semi-pervious layer, which has a low, though measurable permeability, and below by a layer that is either impervious or semi-pervious.

Service Area - The geographical region in which a water supplier has the ability and the legal right to distribute water for use.

Staff Report - A written report prepared by District staff presenting the staff's conclusions and recommendations, based on review of the application.

Staged Drawdown - In dewatering systems, the practice of pumping the source unit to discrete, incremental levels.

Standby Facility - The minimal operation of a withdrawal facility to maintain the mechanical integrity of the pumping apparatus as recommended by the manufacturer or for a limited time period each month.

Supplemental Crop Requirement (SCR) - The volume of water, usually expressed in acre-inches, representing the difference between the estimated evapotranspiration of a given crop and the effective rainfall available in a specific geographic area over some prescribed time period and climatic event.

Traveling Guns - Large sprinklers that discharge high volumes of water through the air above the level of the plant being irrigated at high pressures which are self-propelled and move slowly across the area being irrigated, such as lateral move or linear irrigation systems.

Treatment Facility - Any plant or other works used for the purpose of treating, stabilizing, or holding wastewater.

Unconfined Aquifer - A permeable geologic unit or units only partly filled with water and overlying a relatively impervious layer. Its upper boundary is formed by a free water table or phreatic surface under atmospheric pressure. Also referred to as Water Table aquifer.

Upconing - Upward migration of mineralized or saline water as a result of pressure variation caused by withdrawals.

Utility - Any legal entity responsible for supplying potable water for a defined service area.

Wastewater - The combination of liquid and water-carried pollutants from residences, commercial buildings, industrial plants and institutions together with any groundwater, surface runoff or leachate that may be present.

Water Table - The surface of a body of unconfined ground water at which the pressure is equal to that of the atmosphere; defined by the level where water within an unconfined aquifer stands in a well.

Water Use - Any use of water which reduces the supply from which it is withdrawn or diverted.

Water Well - Any excavation that is drilled, cored, bored, washed, driven, dug, jetted, or otherwise constructed when the intended use of such excavation is for the location, acquisition, development, or artificial recharge of ground water. This term does not include any well for the purpose of obtaining or prospecting for oil, natural gas, minerals, or products of mining or quarrying; for inserting media to dispose of oil brines or to repressure oil-bearing or natural gas-bearing formation; for storing petroleum, natural gas, or other products; or for temporary dewatering of subsurface formations for mining, quarrying or construction purposes. (373.303(7), F.S.).

Wind Stress Damage - Exposure to high wind such that the crop or plant is economically damaged.

Xeriscape - A landscaping method that maximizes the conservation of water by the use of site-appropriate plants and an efficient watering system. The definitions set forth in Chapter 40E-8, F.A.C. shall be incorporated into the Basis of Review.

2.0 WATER NEED AND DEMAND METHODOLOGIES

2.1 Demonstration of Need –

To receive a general or individual permit, an applicant must demonstrate that the proposed water use is a reasonable-beneficial use of water, as required by Section 373.223, F.S. In order to demonstrate that a water use is reasonable-beneficial, the Applicant must show "need" for the water in the requested amount. This chapter describes the factors involved in determining whether there is need and for determining the appropriate permit allocation, or "demand," for a particular water use. Demonstration of "need" requires consideration of several factors, including: 1) legal control over the project site, facilities, and for public water supplies, the proposed service area, and 2) compatibility of the proposed water use with the land use at the project site or area to be supplied water. Demonstration of "demand" is dependent on the specific water use classification requirements set forth in Sections 2.2 through 2.6.

2.1.1 Legal Control over Project Site

Applicants for irrigation, industrial, commercial, and dewatering general or individual permits must demonstrate the legal right to conduct the water use on the project lands or site. This is demonstrated through property ownership or other property interest, such as a leasehold, in the project site. Applicants are required to provide copies of legal documents demonstrating ownership or control of property. A demonstration of legal

control throughout the requested permit duration must be provided. Permit duration shall be based on the time period of the legal interest in the property. The permit will expire upon termination of a non-renewable lease.

2.1.2 Legal Control over Withdrawal Facilities

All applicants for general or individual permits must be able to show legal control to use surface water pumps or ground water wells associated with the water use throughout the duration of the permit. If a withdrawal facility will be used by an entity other than the entity on whose land the facility is located, such user must demonstrate legal control to access and maintain the facility through an agreement, easement or contract.

2.1.3 Legal Control over Water Supply Uses.

An applicant for a general or individual permit proposing to supply water to another entity, such as a public water supplier, must establish need for a water allocation through demonstration of the legal right and obligation to supply the requested allocation. This legal control can be established through service area designations, water sale or delivery contracts, or other proof of such legal obligation. Public water suppliers required to receive a service area certificate or order of exemption from the Public Service Commission, shall obtain such designation prior to issuance of a water use permit pursuant to Section 367.031, Florida Statutes. The Applicant's right to the requested allocation will expire upon termination of the legal obligation to supply water to the receiving entity. Requested water allocations must be supported with detailed demand information and plans of the supply system proposed for the permit duration. The permit Applicant must make a prima facie showing of legal control over the proposed service area. If a prima facie showing is demonstrated by two water suppliers, the service area dispute between such competing water suppliers must be resolved between the parties.

2.1.4 Compatible Land Use

To demonstrate need for the requested allocation, a general or individual permit applicant must provide reasonable assurances that the requested water use classification (irrigation, dewatering, or industrial) and the water demand projection are compatible with the land use of the project site, or in the case of a public water supplier, with the land use of the area to be supplied water. The land use of the project site or area to be supplied water must be that designated in the applicable local government zoning regulations and comprehensive plan. If the requested water use classification is prohibited due to incompatibility with the land use at the project site or area to be supplied water, the need for the requested allocation has not been demonstrated and staff cannot recommend approval. The permit Applicant is advised that the proposed water use, including the demand projections and water use classification, must be compatible with any Development of Regional Impact or Development Order issued for the project. Detailed hydrologic data that has been required in the DRI process may be utilized as a submittal in the water use permit application subject to review by the

District. The approval of a DRI does not guarantee or ensure issuance of a water use permit.

2.2 Demonstration of Demand: Permitted Withdrawal Quantities –

The requested allocation to serve the Applicant's need for water will be based upon the demonstrated demand. Sections 2.3 through 2.6 identify the components of demand that must be identified for applicants of individual and general permits for each water use type. Applicants for individual and general permits must identify the quantities needed for each component of demand in order to justify the quantities requested in the permit application. Typically, the requested quantities are based on documented historical information. Applicants shall request quantities in gallons per day for each component of demand according to the terms listed below. The District will evaluate the quantities requested and identify the quantity allocated in gallons in each permit. The resulting allocation may be in one or more of the following designations:

1. Annual (MG)
2. Maximum Monthly (MG)
3. Maximum Daily (MG)

The annual allocation places a limit on the total annual withdrawals over any 12 month period of time. The maximum monthly quantity places a limit on total withdrawals in any one month. A maximum daily (24 hour) quantity shall be permitted for specific needs, such as freeze protection. If the use of water is from multiple supply sources, each source should be identified as a primary, secondary or back-up source. The Applicant shall provide a breakdown of how the water will be distributed among the multiple sources as part of the application review process. Each of the identified primary sources will receive a separate allocation, the sum of which will not exceed the maximum monthly demand for the projected use. The secondary sources will be used based upon the need for alternative sources during high stress periods or in the event of temporary interruption of the use of the primary facilities. The secondary sources will receive an allocation based on the rated capacity of the secondary source withdrawal facilities or the maximum monthly demand, whichever is less. The back-up sources will not receive a specific allocation. The use of these facilities will be recognized in the permit based on the routine operation for maintenance purposes as recommended by the pump manufacturer.

2.2.1 Annual Withdrawal

The annual withdrawal quantity is determined by calculating the quantity of water to be withdrawn over a 12 month time period. Applicants, other than irrigation uses, must determine the annual quantity by adding the quantities required by each component of demand for the particular use. The total demand is then considered along with other factors affecting withdrawals such as treatment losses; other sources of water; conservation practices employed and water purchased, sold, or transferred to determine the annual withdrawal quantity.

2.2.2 Maximum Monthly Withdrawal

The maximum monthly withdrawal is specific to irrigation type uses and represents the greatest quantity permitted to be withdrawn in any single month. The Maximum Monthly Withdrawal is determined by identifying the peak month of evapotranspiration (ET) utilizing the modified Blaney-Criddle formula. The difference between effective rainfall and ET occurring during the month of the greatest predicted ET becomes the basis for determining the maximum monthly withdrawal.

2.2.3 Maximum Daily Withdrawal

The maximum daily withdrawal is the maximum quantity of water permitted to be used, withdrawn or diverted in any single 24 hour period. This quantity is permitted to account for peak day demands associated with use classes such as public water supply, dewatering, or industrial. A maximum daily allocation shall also be identified associated with frost/freeze protection for agricultural water use permits.

2.3 Irrigation Water Demand

Applicants for general or individual permit must demonstrate that the quantities requested represent reasonable irrigation, livestock and other agricultural water needs. This is demonstrated by providing information on the types and planted acreage of crops to be irrigated, planting dates and length of crop growing season, the irrigation system or systems utilized, frost/freeze protection, the type and number of livestock, and other specific use information. The reasonable demand for agricultural water use is composed of one or more demand components, depending on the specific agricultural use. Where more than one use is served by the same allocation, i.e., improved pasture irrigation and livestock watering, the allocation shall represent the sum of the components. The reasonable need for irrigation water use is equal to the supplemental crop requirement multiplied by the allocation coefficient except when the available water supply is restricted due to adverse resource impacts or the Applicant's limited need for or ability to use the water. If the total rated capacity of all existing and proposed withdrawal facilities is less than the calculated demand, the recommended allocation will be based on the lesser value. Applicants shall identify the crop type, net planted acreage, irrigation method, soil type, planting dates, and periods of irrigation.

2.3.1 Water Conservation Plans

All individual permit applicants for landscape and golf course irrigation projects shall develop a conservation program incorporating the following mandatory elements. This conservation program must be submitted at the time of permit application.

- A. The use of Xeriscape landscaping principles for proposed projects and modifications to existing projects where it is determined that Xeriscape is of significant benefit as a water conservation measure relative to the cost

of Xeriscape implementation and meets the requirements of section 373.185 (2)(a) -(f), F.S.

- B. The installation and use of rain sensor devices, automatic switches or other automatic methods that have the capability to override the operation of the irrigation system when adequate rainfall has occurred is required. Systems which use soil moisture sensors to determine irrigation requirements are not required to also install rain sensors.

2.3.2 Supplemental Crop Requirement

The supplemental crop requirement for individual and general permits is the amount of water needed for a particular crop beyond the amount of water provided by effective rainfall. There are several ways to determine this amount:

- A. Except as described in section B., the supplemental crop requirement for all crop types is determined using the Modified Blaney-Criddle method. This procedure estimates the potential amount of water lost to evapotranspiration and determines the supplemental crop requirement using soil moisture capacity, rainfall, and other variables. The maximum monthly and annual allocations will be based on the supplemental crop requirement for a 2-in-10 deficit effective rainfall. The maximum monthly allocation for citrus crops will be based on full replacement of evapotranspiration. The annual allocation for citrus crops will be based on the supplemental crop requirement for the 2-in-10 deficit effective rainfall.
- B. The supplemental crop requirement may also be determined based on specific reports related to evapotranspiration estimates published by the University of Florida, Institute of Food and Agricultural Sciences (IFAS).

2.3.3 Allocation Coefficient

The allocation coefficient for individual and general permits incorporates the type of irrigation and the system's effect on the relevant water storage system as it relates to increased resource efficiency. The supplemental crop requirement will be multiplied by the net irrigated acreage and the appropriate allocation coefficient listed in Table 2- 1 in determining the allocation requirements, if the alternative allocation coefficient described in 2.3.3.1., is not utilized. Irrigation projects which possess or propose a surface water management (SWM) construction and operation permit which utilizes a retention/detention system or Works of the District permit under Chapters 40E-61 or 40E-63, F.A.C., using farm pumping reduction best management practices which result in increased storage and reduced runoff, are credited as more resource efficient due to the aquifer recharge potential gained through the retention and detention of stormwater and the recycling of irrigation water. For these types of systems, the column marked "With SWM Permit" in Table 2-1 shall be used. For those systems that do not meet the

criteria described above, the column marked "Without SWM Permit" in Table 2-1 shall be used.

2.3.3.1 Alternative Allocation Coefficient

Applicants may request an allocation coefficient different than the criteria outlined in section 2.3.3. In determining which allocation coefficient is appropriate, District staff will consider factors such as: site-specific soil characteristics, evapotranspiration and effective rainfall, depth to background water level, height of ground water mound, irrigation field boundary conditions, or other site-specific information as it relates to increased resource efficiency.

2.3.3.2 Resource Efficiency

Resource efficiency shall be evaluated by using the following factors: evaporation, runoff to areas other than the relevant water storage system, runoff and infiltration back into the relevant water storage system, aquifer recharge potential gained through the retention/detention of stormwater, the recycling of irrigation return flow, related environmental and operational factors such as the ability to maintain historical surface and ground water levels and, the ability to conserve the water resource.

2.3.3.3 Irrigation System Efficiency

The most efficient irrigation system shall be considered to be that which minimizes water lost to evaporation, relative to other irrigation systems in a region. Irrigation system efficiency shall be based on ratings published in Efficiencies of Florida Agricultural Irrigation Systems (Smajstrla et al. IFAS Bulletin 247). Applicants may demonstrate that a different factor is applicable for a particular system. This factor may be based on information provided by the manufacturer of the system. The irrigation system efficiency associated with water that is conveyed over large distances before being utilized for irrigation purposes is determined based upon a combined efficiency factor incorporating the efficiency of the system delivering the water to the point of diversion into an irrigation system and the efficiency of the irrigation system itself. The combined irrigation system efficiency is calculated based upon the appropriate allocation coefficient identified in Table 2-1 and a multiplying factor of 1.5 to account for conveyance losses. If the Applicant does not agree with the use of the 1.5 multiplying factor, another value shall be used if the Applicant provides sufficient documentation which supports the use of a different value.

TABLE 2-1
Allocation Coefficient Multiplier Including
Credit for Resource Efficiency

Irrigation System Type	Allocation Coefficient Multiplier	
	With SWM Permit	Without SWM Permit
Micro-irrigation		
Drip	1.18	1.18
Micro-sprinkler	1.18	1.18
Overhead Sprinkler		
Linear Move	1.33	1.18
Solid Set Sprinkler	1.33	1.25
Traveling Gun	1.43	1.33
Portable Gun	1.54	1.43
Nursery Container	5.00	2.86
Subirrigation		
Seepage, Furrow	2.50	1.67
Semi-Closed Flow-Through	2.50	1.67
Crown Flooding	2.50	1.67

2.3.3.3.1 Standard Irrigation Systems

The accepted standard irrigation system for specific crop types will be required of all initial consumptive use permit applicants whose irrigation systems are not constructed. As new information is made available or new technologies are developed, irrigation standards for other crop types will be established by rule. Upon permit renewal, in Critical Water Supply Problem Areas, the irrigation standard will be required of acreage added to existing, permitted projects; when the existing water use permit contains irrigated acreage for which the allocation was not used and is proposed to be used or for that part of the irrigation system which is being retrofitted. The following two standards are incorporated into this rule.

- A. The accepted irrigation methodology for citrus projects is a micro-irrigation system such as drip, micro-sprinkler, or other system capable of meeting the equivalent irrigation system efficiency of a micro-irrigation system.
- B. The accepted irrigation methodology for nursery container projects is a micro-irrigation system, overspray irrigation water recovery system, or other specific design elements capable of achieving the equivalent efficiency of a micro-irrigation system.

2.3.4 Frost/Freeze Protection

Freeze protection quantities for general and individual permits may be identified based on the number of acres to be protected and the type of freeze protection utilized. If the rated capacity of existing and proposed withdrawal facilities is less than the calculated freeze protection value, the total rated capacity of the existing and proposed withdrawal facilities will be the basis for the recommended maximum daily allocation for freeze protection. The freeze protection allocation will be made on the basis of a 24 hour maximum daily requirement per freeze event. The following values will be utilized for freeze protection calculations unless alternative, reasonable acceptable agricultural practices can be documented by the Applicant.

Flood: 0.10 MGD/acre

Sprinkler: 0.16 MGD/acre

Micro-sprinkler: 0.05 MGD/acre

If the calculated freeze protection allocation exceeds the equivalent maximum daily irrigation allocation, a separate allocation for freeze protection will be recommended. With regard to a general water use permit, the necessary allocation for freeze protection during a one day freeze event shall be included in the requested maximum daily allocation when determining whether the general water use permit threshold is met.

2.3.5 Improved Pasture Irrigation

Applications for the irrigation of unimproved pasture will not be approved. Authorization of water use for improved pasture shall be given if the Applicant documents that an irrigation system exists or is proposed and is capable of delivering the requested amount. For proposed systems, a schedule for implementation of the irrigation system is required. The Applicant will be required to document the amount of improved pasture acreage reasonably expected to be irrigated in any given growing season as the basis for the net irrigated acreage.

2.3.6 Livestock

The reasonable need for livestock use for individual and general permits is determined by multiplying the estimated total number of animals by gallons needed per day per animal as estimated by IFAS or other sources directly related to specific industry process requirements. Unless the Applicant can demonstrate that a different factor is appropriate for their particular needs, the livestock water use will be determined using the values identified in Table 2-2.

**TABLE 2-2
Livestock Water Needs**

Animal	Use per Animal (gpd)
Dairy Cattle	150
Beef Cattle	12
Horses	12
Hogs	2
Sheep	2
Turkeys	1
Chickens	0.1

2.3.7 Aquaculture

The reasonable need for aquaculture is determined by the number and volume of ponds and tanks and their filling and recirculation requirements and other factors that may contribute to maintaining necessary water levels or water quality. An applicant for a general or individual permit must demonstrate that the requested allocation is a reasonable-beneficial use.

2.3.8 Other Agricultural Water Needs

The reasonable need for other agricultural uses, such as cooling of animals or product, is determined based on supporting information provided by the Applicant for a general or individual permit. The supporting information must demonstrate that the requested allocation is a reasonable-beneficial use.

2.3.9 Drainage Districts

Applicants for an individual or general permit who are supplied water by a Drainage or Water Control District do not need to be permitted separately for supplemental quantities unless there is a change in the withdrawal source for which the Drainage or Water Control District has no authority or permission to use. The allocation of the supply from the additional source will be authorized through the issuance of a separate permit specific to the new source classification.

2.4 Industrial / Commercial –

Applicants for an individual permit must demonstrate that the quantities applied for relate to reasonable processing and manufacturing needs. The Applicant shall demonstrate need for the water by providing information on the water balance for the operation, including all sources of water and losses of water utilized in production processes, personal/sanitary needs of employees and customers, treatment losses, and unaccounted uses.

2.4.1 Water Conservation Plans

All individual permit applicants for a commercial or industrial water use permit must submit a water conservation plan at the time of permit application. The conservation plan shall be prepared and implemented for the Permittee's proposed use and, at a minimum, incorporate the following mandatory components:

- A. An audit of the amount of water used in the Applicant's various operational processes. For new Permittees, an audit will not be required as a condition of permit issuance; however, such audit must be conducted within two years of permit issuance.

The following measures will be required within the first year of permit issuance or audit completion if found to be cost effective in the Applicant's audit:

1. implementation of a leak detection and repair program;
 2. implementation of a recovery/recycling or other program providing for technological, procedural or programmatic improvements to the Applicant's facilities, and;
 3. use of processes to decrease water consumption.
- B. Develop and implement an employee awareness and consumer education program concerning water conservation.
 - C. Procedures and time-frames for implementation shall be included in the conservation plan.

2.4.2 Demand Components

Applicants for industrial/commercial uses must identify the demand for each of the following components:

- A. Process requirements - water lost in processing and manufacturing where water is an input in the process. This quantity is determined through the calculation of a water balance. The water balance demonstrates where water is generated and in what quantities, where water is used in manufacturing or processing and the associated losses, and where and in what quantities water is disposed of or reused. The balance may be in the form of a spreadsheet or a flow diagram that indicates all water sources and losses. All sources of water that input to the activity must be listed.

- B. Other uses - determined by calculating the total withdrawal quantity minus the quantity for the uses identified above. Other uses include lawn and landscape irrigation, outside use, air conditioning and cooling, water lost through leaks, and unaccounted uses.

2.5 Dewatering

Dewatering activities that require a water use permit include withdrawals of water for construction activities, mining operations, and minor uses such as exploratory testing, short-term Remedial Action Plans, and aquifer performance tests. There are three types of District permits for dewatering projects, that are primarily based on the duration and volume of water associated with the project. As summarized in Table 2-3, two of the permits are for short duration dewatering projects and the other is for long-term projects. The dewatering duration for a project is considered by Staff to be the period of time necessary to complete all dewatering for the project. Staff will not issue multiple short-term dewatering permits for a single project or different phases of a project.

2.5.1 "No-Notice" Dewatering Permits

"No-Notice" short-term dewatering permits apply to dewatering projects of less than 90 days with maximum daily pumpage of less than 5 million gallons per day and maximum total project pumpage of less than 100 million gallons, where all dewatering water is retained on the project site and there is no potential for resource harm. If a project does not qualify for a "No-Notice" permit, a Dewatering General Water Use Permit (Section 2.5.2) or a Dewatering Individual Permit (Section 2.5.3) must be obtained for the dewatering project. These permits are intended for projects of longer duration or larger dewatering pumpage, or for those projects where the potential for resource impact needs to be evaluated by District staff or off-site discharge of dewatering water is requested.

Proposed dewatering activities under the "No-Notice" permit must satisfy the following criteria, in addition to the Conditions of Issuance in 40E-20.301, F.A.C., and the "No-Notice" requirements in 40E-20.302(3), F.A.C.:

1. will retain all discharge on the project site. No off-site discharge is authorized under "No-Notice" dewatering.
2. will not dewater to a depth below 0.0 feet NGVD within 1000 feet of saline water, except when dewatering saline water, as defined in Chapter 1 of this Basis of Review.
3. will not occur within 100 feet of a wastewater treatment plant rapid-rate land application system permitted under Part IV of Chapter 62-610, F.A.C.
4. will not occur within one mile of a known landfill or contamination.
5. will not occur within 1000 feet of a wetland.

The applicant is not required to submit a permit application for dewatering activities, if the "No-Notice" criteria are met. In proceeding with "No-Notice" dewatering, the applicant acknowledges that the dewatering operation is subject to the Standard Permit Conditions in Section 5.1 of the BOR, including responsibility for mitigating any harm that may occur as a result of the dewatering to existing legal uses, off-site land uses, or natural resources.

Linear projects, such as roads, utilities, or pipelines, may qualify for multiple "No-Notice" permits. The dewatering activity for these projects may have a rolling 90-day duration, in which the dewatering operation at the end of each 90-day period occurs more than 1 mile from the location at the beginning of each 90-day period.

2.5.2 Dewatering General Water Use Permit

Dewatering General Water Use Permits, as described in Rule 40E-20.302(2), F.A.C., are for dewatering projects, which a) cannot meet the conditions of issuance and requirements for "No-Notice" permits, b) have a proposed duration of less than one year, and c) propose to pump less than 10 million gallons per day with a total project volume of less than 1800 million gallons. A dewatering general water use permit application must be submitted to the District and Staff must issue the General Permit prior to the applicant beginning dewatering, unless portions of the project qualify for dewatering under the "No-Notice" permit described above. The applicant may elect to begin dewatering for a single period of only 90 days in areas of the project, which meet the "No-Notice" criteria, once an application for a Dewatering General Water Use Permit has been submitted to the District.

Permit applications for a Dewatering General Water Use Permit must:

- (1) provide reasonable assurances that the project will not cause harm to the resource, existing legal uses, offsite land uses, and wetland environments or cause harmful saline water intrusion or movement of pollutants, as described in Chapter 3 of this Basis of Review. If the potential for harm exists, the applicant shall redesign the dewatering activities, including recharge trenches or storage areas to offset the potential drawdown impacts of the proposed activity.
- (2) demonstrate that the requested allocations represent reasonable dewatering needs. These needs are generally demonstrated by providing information on the water budget for the operation, including all sources and losses of water utilized in the dewatering process. The water budget should demonstrate where and in what quantities water is generated to accomplish the dewatering, including any associated losses, and where and in what quantity water is stored, recharged, disposed, or reused. If processing of materials is associated with the dewatering, a separate water budget describing these activities is required. The water budget may

be in the form of a spreadsheet or a flow diagram that indicates all water sources and losses.

- (3) identify the areal extent and depth of the proposed excavation, the depth of dewatering, and the areal extent of the drawdown of the Water Table aquifer associated with the proposed dewatering.
- (4) provide reasonable assurances that all dewatering water will be retained on the project site, unless the applicant demonstrates that it is not technically feasible to retain the dewatering water onsite. If any offsite discharge is requested due to demonstrated technical infeasibility of onsite retention, the applicant must provide the following information with the permit application:
 - a. documentation of authorization that allows the applicant to discharge directly into the receiving water body and/or adjacent lands, and a demonstration that the receiving water body or adjacent lands are capable of accepting the dewatering discharge;
 - b. an operational plan which demonstrates that the discharge to the receiving water body will meet all applicable State Water Quality standards prior to discharge;
 - c. an operational plan which demonstrates that the discharge to protected wetlands will not contain turbidity levels in violation of State Water Quality standards (must be less than 29 NTU above background levels) prior to discharge;
 - d. a monitoring plan which includes, at a minimum, proposed sampling locations and daily turbidity measurements of the discharge and background conditions in the receiving body and/or wetland; and
 - e. a contingency plan which includes procedures for ceasing dewatering operations and correcting the situation until monitoring demonstrates water quality standards are met.
- (5) provide reasonable assurances that fresh dewatering water will not be discharged to saline tidal waters, unless the applicant demonstrates that it is not technically feasible to prevent discharge to saline water and requests specific authority from the District for discharge. Saline dewatering water, as defined in this Basis of Review, may be discharged to tidewater.
- (6) provide an operational plan which describes how stormwater will be handled during dewatering operations.

Dewatering applications will be reviewed concurrently with Environmental Resource or Surface Water Management construction permit applications, and the dewatering application will not be considered complete until both applications are complete. An applicant may request that the dewatering permit include a later "start" date to coincide with the actual start of dewatering activities at the project. Staff will recommend a permit expiration date, based on the proposed "start" date. Any temporary dewatering water holding areas must be constructed and operated using sound engineering practices to protect public health, safety, and welfare and, as necessary, dewatering activities must meet all applicable Environmental Resource or Surface Water Management criteria.

2.5.3 Long-Term Dewatering Individual Permits

Long-term dewatering individual permits apply to projects that exceed the thresholds and criteria described in Sections 2.5.1 and 2.5.2 above. These permits must be approved by the District Governing Board. Two types of individual dewatering permits are available from the District. For projects where all the dewatering activities are defined at the time of the permit application, the applicant may apply for a "standard" Individual Permit. For long-term, multi-phased projects, with undefined activities or no contractor at the time of the permit application, the applicant may apply for a "master" Individual Permit.

Applicants for all individual dewatering permits must satisfy the conditions of issuance for Individual Permits (Rule 40E-2.301, F.A.C.), and may not commence dewatering prior to approval of the permit by the Governing Board. The applicant may elect to begin dewatering for a single period of only 90 days in areas of the project, that meet the No-Notice criteria specified in Section 2.5.1 of this Basis of Review, once an application for an Individual dewatering permit has been submitted to the District.

The applicant must provide the information required for the Dewatering General Permit, as specified in Section 2.5.2. In addition, the applicant shall provide estimates of the maximum monthly and annual dewatering withdrawals for the project and will be required to submit records of monthly withdrawals for each dewatering pump to the District. Staff shall not specify maximum monthly or annual withdrawal volumes in the recommended permit conditions presented to the Governing Board.

A. "Standard" Individual Permits

The applicant shall specify all proposed dewatering activities for the project in terms of depth, duration, and areal extent of dewatering and proposed routing of dewatering water, the estimated magnitude and extent of drawdown, proposed recharge/storage areas, and the potential for harm. The applicant may proceed with all dewatering activities once the permit has been approved by the Governing Board.

B. "Master" Individual Permits

Due to project uncertainties, the applicant may not be able to specify all aspects of the proposed dewatering activities at the time of the permit application. In order to receive a "master" dewatering permit, the applicant must meet all conditions of issuance and specify the depth, duration, and areal extent of dewatering, the proposed routing of dewatering water, the estimated magnitude and extent of drawdown, proposed recharge/storage areas, and the potential for harm for "typical" dewatering activities for the project. In addition, the applicant shall provide an estimated project schedule showing dewatering activities and calculated estimated maximum monthly and annual dewatering withdrawals. After approval of the permit by the Governing Board, the applicant shall be required by limiting condition to supply site-specific dewatering plans for each proposed dewatering activity to the District for review and approval at least two weeks prior to dewatering. The applicant may not initiate dewatering prior to receiving written notification from District Staff, that the proposed dewatering activity is consistent with the "master" permit approved by the Governing Board.

TABLE 2-3

Dewatering Permits

PERMIT REQUIRED	MAXIMUM DAILY PUMPAGE	TOTAL PROJECT PUMPAGE	DURATION	COMMENTS
"No Notice" Rule 40E-20.302(3), F.A.C. BOR Section 2.5.1	5 MG	100 MG	Less than 90 Days	No potential for resource impacts No offsite discharge
General Permit 40E-20.302(2), F.A.C. BOR Section 2.5.2	10 MG	1800 MG	Less than 1 Year	Short-term permit for defined projects
Individual Permit 40E-2, F.A.C. BOR Section 2.5.3.A	No limitation	No limitation	Greater than 1 Year	Standard longer-term permit for defined projects
"Master" Individual Permit 40E-2, F.A.C. BOR Section 2.5.3.B	No limitation	No limitation	Greater than 1 Year	Permit for phased projects, projects with undefined activities, or no contractor at time of permit application

2.6 Public Water Supply --

In order to accurately calculate demand, public water supply general or individual permit applicants must meet the criteria included in Section 2.1 of this manual and identify the demand for each of the uses listed in this section. Information required to demonstrate reasonable demand for each component includes the number, type, and size of service connections; past pumpage records; projected population data for the service area; data on the specific uses; and data specific to the forecasting models used. Demand quantities shall be based on raw water demand or that volume of water necessary to be withdrawn from existing or proposed sources. The quantities must be expressed in average gallons per day for each component of demand.

Where metering, billing, or other record-keeping methods do not provide accurate use estimates, the Applicant must provide the best estimates for each use type and must document the estimation method used.

In applications where a portion of the demand is derived from large use customers who redistribute water (e.g., a county utility sells water to a municipality), the Applicant must obtain and report demand information from each customer. This information is required to demonstrate that the quantities applied for are supported by reasonable demand. Per capita use guidelines and water use Conservation Plans in Section 2.6.1. apply to redistributing water customers as well as the Applicant.

2.6.1 Water Conservation Plans

All public water supply utilities applying for an individual permit are required to develop and implement a water conservation plan. The water conservation elements of each plan need to be identified as part of the application. A timetable outlining the implementation schedule of each of the required water conservation elements will be required to be submitted or shown to already exist prior to issuance or renewal of a public water supply water use permit. The conservation plan shall be prepared and implemented for the service area incorporating, at a minimum, the following mandatory components. For those components which require ordinance adoption, such ordinance should incorporate the entire boundary of the enacting jurisdiction. The Permittee shall provide a copy of the ordinances for each of the mandatory elements for which ordinances are adopted. The mandatory water conservation elements are as follows:

- A. The limitation of all lawn and ornamental irrigation to the hours, at a minimum, of 4:00 P.M. to 10:00 A.M. The permit Applicant or enacting local government may adopt an ordinance which includes exemptions from the irrigation hour restrictions for the following circumstances, irrigation systems and/or users:
 - 1. Irrigation using a micro-irrigation system;
 - 2. Reclaimed water end users;
 - 3. Preparation for or irrigation of new landscape;

4. Watering in of chemicals, including insecticides, pesticides, fertilizers, fungicides, and herbicides when required by law, recommended by the manufacturer, or constituting best management practices;
5. Maintenance and repair of irrigation systems;
6. Irrigation using low volume hand watering, including watering by one hose attended by one person, fitted with a self-canceling or automatic shutoff nozzle or both or
7. Users irrigating with 75% or more water recovered or derived from an aquifer storage and recovery system.

B. Where the local government operating the public water supply utility, pursuant to section 125.568 or 166.048, F.S., determines that Xeriscape would be of significant benefit as a water conservation measure relative to the cost of Xeriscape implementation, the local government operating the public water supply utility is required to adopt a Xeriscape landscape ordinance meeting the requirements of section 373.185(2)(a)-(f), F.S. In the event such a Xeriscape ordinance is proposed for adoption, the permit Applicant shall submit the draft ordinance to the District for determination of compliance with section 373.185(2)(a) - (f), F.S. If the ordinance which the local government has or proposes to adopt includes an alternative set of requirements which do not encompass those contained in section 373.185(2)(a)-(f), F.S., eligibility for the incentive program will not be achieved. The District, in compliance with section 373.185, F.S., offers the following incentive program, to those local governments who are eligible, consisting generally of information and cost-benefit analysis assistance. Specifically, the information provided interested parties will consist of an explanation of the costs and benefits of Xeriscape landscapes; the types of plants suitable for Xeriscape landscapes within the local government's jurisdiction; the types of irrigation methods suitable for Xeriscape landscaping and the use of solid waste compost. Further, if requested, the District will assist local governments in determining whether the benefits of requiring Xeriscape landscaping outweigh the costs within that local government's jurisdiction; this assistance may consist of economic considerations, technical information or referral to other agencies that can provide information the local government may need to perform its costbenefit determination. The Governing Board finds that the implementation and use of Xeriscape landscaping, as defined in section 373.185, F.S., contributes to the conservation of water. The Governing Board further supports adoption of local government ordinances as a significant means of achieving water conservation through Xeriscape landscaping.

C. The adoption of an ordinance requiring the installation of ultra-low volume plumbing fixtures in all new construction, such that plumbing fixtures are installed to comply with the following maximum flow volumes at 80 psi:

Toilets: 1.6 Gal./Flush; Shower Heads: 2.5 Gal./Min.; and Faucets 2.0 Gal./Min.

- D. The adoption of water conservation-based rate structures. Such rate structures should include at least one of the following alternative components: increasing block rates, seasonal rates, quantity based surcharges and/or time of day pricing as a means of reducing demands.
- E. The implementation of leak detection programs by utilities with unaccounted-for water losses of greater than 10% is required. Such leak detection program must include water auditing procedures, in-field leak detection efforts and leak repair. The program description should include the number of man-hours devoted to leak detection, the type of leak detection equipment being used and an accounting of the water saved through leak detection and repair. It is the policy of the District to encourage public water supply systems to have no more than 10% unaccounted-for water losses.
- F. For local government applicants, the adoption of an ordinance requiring any person who purchases and installs an automatic lawn sprinkler system to install, operate and maintain a rain sensor device or automatic switch which will override the irrigation cycle of the sprinkler system when adequate rainfall has occurred pursuant to Section 373.62, F.S.
- G. The implementation of water conservation public education programs.
- H. For those potable public water supply utilities who control, either directly or indirectly, a wastewater treatment plant, an analysis of the economic, environmental and technical feasibility of making reclaimed water available. Use of the Guidelines for Preparation of Reuse Feasibility Studies published by the Department in November, 1991 is suggested.
- I. Procedures and time-frames for implementation shall be included in the conservation plan.

2.6.2 Demand Components

All public water supply applicants for an individual or general permit must identify the demand for the following components:

- A. Residential Use - at a minimum, shall be divided into single-family residential use and multi-family residential use;
- B. Other metered uses - include all uses other than residential accounted for by meter;

- C. Unaccounted uses - the total water system output minus all accounted uses above. Unaccounted use includes unmetered use, water lost through leaks, water used to flush distribution lines, fire fighting, and other unidentified uses. This quantity should not exceed 10 percent of total distribution quantities. Applicants with unaccounted use greater than 10 percent are required to address the reduction of such use through the formation of a formal leak detection program;
- D. Treatment and Distribution Losses - In some circumstances, not all water that is withdrawn is actually used. This circumstance may be a result of losses in the system during distribution, or because the water must undergo a treatment process before it is usable. This component should only be calculated when such losses are significant. Some water treatment technologies, such as desalination or sand filtration, may cause significant portions of the withdrawn water to be unusable. In such cases, the Applicant shall be required to indicate the withdrawal quantity treated, the percent product (usable) water, the percent reject (unusable) water, and the manner in which the reject water will be disposed.
- E. Large User's Agreements - for those utilities which provide water to other entities through large user's agreements or other similar contracts, the quantity of water delivered to each end user (both average and peak day) and the duration of the water service delivery shall be identified. For those utilities which purchase supplemental water from another utility, the volume of water historically purchased (or contracted to be purchased for proposed uses) for both an average and maximum daily basis and the duration of the contract shall be provided.

2.6.3 Per Capita Daily Water Use

Per capita daily water use is a guideline used to measure the reasonable withdrawal requests of public water supply applicants for an individual or general permit. Per capita water use includes population-related withdrawals associated with residential, business, institutional, industrial, miscellaneous metered, and unaccounted uses. The average per capita daily use rate is calculated for the last five years or period of record, whichever is less, by dividing the average daily water withdrawals for each year of record by the permanent or seasonally adjusted population served by the utility for the same period of time. The per capita use rate that is most representative of the anticipated demands, considering the water conservation plans required by criteria in section 2.6.1, shall be identified and used for water demand projection purposes. The historical demand patterns may not always be appropriate for projection purposes. This may occur when there are current large users whose growth is not related to population, or when future development may take on characteristics very different than those of present development. In such cases, alternative per capita estimates, such as a design per capita based on dwelling unit type, population characteristics, seasonality of the population and comparison with adjacent similar developments, shall be presented

accompanied by necessary documentation. If no historical water use data exists or in the case of proposed developments, a design per capita use shall be used based on the above alternative criteria. Per capita daily water use greater than 200 gallons per capita per day (gpcd) must be supported with additional information explaining the rate of use.

2.6.4 Maximum Daily Peaking Ratio

The recommended maximum daily allocation for a public water supply general or individual permit is based on the average daily demand for the duration of the permit times the maximum daily to average daily peaking ratio. The maximum daily peaking ratio shall be determined based on historical use patterns. The methodology used in determining the maximum daily peaking ratio will depend upon available data. The maximum daily peaking ratio is calculated by dividing the historical maximum daily withdrawal by the average daily withdrawal for twelve months of record.

Listed below are methodologies used to calculate the maximum daily peaking ratio depending on the available data. Extensive non-domestic use may cause variations in methodologies.

- A. In cases where several years of pumpage records are available, the maximum daily peaking ratio is calculated for each year. The ratio is generally the average of the last three years of record.
- B. For proposed developments, a ratio between 1.5 and 2.0 will be used, depending upon the operation of the utility, although engineering documents justifying a different ratio will be considered.
- C. When a utility operates more than one treatment plant and the plants operate independently (no interconnections), the maximum daily peaking ratio must be determined for each treatment plant and its associated wellfield(s).

2.6.5 Population Estimates

In service areas without significant seasonal population fluctuations, the use of permanent population estimates is appropriate. In service areas where there are significant seasonal population changes, the general or individual permit applicant shall estimate the seasonal population for use in conjunction with permanent population in the calculation of per capita daily water demand. The Applicant is advised that if significant seasonal population fluctuations are not accounted for, per capita water daily water use may be over-estimated. Permanent and seasonal (if applicable) population growth must be projected for the requested duration of the permit, on a yearly basis, for the area served by the application.

When population estimates are required for years in between published or referenced estimates, the Applicant must interpolate the data. The Applicant may assume that population increases in equal increments in the years between established estimates.

2.6.5.1 Population Data

Population data should be derived from the prevailing Comprehensive Land Use Plan (developed under Chapter 9J-5, F.A.C.). If the Applicant's population estimate varies from the Comprehensive Plan, other accepted sources of population data to validate the variance include the following: (1) University of Florida Bureau of Economics and Business Research (BEBR), (2) Regional Planning Council (RPC), (3) County Planning Departments, or the (4) District Planning Department.

2.6.6 Health Review

The Applicant for a public water supply general or individual permit is advised that permits or certifications regarding water quality may be required by other governmental agencies, such as the Florida Department of Environmental Protection and Department of Health and Rehabilitative Services, for public health purposes.

3.0 WATER RESOURCE EVALUATIONS

Section 373.223, F.S., provides a three-pronged test for evaluating each proposed water use: (1) the use must be reasonable-beneficial, (2) must not interfere with any existing legal use of water, and (3) must be consistent with the public interest. Reasonable assurances that the proposed water use from both an individual and cumulative basis meets this three-pronged test are provided, in part, by the Applicant's compliance with the Conditions for Issuance, set forth in Rule 40E-2.301.

This section provides some technical guidelines for determining whether a water use meets the Conditions for Issuance set forth in Rule 40E-2.301. If the criteria described in this section are not met, applicants may consider reduction of withdrawal quantities, a pumpage rotation schedule, mitigation, change in withdrawal source or other means to bring the proposed use into compliance with the technical criteria.

3.1 Reasonable Demand –

The proposed withdrawal of water must be supported by information specified in Section 2.0 of this manual, demonstrating that the withdrawal quantities are necessary to supply a certain reasonable need or demand. Only that portion of the requested demand that is supported by adequate documentation will be recommended for issuance through the time period specified by the permit duration.

3.2 Sources of Water –

District permits are required for all non-exempt existing and proposed uses of fresh and saline sources. Sources are described as surface water or ground water which can be further identified with the name of the water body and/or aquifer. Applicants using seawater or reclaimed water to meet their total water needs are not required to obtain

water use permits. However, if these sources are utilized, in part, to meet the Applicant's water demand, the Applicant should identify the quantities obtained from these sources that are used to meet the demand. If a source is not reliable throughout the year, the Applicant may request withdrawal quantities from secondary and standby sources of supply, which may be used when the primary supply is limited. The permit will identify the secondary and backup sources and the conditions and time periods for which they are likely to be required.

Consideration must be given to the availability of the lowest quality water, which is acceptable for the intended use. If a water source of lower quality is available and is feasible for all or a portion of an Applicant's use, this lower quality water must be used. Such lower quality water may be in the form of reclaimed water, recycled irrigation return flow, collected stormwater, saline water, or other sources.

3.2.1 Restricted Allocation Areas

Due to concerns regarding water availability, the following geographic areas are restricted with regard to the utilization of specific water supply sources. These areas and sources include the following:

- A. Lake Istokpoga/Indian Prairie Canal System - No additional surface water will be allocated from District controlled surface water bodies over and above existing allocations. No increase in surface water pump capacity will be recommended.
- B. C-23, C-24 and C-25 Canal System - No additional surface water will be allocated from District canals C-23, C-24 and C-25, or any connected canal systems that derive water supply from these District canals, over and above existing allocations. No increase in surface water pump capacity will be recommended.
- C. L-1, L-2 and L-3 Canal System - No additional surface water will be allocated from District canals L-1, L-2 and L-3 over and above existing allocations. No increase in surface water pump capacity will be recommended.
- D. Pumps on Floridan Wells - No pump shall be placed on a flowing Floridan well in Martin or St. Lucie County, except under the following guidelines:
 - 1. If the pump was in place and operational prior to March 2, 1974, and is still in place or a replacement pump with a similar capacity is in place, or
 - 2. The proposed pump is installed for the purpose of increasing pressure in attached piping (e.g., drip or micro-jet irrigation systems) and not for the purpose of increasing flow over and above that flow which naturally emanates from the well. The determination of the appropriate pump

capacity must occur after well construction and measurement of the actual natural flow rate. Prior to any pump installation, the Permittee shall provide measurements of flow from each well using calibrated flow equipment. The method of accounting, calibration data, corrections for well losses, proposed pump information, and the basis for the requested flow rate shall be submitted to District Staff for review and approval, or

3. The Applicant conducts and provides the results of a study, approved by District staff, which shows that pump installation and subsequent withdrawals will not interfere with any presently existing legal use, as defined in Section 3.7 of this Basis of Review, or
4. The proposed pump is installed to temporarily assist in producing the permitted allocation associated with freeze protection pursuant to Section 2.3.4 of this Basis of Review, or
5. The proposed pump is installed to temporarily assist in meeting allowable withdrawals for the duration of a water shortage declared pursuant to Chapter 40E-21, F.A.C.

3.2.2 Area of Special Concern

If the District determines that the application is in an area of special water concern because of either limitations on water availability or other potentially adverse impacts associated with the proposed withdrawal, then:

- A. allocation of water shall be restricted or denied for irrigation purposes when reclaimed water is available and is economically, technically and environmentally feasible,
- B. irrigation shall be restricted to the use of a micro-irrigation system or the irrigation allocation limited to the quantity of water equivalent to the efficiency achieved by a micro-irrigation system, or
- C. monitoring programs shall be imposed to delineate the cone of depression surrounding a withdrawal.

3.2.3 Reclaimed Water Reuse Criteria

Based upon the statutory guidance and the delineation of feasibility factors found in the State Water Policy, Chapter 17-40, F.A.C., the Governing Board determines that, in those areas of the District which are not designated a Critical Water Supply Problem Area pursuant to Chapter 40E-23, (see figure III-3), when reclaimed water is readily available it must be used in place of higher quality water sources, unless it is demonstrated by the Applicant that its use is either not environmentally, economically or

technically feasible. In determining whether reclaimed water is readily available, the District will consider the following factors:

- A. Whether a suitable source of reclaimed water exists;
- B. Whether the source is offered to or controlled by the Applicant; and
- C. Whether the Applicant is capable of accessing the source through distribution lines.

In those areas of the District which are designated as Critical Water Supply Problem Areas pursuant to Chapter 40E-23, reclaimed water is required to be used, unless it is demonstrated by the Applicant that its use is either not environmentally, economically or technically feasible.

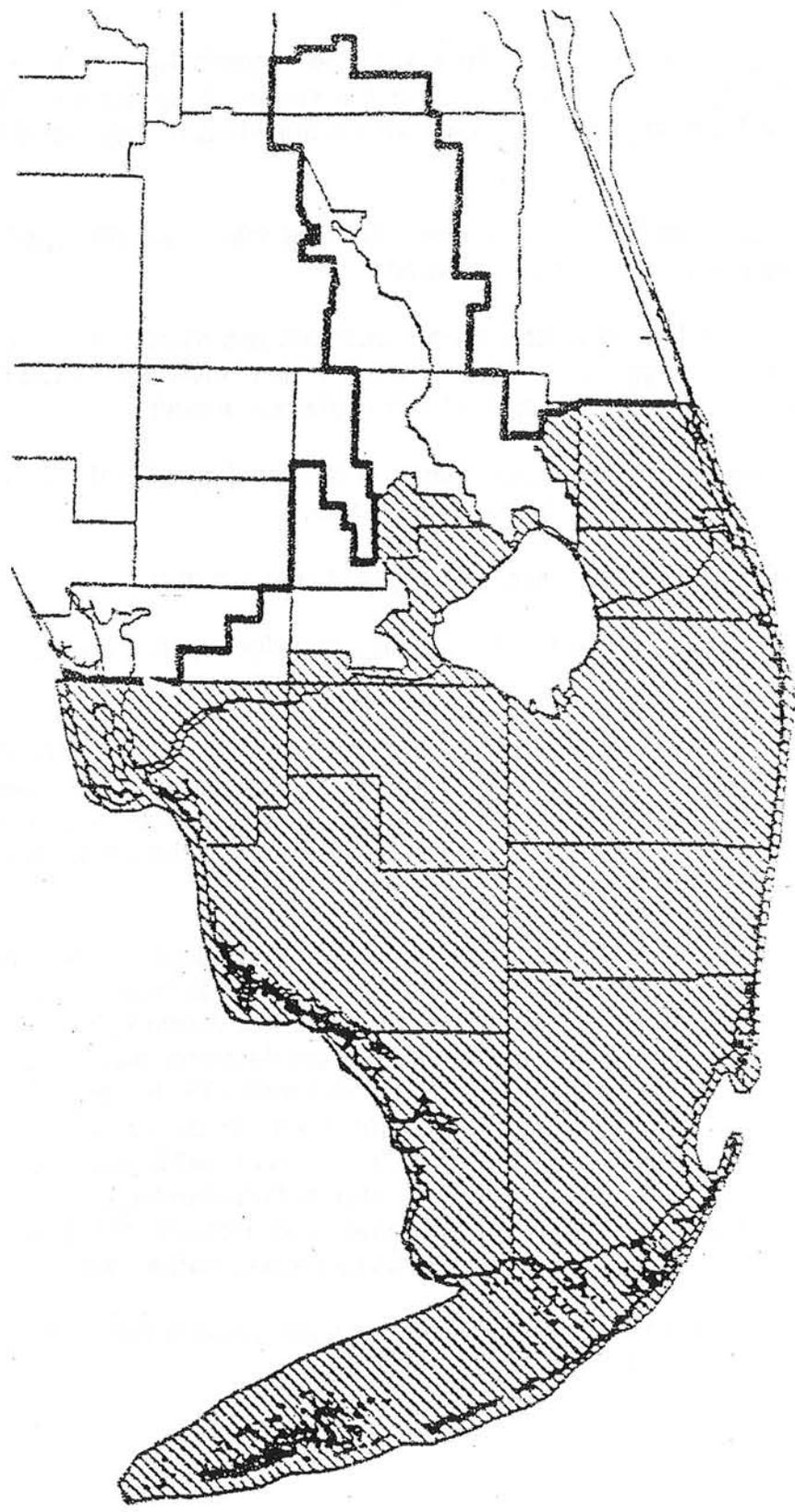


Figure III-3



■ critical water supply
problem areas

revision	number	date
drawn by:	mm	date: 4/7/71
revised by:		date:
Planning Dept:		Dir. 000

3.3 Environmental Impacts –

The withdrawal of water must not cause adverse impacts to environmental features sensitive to magnitude, seasonal timing and duration of inundation. Environmental features that will be evaluated by District staff when determining withdrawal impacts include:

- A. Natural surface water bodies such as lakes, ponds, springs, streams, estuaries, or other watercourses;
- B. Wetland habitat except those wetlands previously affected by drainage, land clearing, earthwork, or those which have been invaded by exotic species and are in a state of environmental decay;
- C. Created wetland habitats and their relationship to local and regional water resources and associated ecosystems;
- D. Habitat for threatened or endangered species; and
- E. Environmental features which are dependent upon the water resources of the District.

Drawdown impacts to surface water management water bodies created solely for purposes of flood water retention or detention, are not considered to be adverse unless they hydraulically support wetlands which are natural or are required through mitigation by the District or other permitting governmental entity or if the drawdown of the lake system detrimentally affects the public health and safety.

District staff will review the Applicant's submittal and identify the environmentally sensitive areas that are directly related to the water resources of the District. An evaluation of the impact of the Applicant's withdrawal, combined with other withdrawals from existing legal users, on those environmental features will be performed. To facilitate the District's assessment of the environmental impact of withdrawals, Applicants shall be required to provide information such as aerial photographs, topographic maps, baseline hydrologic data, environmental assessments, aquifer characteristics, soil profiles and any additional information relevant to the environmental impacts of the withdrawal. District Staff may also inspect the site to delineate environmental features and evaluate the effects of existing withdrawals.

Potential environmental impacts will be evaluated by comparing the existing natural system to the predicted post-withdrawal conditions.

3.4 Saline Water Intrusion

A water use permit application will be denied if the application requests freshwater withdrawals that would cause harm to the water resources as a result of saline water intrusion. Harmful saline water intrusion occurs when:

- A. Withdrawals result in the further movement of a saline water interface to a greater distance inland toward a freshwater source except as a consequence of seasonal fluctuations; climatic conditions, such as drought; or operation of the Central and Southern Flood Control Project, secondary canal systems, or stormwater systems.
- B. Withdrawals result in the sustained upward movement of saline water. Sustained upward movement is the level of movement that persists when the withdrawals have ceased. When the saline interface occurs beneath the point of withdrawal, the maximum amount of pumpage from any well shall be constrained as follows:

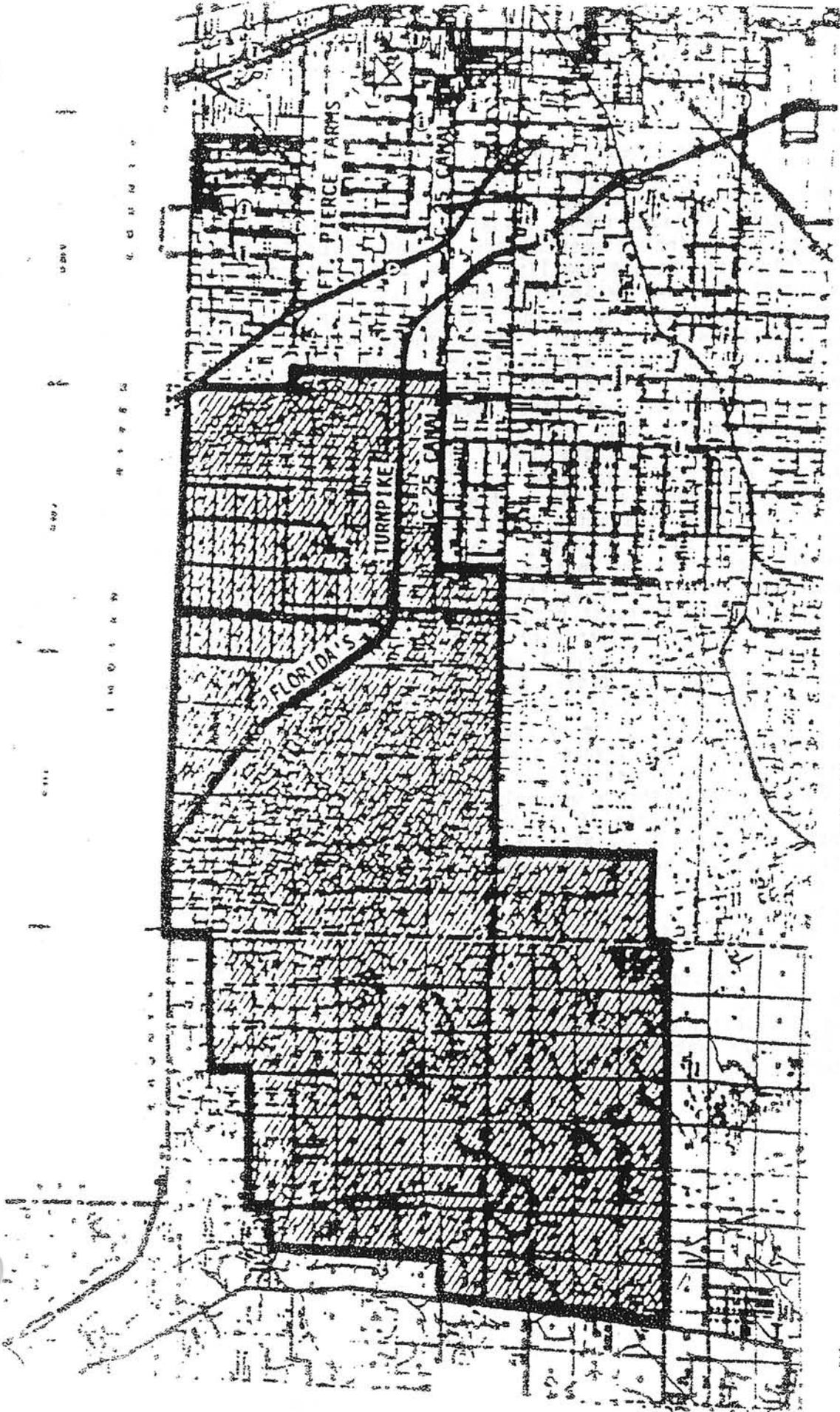
$$Q = \frac{2\pi}{3} (b-l)^2 \frac{\Delta\rho}{\rho} K$$

Where: Q is the maximum safe yield of well
b is the thickness of fresh water
l is the distance between top of aquifer and well screen
p is the density of fresh water
 $\Delta\rho$ is the change in density of fresh water
K is the hydraulic conductivity of the aquifer

In order to provide reasonable assurances that harmful saline water intrusion will not occur, the Applicant shall demonstrate that:

1. A ground water divide (mound of fresh water) greater than one foot higher than the potentiometric head at the saline water source exists between the withdrawal point and the saline water source (defined by the location of the 250 mg/l isochlor); or
2. A hydrologic analysis of groundwater flow demonstrates that there will be no further net inflow of groundwater from the saline water source toward the withdrawal point; except as a consequence of seasonal fluctuations; climatic conditions, such as drought; or operation of the Central and Southern Flood Control Project, secondary canal systems, or stormwater systems, or
3. Other evidence shows saline water intrusion will not cause harm to the wellfield and water resource, if pumpage is allowed or increased. Should the Applicant's proposed withdrawals occur in an area where the saline

water interface is unstable (as demonstrated by increases in measured chloride concentration levels within the influence of the proposed use), the applicant shall determine the cause of the saline movement and the extent of future movement through the duration of the permit and shall demonstrate that the proposed withdrawal will not cause harmful saline intrusion through the duration of the permit.



1-13 P. 101

EXPLANATION

AREA OF CONCERN

EASTERN OKEECHOBEE -- NORTHWESTERN
 ST. LUCIE BASIN

ST. LUCIE COUN
 FLORIDA

Eastern Okeechobee-
Northwestern St. Lucie Basin

Begin at the Southwest corner of Section 36, Township 34 South, Range 35 East; thence northerly along the section lines to the Northwest corner of Section 13, Township 34 South, Range 35 East; thence easterly along the section line to the Range line between Ranges 35 and 36 East; thence northerly along said Range line to the Northwest corner of Section 18, Township 34 South Range 36 East; thence easterly along the section lines to the Southwest corner of Section 10, Township 34 South, Range 36 East; thence northerly along the section line to the Northwest corner of said Section 10; thence easterly along the section lines to the Okeechobee-St. Lucie County line; thence northerly along said county line to the south line of Indian River County; thence easterly along the St. Lucie-Indian River County line to the westerly right of way line of Interstate 95; thence southeasterly along said right of way line of Interstate 95 to the East line of Section 1, Township 34 South, Range 38 East; thence southerly along the section lines to the Northwest corner of the Southwest one-quarter of Section 18, Township 34 South, Range 39 East; thence easterly along the 1/4 line to the Northeast corner of said Southwest 1/4 of Section 18; thence southerly along the 1/2 section lines to the North right of way line of South Florida Water Management Districts Canal 25 (Belcher Canal); thence westerly along said North right of way line of Canal 25 to the West right of way line of South Florida Water Management Districts Canal 24; thence southerly along said Westerly right of way line of Canal 24 to the North right of way line of State Road 68; thence westerly along said North right of way line of State Road 68 to the West line of Section 9, Township 35 South, Range 37 East; thence southerly along the section lines to the Southwest corner of Section 28 Township 35 South, Range 37 East; thence westerly along the section lines to the St. Lucie-Okeechobee County line; thence southerly along said St. Lucie-Okeechobee County line to the Southeast corner of Section 25, Township 35 South, Range 36 East; thence westerly along the section lines to the East right of way line of U.S. Highway 441; thence northerly along said East right of way line of U.S. Highway 441 to the Township line between Townships 34 and 35 South; thence easterly along said Township line to the POINT OF BEGINNING.

3.4.1 Use of Saline Water

The District encourages the use of the lowest water quality for the use intended, while also providing for the long-term protection of the water resources. The use of saline water is permitted by the District as a source of supply for all uses. The use of saline water may cause limited increases in salinity but not to the extent of interfering with any presently existing legal use of water, otherwise harming water resources, or rendering the resource no longer usable by the Permittee. In order to provide reasonable assurances that harmful increases in salinity will not occur in violation of this section, the Applicant must demonstrate that:

- A. The quality of the proposed source will be adequate for the intended use throughout the duration of the permit;
- B. The proposed use will not cause harm to presently existing legal use of water as defined in section 3.7 of this Basis of Review; and
- C. The proposed use of water will not cause harm to freshwater sources that come in contact with saline water as a result of the proposed use. Under the following conditions, the use of saline water will not be considered harmful to the receiving water body under this subsection:
 - i. the affected receiving water body is non-productive or low yielding in nature (hydrologic conductivity of less than 10 feet per day);
 - ii. the saline source water will discharge directly to tide after use;
 - iii. the saline source water will be diluted to less than 200 mg/L chloride concentration prior to use; or
 - iv. the impacts of the saline water use are compatible with surrounding land uses.

Any use of saline water that comes into contact with fresh water as a result of the proposed use will require a detailed water quality monitoring program as a limiting condition of any permit issued. This rule is not intended to allow the District to consider disposal of concentrate resulting from desalination of saline water in determining compliance with the consumptive use permit conditions for issuance.

3.5 Pollution of the Water Resources –

The issuance of a water use permit shall be denied if the withdrawals would cause significant degradation of surface or ground water quality through the induced movement of pollutants into a water resource that is not polluted. Significant water quality degradation may result from altering the rate or direction of movement of pollutants, as evidenced by the predicted influence the water withdrawals would have

on inducing movement of the pollutants or as indicated by a sustained increase in background levels in pollutant concentrations.

3.6 Existing Offsite Land Uses –

The issuance of a permit shall be denied if the withdrawal of water would cause an unmitigated adverse impact on an adjacent land use that existed at the time of permit application or that exists at the time of an application for permit modification. Adverse impacts on land uses include:

- A. Significant reduction in water levels in an adjacent surface water body, including impoundments, to the extent that the designed function of the water body is impaired.
- B. Damage to crops or other types of vegetation.
- C. Land collapse or subsidence caused by reduction in water levels.

3.7 Interference with Existing Legal Users

The issuance of a permit shall be denied if the withdrawal of water together with other withdrawals would cause an unmitigated adverse impact on presently existing legal uses existing at the time of permit issuance. The District considers that an adverse impact does not occur if the Applicant's withdrawals do not lower water levels at an existing legal user's withdrawal facilities such that it adversely impairs the ability to obtain water from that source. An adverse impairment is defined as interfering with the pumping water level at an existing legal user's withdrawal facility in such a way that the withdrawal capability of the withdrawal facility is reduced by 10% or greater.

The drawdown impact on withdrawal facilities that are fitted with a centrifugal pump is based on the cumulative drawdown from all existing and proposed permitted uses such that the average, end-of-dry season potentiometric surface can be maintained at a pumping level of no greater than 20 feet below land surface.

The evaluation of impacts will be made taking into account the type of pumping equipment installed and expected range of water-level fluctuations.

Staff will not recommend approval of a requested quantity that will cause adverse impact unless the adverse impact is mitigated, prior to permit issuance, by the Applicant. It is the Applicant's responsibility to investigate and mitigate adverse impacts to presently existing legal uses, if they occur subsequent to permit issuance. Mitigation may include pumpage reduction, replacement of the impacted individual's equipment to enable greater withdrawals, placement of wells farther away from the impacted well, change in withdrawal source or other means.

3.8 Otherwise Harmful –

The issuance of a permit shall be denied if the withdrawal or use of water would otherwise be significantly harmful to the water resources.

3.9 Minimum Flows and Levels

Applications for consumptive use permits for water uses that directly or indirectly withdraw water from MFL water bodies must meet the criteria in this section, in addition to all other conditions for permit issuance in Chapters 40E-2 or 40E-20, as applicable. Applications that meet the criteria contained in this section are considered to comply with Rule 40E-2.301(1)(l), F.A.C. Consumptive use permit applications shall be reviewed based on the recovery or prevention strategy approved at the time of permit application review.

3.9.1 Evaluations for MFL Water Bodies Subject to a Recovery Strategy

Evaluations for direct or indirect withdrawals from MFL water bodies that are subject to a recovery strategy:

- A. Permit Renewals: A request for renewal of an existing permitted allocation, which directly or indirectly withdraws water from a MFL water body, shall meet the requirements of this section if: (1) the impact of the withdrawal of water will be corrected through implementation of a recovery strategy; and (2) the level of impacts from the allocation approved in the expiring permit are no greater under the requested renewal.

If the level of certainty under the expiring permit is changed to a 1 in 10 year level of certainty by rule (e.g. a golf course irrigation level of certainty changed from a 1 in 5 to a 1 in 10 year level of drought) the levels of impact from the withdrawal of water under the expiring permit shall be normalized to a 1 in 10 drought level of certainty in order to evaluate the impact of the withdrawal of water.

- B. New or Modified Permits – Direct Withdrawals. A request for a new or increased permit allocation which directly withdraws water from a MFL water body, shall meet the requirements of this section, if:
 - (1) Sufficient additional water has been made available for the new or increased portion of the requested allocation via certification of a project or project phase of the recovery strategies, as certified by the District, pursuant to Rule 40E-8.421(1)(e), F.A.C. Water made available from a certified project or project phase of a recovery

strategy for new or increased uses will be allocated based on the criteria in the Basis of Review and Chapter 40E-2; or

- (2) The request incorporates a District approved alternative measure or source that prevents additional impacts to the MFL water body from the new or increased portion of the requested allocation. An example of an acceptable alternative measure is an aquifer storage and recovery system, which stores excess water during the wet season in order to minimize new or increased withdrawals during the dry season. The permit conditions shall require the District approved alternative measure or source to be operating or otherwise available concurrently with the new or increased use.
- C. New or Modified Permits – Indirect Withdrawals. A request for a new or increased permit allocation which indirectly withdraws water from a MFL water body, shall meet the requirements of this section, if the new or increased use is consistent with the recovery strategy as delineated in the applicable regional water supply plan.

3.9.2. Evaluations for MFL Water Bodies Subject to a Prevention Strategy

Evaluations for direct or indirect withdrawals from MFL water bodies that are subject to a prevention strategy:

- A. Permit Renewals - A request for renewal of an existing permitted allocation that directly or indirectly withdraws water from a MFL water body shall meet the requirements of this section if the level of impacts from the allocation approved in the expiring permit are no greater under the requested renewal. If the level of certainty under the expiring permit is changed to a 1 in 10 year level of certainty by rule (e.g. a golf course irrigation level of certainty changed from a 1 in 5 to a 1 in 10 year level of drought) the levels of impact from the withdrawal of water under the expiring permit shall be normalized to a 1 in 10 drought level of certainty in order to evaluate the impact of the withdrawal of water.
- B. New or Modified Permits – A request for a new or increased permit allocation that directly or indirectly withdraws water from a MFL water body, shall meet the requirements of this section if the request is consistent with the prevention strategy(ies) as delineated in the applicable regional water supply plan.

4.0 MONITORING REQUIREMENTS

To ensure continuing compliance with the conditions of permit issuance, monitoring and reporting activities shall be required as special limiting conditions of the permit pursuant to Section 5.0 of this Basis of Review. The details of all required monitoring plans shall

be submitted by the Applicant for District review and approval as part of the water use permit application and shall be a condition of permit issuance. The permit will require implementation of the approved monitoring programs.

4.1 Withdrawal Quantity

Proper accounting for water use is essential to establish that the use is a reasonable beneficial use of the resource and in the public interest. In addition, proper accounting of the various water uses enables the District to better estimate water use and to implement water shortage plans.

All Permittees with a maximum monthly allocation of greater than 3.0 million gallons, or irrigation water users located within the South Dade County Water Use Basin (as designated in Figure 21-11, Chapter 40E-21, F.A.C.), with a maximum monthly allocation of greater than 15.0 million gallons, are required to monitor and report withdrawal quantities from each withdrawal facility or point of diversion. A reliable, repeatable water use accounting system must be identified to monitor water usage from all withdrawal facilities, in accordance with permit conditions. The District considers a reliable water use accounting method to be accurate within +/- 10 per cent of the actual flow. For pumped systems, acceptable water use accounting systems include flowmeters, or clocks which totalize pump operation. For gravity flow systems, acceptable methods include the use of rated water control structures. Permit applicants must submit documentation of the water use accounting method and calibration method as a part of the permit application. Prior to the use of any authorized facility, the approved water use accounting method must be operating and the initial calibration submitted to the District. Recalibration results for the water use accounting method shall be submitted to the District every five years from permit issuance.

Withdrawal quantities for each permitted withdrawal facility shall be calculated monthly and reported to the District quarterly, unless otherwise conditioned on a greater frequency due to the potential for resource harm. Permittees, whose full demands are met through a combination of their own withdrawals or other sources, such as reclaimed water or water sales agreements, shall report the monthly totals supplied from sources other than their own withdrawals, unless the use of those sources are reported to another state agency, in which case the District shall obtain the water use information from said agency.

For special districts with withdrawal facilities that supply several individual users, the water use shall be monitored at the primary withdrawal facilities. Individual water users within the special district do not need to submit individual pumpage reports unless required by another water use permit. For those special districts in which water is passed through the project, the permittee may be required to report the volumes of water that flow out of the project if necessary to quantify the water consumed by the project.

4.2 Saline Water Monitoring

The purpose of saline water monitoring is to ensure that harmful saline water intrusion, whether lateral from a surface or groundwater saline source, vertical from an aquifer containing lower quality water, or a combination of both, does not occur. Saline water monitoring is accomplished by routine sampling of the discharge water from production wells or from separate monitor wells. However, in areas of known saline water movement, separate monitor wells are required to be designed and constructed expressly for the purpose of saline water intrusion monitoring. The dissolved chloride concentration and the water level elevation, referenced to National Geodetic Vertical Datum, shall be measured. Frequency of measurements may be weekly, monthly, or quarterly, and will be identified in the permit limiting conditions.

Applicants shall submit a saline water monitoring program for review and approval when:

- A. The withdrawal facility is within one mile of a brackish or saltwater body including canals and tidal creeks;
- B. The withdrawal facility is located seaward of the 250 mg/l chloride line mapped at the base of the aquifer or located seaward of a line between two adjacent salinity control structures;
- C. The land on which the withdrawal facility is located is between the Intracoastal Waterway and the Atlantic Ocean; between a tidal creek and the Gulf of Mexico; or between the Intracoastal Waterway and the Gulf of Mexico;
- D. Saline water is located either above or below the producing zone ;
- E. A history of saline water intrusion or increasing chloride concentrations exists for either ground water or surface water in the vicinity of the withdrawal facility;
- F. Staff evaluation indicates that, at projected withdrawal rates, saline water intrusion may occur to the extent that the existing treatment process will no longer be capable of producing potable water;
- G. Staff evaluation indicates that, at projected withdrawal rates, saline water intrusion may occur in neighboring withdrawal facilities; or
- H. Staff evaluation indicates saline water may come in contact with a fresh water source (per Section 3.4.1 of this Basis of Review) as a result of the proposed use.

Guidelines for establishing a saline water monitoring program, as well as sampling, sample handling, and analysis guidelines, are available from the District.

4.3 Pollution Source Monitoring

The purpose of pollution source monitoring is to ensure withdrawals do not cause harmful movement of contaminants in violation of state water quality standards. Movement of contaminants consistent with a state approved remediation plan is not considered harmful. In order to effectively monitor a pollution source, separate monitor wells must be installed and monitored to evaluate withdrawal effects on movement of the pollution. The Applicant shall submit a pollution source monitoring program identifying chemical constituents, monitoring frequencies, and well construction details and locations to the District for review and approval when the project's withdrawals have the potential for a direct influence on a contaminant plume.

4.4 Water Level Monitoring

The purpose of water level monitoring programs is to ensure existing legal uses, offsite land use, and water resources, are not harmed by lowered water levels. Applicants shall submit a water level monitoring program to the District for review and approval when:

- A. A saline water monitoring program or a pollution source monitoring program is required (see Sections 4.2 and 4.3);
- B. A wetland hydrobiologic monitoring program is required (see Section 4.5);
or
- C. Uncertainty in computer modeling or data exists to define the drawdown resulting from withdrawals from ground water or surface water sources and to ensure that existing legal uses, offsite land use, water resources, and wetland and surface water functions are not harmed by withdrawals.

4.5 Wetland and Other Surface Waters Monitoring

Wetland monitoring shall be required to ensure that harm to wetland and other surface waters does not occur. Monitoring shall consist of various types of data collection, such as ground water and surface water levels, surface water quality, biological parameters, ground and aerial photography, rainfall, pumpage, and land cover assessments. Guidelines for establishing a wetland hydrobiologic monitoring program are available from the District. The Applicant shall submit a wetland hydrobiologic monitoring program to the District for review and approval when:

The impacts of the proposed use, either individually or cumulatively with other permitted users, produces drawdowns approaching the applicable drawdown criteria in Section 3.3.

5.0 PERMIT CONDITIONS

Water use permits shall be conditioned as necessary so that the use is consistent with the overall objectives of the program and are not harmful to the water resources of the area. There are two categories of permit conditions that will be applied to water use permits. Standard Conditions contain general information and operational constraints that apply to all uses of water. Special Conditions address project specific considerations that may vary among use classes, sources of supply and geographic locations.

5.1 Standard Permit Conditions -

- A. This permit shall expire on (expiration date)
- B. Application for a permit modification may be made at any time.
- C. Use classification is (primary water use type and secondary water use types).
- D. Source classification is: (source classification) and the water use basin is (water use basin).
- E. Total annual allocation shall not exceed (recommended actual allocation).

Total maximum monthly allocation shall not exceed (recommended maximum monthly allocation).

Total maximum daily allocation shall not exceed (recommended daily allocation).
Maximum annual allocation from (a specific source) shall not exceed (the recommended maximum annual allocation by source).

Maximum monthly allocation from (a specific source) shall not exceed (recommended maximum monthly allocation by source).

Maximum daily allocation from (a specific source) shall not exceed (the recommended maximum daily allocation by source).

- F. In the event of a declared water shortage, water withdrawal reductions will be ordered by the District in accordance with the Water Shortage Plan, Chapter 40E-21, F.A.C. The Permittee is advised that during a water shortage, pumpage, water levels, and water quality data shall be collected and submitted as required by District orders issued pursuant to Chapter 40E-21, F.A.C.
- G. Withdrawal facilities are:
- H. Permittee shall mitigate harm to existing legal uses caused by the permittee's withdrawals as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the permittee to modify withdrawal rates or mitigate the harm.

Harm, as determined through reference to the conditions for permit issuance, includes:

- A) Reduction in surface or ground water levels that prevents an adjacent withdrawal facility from producing water, or
- B) Induced movement of saline water or pollutants into a withdrawal facility to a degree that causes the water to be unsuitable for the use intended.

I. Permittee shall mitigate harm to existing off-site land uses caused by the permittee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the permittee to modify withdrawal rates or mitigate the harm. Harm as determined through reference to the conditions for permit issuance, includes:

- A) Significant reduction in water levels in an adjacent surface water body, including impoundments, to the extent that the designed function of the authorized structures and facilities is impaired,
- B) Land collapse or subsidence caused by reduction in water levels, or
- C) Damage to crops and other types of vegetation caused by withdrawals that impair the operation of a seepage irrigation system.

J. Permittee shall mitigate harm to the natural resources caused by the permittee's withdrawals, as determined through reference to the conditions for permit issuance. When harm occurs, or is imminent, the District will require the permittee to modify withdrawal rates or mitigate the harm. Harm, as determined through reference to the conditions for permit issuance includes:

- A) Reduction in ground or surface water levels that results in harmful lateral movement of the fresh water/salt water interface,
- B) Reduction in water levels that harm the hydroperiod of wetlands,
- C) Significant reduction in water levels or hydroperiod in a naturally occurring water body such as a lake or pond,
- D) Harmful movement of contaminants in violation of state water quality standards, or
- E) Significant damage to the natural system including damage to habitat for rare or endangered species.

- K. If any condition of the permit is violated, the permit shall be subject to review and modification, enforcement action, or revocation pursuant to Chapter 373.
- L. Authorized representatives of the District, with advance notice to the permittee, shall be permitted to enter, inspect, and observe the permitted system to determine compliance with permit conditions.
- M. Permittee is advised that this permit does not relieve any person from the requirement to obtain all necessary federal, state, local and special district authorizations.
- N. The permit does not convey any property right to the Permittee, nor any rights and privileges other than those specified in the permit and Chapter 40E-2, F.A.C.
- O. Permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of the real property on which the permitted activities are located. All transfers of ownership are subject to the requirements of section 40E1-1.6107, F.A.C.
- P. Permittee shall notify the District in writing 30 days prior to any changes to the project that could potentially alter the reasonable demand reflected in the permitted allocation. Such changes include, but are not limited to, change in irrigated acreage, crop type, irrigation system, large users agreements, or water treatment method. Permittee will be required to apply for a modification of the permit for any changes in permitted allocation.

5.2 Special Permit Conditions

Permittee shall submit all data as required by the implementation schedule for each of the limiting conditions to: S.F.W.M.D., Supervising Hydrogeologist – Water Use Compliance, Water Use Division (4320), P.O. Box 24680, West Palm Beach, FL 33416-4680 or by e-mail to wucomp@sfwmd.gov.

5.2.1 Public Water Supply

- A. Permittee shall notify the District within 30 days of any change in service area boundary that results in a change in demand that affects its permitted allocation. The allocation shall be modified to effectuate such change.
- B. Permittee shall implement the wellfield operating plan submitted in support of the permit application, as described in the District staff report.

- C. Permittee shall implement the following wellfield operating plan:
- D. Permittee shall determine unaccounted-for distribution system losses. Losses shall be determined for the entire distribution system on a monthly basis. Permittee shall define the manner in which unaccounted-for losses are calculated. Data collection shall begin within six months of Permit issuance. Reporting shall be submitted to the District on a yearly basis from the date of Permit issuance.
- E. Permittee shall maintain an accurate flow meter at the intake of the water treatment plant for the purpose of measuring daily/monthly inflow of water. The monthly total inflow to the treatment plant shall be reported to the District quarterly.
- F. Within two years of permit issuance, the Permittee shall submit a long-term water supply plan to the District for the purpose of assessing future water supply development activities within the water supply planning region. Prior to (board date + 1 year), the Permittee shall submit to the District an outline of the proposed plan. At a minimum, the plan shall address consideration by the Permittee of resource protection, water supply alternatives, plans for water shortages or wellfield failures, and conservation measures.
- G. The following elements in the Water Conservation Plan required by Section 2.6.1 of the Basis of Review for Water Use Permit Applications within the South Florida Water Management District, must be implemented in accordance with the following approved implementation schedule:

5.2.2 Dewatering

- A. Prior to initial dewatering, the Permittee shall contact the District to allow for a site visit to verify:
 - (1) The water use accounting method used by the contractor and receive results of the calibration testing of the identified method,
 - (2) The location and design of the recharge trenches and on-site retention areas where dewatering water will be retained,
 - (3) The location of monitoring facilities, and
 - (4) Other site-specific issues related to the protection of the resource or other existing legal users.

Dewatering may commence upon written approval from the District that the preceding conditions have been satisfied as permitted.

- A site visit can be scheduled by contacting: (water use permitting staff member).
- B. All dewatering water shall be retained on the Permittee's land. Off-site discharge of dewatering effluent shall not be made.
 - C. Off-site discharge may be made via the facilities and conditions that follow:
 - D. Turbidity measurements of the dewatering water shall be made daily prior to discharge and submitted to the District weekly. If turbidity levels in the dewatering water exceed 29 NTU above background conditions in the receiving water body, the Permittee is required to cease dewatering operations and correct the situation until monitoring demonstrates turbidity standards are met.
 - E. Permittee shall not lower the water table below ___ feet NGVD, which is ___ feet below ground surface. The depth of the excavation shall not exceed ___ feet below ground surface. (blanks filled in based on project specifications).
 - F. Permittee shall construct the proposed recharge trenches prior to dewatering and maintain water levels during active dewatering operations within one foot of land surface. Obstructions and sediments within the recharge trenches shall be removed to increase effectiveness of the recharge system.
 - G. The excavation and associated dewatering facilities (such as impoundments and recharge trenches) shall be constructed using sound engineering practice. If the excavation or dewatering activities endanger the properties of adjacent owners (through erosion, side wall collapse, flooding, etc.), the Permittee shall cease operation until a method to prevent such occurrences is found and instituted. The Permittee shall be responsible for finding and instituting methods to stop such occurrences.
 - H. Permittee shall immediately cease dewatering when continued dewatering would create a condition hazardous to the health, safety, and general welfare of the people of the District.
 - I. Permittee shall be responsible for clearing shoaling, if the Permittee's dewatering operation creates shoaling in adjacent water bodies.
 - J. Permittee shall conduct dewatering activities in adherence to the following operating plan: (determined based on project specifications)
 - K. Following the dewatering operation, all dewatering facilities (such as impoundments, conveyances, and recharge trenches) shall be filled and regraded to ground elevation or to otherwise comply with the Environmental Resource Permit.

5.2.3 Irrigation

- A. Landscape and golf course Permittees must comply with the water conservation plan requirements in section 2.3.1 of the Basis of Review for Water Use Permit Applications Within the South Florida Water Management District.
- B. Landscape and golf course irrigation is prohibited between the hours of 10:00 A.M. and 4:00 P.M., except as follows:
 - a) Irrigation using a micro-irrigation system is allowed anytime.
 - b) Users whose average annual allocation is made up of 75% or greater volume of reclaimed water for irrigation may irrigate at anytime.
 - c) Irrigation of, or in preparation for planting, new golf courses and recreational areas is allowed at any time of day for one 30-day period provided irrigation is limited to the amount necessary for sod or plant establishment. Irrigation of newly seeded or sprigged golf course areas is allowed any time of day for one 60-day period.
 - d) Watering in of chemicals, including insecticides, pesticides, fertilizers, fungicides, and herbicides, when required by law, recommended by the manufacturer or constituting best management practices, is allowed anytime within 24 hours of application.
 - e) Irrigation systems may be operated anytime for maintenance and repair purposes.
- C. The allocation in this permit is for irrigation only, not the artificial maintenance of lake levels. The use of surface water lakes is for water quality treatment only. Therefore, the ratio of the number of gallons per day withdrawn from the groundwater wells to the number of gallons per day withdrawn from the surface water pumps shall not exceed 1:1 on a monthly basis.

5.2.4 Industrial / Commercial

Industrial/Commercial Permittees must comply with the water conservation plan requirements in section 2.4.1 of the Basis of Review for Water Use Permit Applications within the South Florida Water Management District.

5.2.5 Reclaimed Water Feasibility

- A. Upon notification from the District of the availability of reclaimed water pursuant to Section 373.250, F.S., the Permittee shall investigate the feasibility of obtaining reclaimed water and actively participate in discussions and negotiations with potential suppliers of reclaimed water when the supplies become available.

- B. Should reclaimed water become unavailable, the Permittee shall apply to the District for an emergency water use permit prior to temporarily increasing withdrawals above the permitted allocation.
- C. If reclaimed water becomes available prior to the expiration date of this permit, the Permittee shall apply for a modification of the water use permit to reflect that portion of the allocation which is to be provided for by reclaimed water. The permittee is required to request a permit modification when an agreement has been executed between both parties, the transmission lines are constructed to the project site, and the necessary on-site modifications and authorizations are obtained.

5.2.6 Water Level, Saline Water Intrusion, Contamination, and Wetland Hydrobiologic Monitoring and Data Collection

One of the following Special Conditions shall be added to require monitoring when necessary to ensure the use of water authorized in the permit is not causing harm to the resource, the user, or other existing legal users:

- A. Permittee shall implement the (water level, saline water intrusion, contamination, or wetland hydrobiologic) monitoring program described in the District staff report prepared in support of recommendation for permit issuance,
- B. Permittee shall implement the following (water level, saline water intrusion, contamination, or wetland hydrobiologic) monitoring program:

5.2.7 Well Construction

- A. Permittee shall secure a well construction permit prior to construction, repair, or abandonment of all wells, as described in chapters 40E-3 and 40E-30, F.A.C.
- B. If a proposed well location is different from a location specified in the application, the Permittee shall submit to the District an evaluation of the impact of pumpage from the proposed well location on adjacent existing legal uses, pollution sources, environmental features, the saline water interface, and water bodies one month prior to all new well construction. The Permittee is advised the proposed well locations and resulting impacts must be in compliance with all permitting criteria and performance standards in effect at that time.
- C. Permittee shall submit to the District an updated Well Description Table (Table "A") within 90 days of completion of the proposed wells identifying the actual total and cased depths, pump manufacturer and model numbers, pump types, intake depths and type of meters.
- D. Permittee shall submit to the District an updated Well Description Table (Table "A") within six months of permit issuance, identifying which wells have been

properly plugged and abandoned according to subsection 40E-3.531 (3), F.A.C. and which wells are to be maintained as water level monitoring wells.

- E. Within six months of permit issuance, the Permittee shall plug and abandon the following wells in accordance with Chapters 40E-3 or 40E-30, F.A.C.: (individual wells identified based on project specifications).
- F. Permittee shall submit to the District a well survey that shall include the following: well cased depth, well total depth, and chloride ion concentration of the water in wells not having this information listed in Well Description Table (Table "A"). This survey shall be submitted for the following wells within six months of permit issuance: (individual wells identified based on project specifications).
- G. Within one month of new well construction, Permittee shall perform a step drawdown test. Prior to conducting the test, the Permittee shall submit a plan for the test to District staff for review and comment. Permittee shall submit step drawdown test information for the following wells to the District within one month of completion of the test: (individual wells identified based on project specifications). Information on performing step drawdown tests is available from the District.
- H. Permittee shall perform an aquifer performance test on the proposed wells. Prior to conducting the test, the Permittee shall submit a plan for the test to District staff for review and comment. The test data for the following wells shall be submitted to the District within one month of completion of testing. Permittee shall submit the pumping rate, duration of test, and the drawdown at the end of the test. Information on performing aquifer performance tests is available from the District.

5.2.8 Flowing Floridan Aquifer Wells

- A. Permittee shall submit to the District an artesian well survey that shall include the well cased depth, well total depth, and chloride ion concentration of the water in each well. This survey shall be submitted for the following wells within six months of permit issuance: (individual wells identified based on project specifications).
- B. Prior to any permanent pump installation on Floridan aquifer wells in Martin or St. Lucie counties, the Permittee shall provide measurements of flow from each well using calibrated flow equipment. The method of accounting, calibration data, corrections for well losses, proposed pump information, and the basis for the requested flow rate shall be submitted to the District for review and approval. Staff approval will be granted if the natural flow rate of the well is greater than that of the proposed pump.

- C. Temporary pumps installed on Floridan aquifer wells in Martin or St. Lucie counties to increase flow for freeze protection withdrawals must be removed within 72 hours of the conclusion of the freeze event.

5.2.9 Water Use Accounting (for permits with maximum monthly allocations greater than 3 million gallons)

- A. Prior to any withdrawals at the project, the Permittee shall provide the results of the calibration testing of the identified water accounting method(s) and equip all existing and proposed withdrawal facilities with approved water use accounting method(s) pursuant to Section 4.1 of the Basis of Review for Water Use Permit Applications.
- B. Every five years from the date of Permit issuance, the Permittee shall submit recalibration data on each withdrawal facility.
- C. Monthly withdrawals for each withdrawal facility shall be reported to the District quarterly. The water accounting method and means of calibration shall be stated on each report.
- D. Permittees, who are dependent on other sources of water supply such as reclaimed water or water sale agreements to meet a portion of their demands, shall include the monthly volumes from all other sources in the report to the District, unless the use of those sources is reported to another state agency, in which case the District will obtain the water use information from said agency. The water accounting method and means of calibration shall be stated on each report.
- E. Permittee shall maintain records of the calibrated daily withdrawals from each withdrawal facility. These records shall be available for review upon request by District staff.
- F. Daily withdrawals for each withdrawal facility shall be reported to the District on the following schedule. The water accounting method and means of calibration shall be stated on each report.

5.3 Specific Region Special Conditions

- A. A "Water Rights Compact Among the Seminole Tribe of Florida, the State of Florida, and the South Florida Water Management District", which confirms tribal rights has been approved. Exercise of tribal rights in the future may impact allocations sought by the Permittee in future permit modifications and renewals.
- B. The property which is the subject of this Permit is located in the area covered by Chapter 40E-63, F.A.C, (Works of the District within the Everglades). This special condition is intended to notify the Permittee that this property may be subject to

additional or new permitting or water quality requirements as specified in Chapter 40E-63, F.A.C.

- C. Permittee shall be subject to all the stipulations agreed to in any executed landowner agreement reached between the Permittee, the District and the Seminole Tribe of Florida. Such stipulations may impact allocations sought by the Permittee in future Permit modifications and renewals.
- D. Permittee and the Lake Worth Drainage District have previously entered into an interlocal agreement for mitigation of impacts. It is acknowledged and agreed by the Permittee that this modification of the permit shall be incorporated into and made part thereof the interlocal agreement.
- E. Permittee will be responsible for mitigation to domestic uses, including but not limited to those shown in the District staff report for this permit, in the event that declining water levels result in domestic uses suffering a loss of water supply and the event is confirmed by application of the following factors by District staff. Factors used in determining mitigation responsibility include, but are not limited to, water level monitoring data, local pumpages, and climatic conditions. Failure by the Permittee to mitigate any adverse impacts that occur as a result of the Permittee's withdrawals, for which mitigation responsibility has been determined, will be considered a permit violation.

5.4 Surface Water Management

This is an existing project. An Environmental Resource or surface water management permit will be required prior to any change in land use or modification of the drainage system.