

**Rules of the
South Florida Water Management District**

Water Wells

CHAPTER 40E-3, F.A.C.



Effective: July 14, 2014

**CHAPTER 40E-3
WATER WELLS**

40E-3.010	Review of Water Well Permit Applications (Repealed)
40E-3.011	Policy and Purpose
40E-3.021	Definitions
40E-3.032	Delegation
40E-3.035	Agreements
40E-3.036	Rules and Publications Incorporated by Reference
40E-3.038	Violations of Contractor Licensing and Well Construction Requirements
40E-3.040	Scope of Part I
40E-3.041	Permits Required
40E-3.051	Exemptions
40E-3.0511	Exceptions and Variances for Well Construction Permits (Repealed)
40E-3.101	Content of Application
40E-3.301	Conditions for Issuance of Permits
40E-3.321	Duration of Permits
40E-3.341	Suspension and Revocation
40E-3.411	Well Completion Reports
40E-3.451	Emergency Authorization
40E-3.461	Inspection
40E-3.500	Scope of Part II
40E-3.502	Construction Methods
40E-3.504	Location
40E-3.507	Casing and Liner Pipe Standards
40E-3.512	Well Construction Requirements
40E-3.517	Grouting and Sealing
40E-3.521	Well Seals
40E-3.525	Explosives
40E-3.529	Flowing Wells
40E-3.531	Abandoned Well Plugging
40E-3.600	Scope of Part VI
40E-3.601	General Permit for Water Wells within a Portion of Southern Miami-Dade County

40E-3.010 Review of Water Well Permit Applications.

Rulemaking Authority 120.54(5), 120.60 FS. Law Implemented 120.54(5), 120.60 FS. History—New 7-2-98, Repealed by Section 3, Chapter 2012-31, Laws of Florida, 5-27-12.

40E-3.011 Policy and Purpose.

(1) The purpose of Chapter 40E-3, F.A.C., is to implement the duties and responsibilities of the South Florida Water Management District (District) under Part III, Chapter 373, F.S., and those responsibilities and duties delegated to the District by the Department of Environmental Protection (Department) to regulate the location, construction, repair, or abandonment of water wells and the licensing of water well contractors. It is the policy of the Governing Board that these rules are reasonably necessary to insure the protection and management of water resources and the health, safety, and general welfare of the people of this District.

(2) Additional District rules relating to water wells are found in Chapters 40E-5 (Artificial Recharge) and 40E-2 (Consumptive Use).

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.103(1), 373.306, 373.308, 373.309, 373.313, 373.314, 373.316, 373.319, 373.323(2), 373.326, 373.329, 373.333, 373.342 FS. History—New 1-1-85, Amended 12-19-89, 3-16-05, 7-14-14.

40E-3.021 Definitions.

When used in this chapter:

(1) “Annulus” or “Annular Space” means any artificially created void existing between a well casing or liner pipe and a borehole wall, or between two casings, or between tubing and the casing for liner pipes.

(2) “Casing Diameter” or “Diameter of Casing” means the largest nominal permanent water bearing casing. For the purpose of this chapter, the diameter of the casing at the upper terminus will be presumed to be the diameter for the entire length, unless the well owner or contractor can demonstrate that the well has a smaller diameter permanent water bearing casing below the upper terminus.

(3) “Consolidated” means a geologic stratum, which is cemented with a binding substance commonly derived from within the deposit containing that stratum.

(4) “Consumptive Use Permit” or “Water Use Permit” means a Water Use Permit issued under Chapter 40E-2, F.A.C.

(5) “Dewatering” means the use of wells or other such equipment to temporarily lower a water level as may be necessary during construction activities.

(6) “Driller” means a person working under the direct supervision of a licensed water well contractor who actually constructs the well.

(7) “Field Log” means a log with accurate, written documentation of all construction activities needed to fill out well completion reports.

(8) “Filter Pack” means sand or gravel that is uniform, clean, and siliceous. It is placed in the annulus of the well between the borehole wall and the well screen.

(9) “Inspection Port” means any opening not less than three-quarters (3/4) inch in diameter through which unobstructed access to the inside of the casing can be obtained for measuring water levels. Inspection ports shall be threaded openings temporarily sealed with a removable watertight plug.

(10) “Jetted Well” or “Sand Point Well” means a pipe with an attached well point or open-ended screen. The well is installed in unconsolidated formations by the washing action of a water jet.

(11) “Monitoring Well” or “Observation Well” means a well used primarily to monitor hydrologic parameters such as water levels or water quality.

(12) “Packer” means a device placed within a well casing that seals the annulus between two pieces of casing, between the casing and the screen, between one formation or water bearing strata and another, or between the formation and the casing.

(13) “Public Water Supply Well” means a well constructed for the purpose of supplying water to a public water system, as permitted under Chapters 62-550, 62-555, 62-560, 62-524, and 64E-8, F.A.C.

(14) “Test Hole” means any temporarily cased or uncased hole drilled, bored, cored, washed, or jetted, for the intended use of obtaining data for engineering, geophysical or geological exploration, and/or prospecting for minerals or products of mining or quarrying, and not for the purposes of either producing, disposing of, or searching for water.

(15) “Upper Terminus” means that portion of a well casing ending at land surface or within an approved depth below land surface. Land surface is considered to be the ground elevation of the finished grade at the well.

(16) “Water Test Well” means a temporary water well for the purpose of obtaining data to determine aquifer properties or water quality. Water test wells are typically drilled prior to applying for a water use permit. Water test wells must either be abandoned or converted to a water well or monitoring well within 30 days of completion of testing.

(17) “Well Casing” means a metallic or non-metallic pipe installed in a borehole or driven to prevent caving, provide structural strength, seal off zones of poor water quality, or prevent the interchange of waters between aquifers.

(18) “Well Completion Report” means the form, supplied or approved by the District, that is completed and signed by the licensed water well contractor.

(19) All definitions contained in Section 373.303, F.S. and Chapters 62-531 and 62-532, F.A.C., are adopted and incorporated by reference in paragraphs 40E-3.036(1)(a) and (c), F.A.C., respectively.

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.019, 373.106, 373.303, 373.306 FS. History—New 1-1-85, Amended 12-19-89, 3-16-05, 9-26-12, 7-14-14.

40E-3.032 Delegation.

The authority for general administration of Chapter 40E-3, F.A.C., is delegated to the Executive Director of the District. It is the

policy of the Governing Board that in making this delegation the Executive Director is authorized to designate specific staff members to carry out various tasks but that overall supervision and responsibility shall rest with the Executive Director. The Executive Director is expressly authorized to issue permits under this chapter as provided in Section 373.342(1), F.S.

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.308, 373.309(2), 373.339, 373.342 FS. History—New 1-1-85, Amended 3-16-05.

40E-3.035 Agreements.

The Governing Board hereby incorporates by reference the following documents, which are available at no cost by contacting the South Florida Water Management District Clerk's Office, 3301 Gun Club Road, West Palm Beach, FL 33406, (800) 432-2045, ext. 6436, or (561) 682-6436:

(1) "Delegation Agreement between South Florida Water Management District and Lee County for Regulation of Water Wells," dated September 13, 2005.

(2) "Delegation Agreement between South Florida Water Management District and Miami-Dade County Health Department", dated August 10, 2005.

(3) "Agreement between Collier County and South Florida Water Management District," dated February 5, 1985; "Amendment to the Water Well Construction Permit Program Delegation Agreement between South Florida Water Management District and Collier County," dated May 11, 2005.

(4) "Agreement between the City of Cape Coral and South Florida Water Management District," dated October 10, 1986; "Amendment to the Water Well Construction Permit Program Delegation Agreement between South Florida Water Management District and the City of Cape Coral," dated August 10, 2005.

(5) "Agreement between the Martin County Health Department and South Florida Water Management District," dated June 12, 1998; "Amendment to the Water Well Construction Permit Program Delegation Agreement between South Florida Water Management District and Martin County Health Department," dated April 18, 2005; "Second Amendment to the Water Well Construction Permit Program Delegation Agreement between South Florida Water Management District and Martin County Health Department," dated May 13, 2010.

(6) "Agreement between the Osceola County Health Department and South Florida Water Management District," dated February 11, 1999; "Amendment to the Water Well Construction Permit Program Delegation Agreement between South Florida Water Management District and Osceola County Health Department," dated April 18, 2005.

(7) "Agreement between the St. Lucie County Health Department and South Florida Water Management District," dated April 13, 2000; "Amendment to the Water Well Construction Permit Program Delegation Agreement between South Florida Water Management District and St. Lucie County Health Department," dated May 11, 2005; "Second Amendment to the Water Well Construction Permit Program Delegation Agreement between South Florida Water Management District and St. Lucie County Health Department," dated May 13, 2010.

(8) "Agreement between the Hendry County Health Department and South Florida Water Management District," dated September 14, 2000; "Amendment to the Water Well Construction Permit Program Delegation Agreement between South Florida Water Management District and Hendry County Health Department," dated April 18, 2005.

(9) "Agreement between the Okeechobee County Health Department and South Florida Water Management District," dated April 11, 2002; "Amendment to the Water Well Construction Permit Program Delegation Agreement between South Florida Water Management District and Okeechobee County Health Department," dated April 18, 2005; "Second Amendment to the Water Well Construction Permit Program Delegation Agreement between South Florida Water Management District and Okeechobee County Health Department," dated May 13, 2010.

(10) "Water Well Construction Permit Program Delegation Agreement between South Florida Water Management District and Glades County Health Department," dated May 11, 2005.

(11) "Delegation Agreement between South Florida Water Management District and Orange County Health Department," dated May 11, 2005.

(12) "Delegation Agreement between South Florida Water Management District and Osceola County and Polk County Health Departments," dated May 11, 2005.

(13) "Delegation Agreement between South Florida Water Management District and Palm Beach County Health Department," dated May 11, 2005.

(14) "Delegation Agreement between South Florida Water Management District and State of Florida Department of Health, Broward County Health Department," dated June 8, 2005.

(15) "Delegation Agreement between South Florida Water Management District and Highlands County Health Department," dated May 13, 2010.

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.103, 373.308, 373.309, 373.323, 373.324, 373.326, 373.329, 373.333 FS. History--New 3-16-05, Amended 8-26-10.

40E-3.036 Rules and Publications Incorporated by Reference.

The following Department rules, publications, standards and forms are incorporated by reference herein, regarding construction, repair and abandonment of wells, and shall apply to the well contractor licensing program administered by the District.

(1) Chapter 62-531, F.A.C., Well Contractor Licensing Requirements (11-25-07), <http://www.flrules.org/Gateway/reference.asp?No=Ref-00573>, a copy of which may be obtained by writing or calling the Department, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, telephone (850) 245-8648, or the South Florida Water Management District, 3301 Gun Club Road, West Palm Beach, FL 33406, telephone (561) 682-6436. The following publications referenced in Chapter 62-531, F.A.C., are also incorporated by reference herein:

(a) The Department's Water Well Contractor Disciplinary Guidelines and Procedures Manual (October 2002) <http://www.flrules.org/Gateway/reference.asp?No=Ref-00581>, incorporated by reference in subsection 62-531.450(5), F.A.C., a copy of which may be obtained by writing or calling the Department, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, telephone (850) 245-8648, or the South Florida Water Management District, 3301 Gun Club Road, West Palm Beach, FL 33406, telephone (561) 682-6436;

(b) The Department's Manual for Coursework and Continuing Education for Water Well Contractors, Department of Environmental Protection (November 2006), <http://www.flrules.org/Gateway/reference.asp?No=Ref-01521>, incorporated by reference in subsection 62-531.300(2), F.A.C., a copy of which may be obtained by writing or calling the Department, 2600 Blair Stone Road, MS 3680, Tallahassee, FL 32399-2400; telephone (850) 245-8648, or the South Florida Water Management District, 3301 Gun Club Road, West Palm Beach, FL 33406, telephone (561) 682-6436;

(2) Chapter 62-532, F.A.C., Water Well Permitting and Construction Requirements (10-07-10), <http://www.flrules.org/Gateway/reference.asp?No=Ref-00574>, a copy of which may be obtained by writing or calling the Department, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, telephone (850) 245-8648, or the South Florida Water Management District, 3301 Gun Club Road, West Palm Beach, FL 33406, telephone (561) 682-6436. The following publications referenced in Chapter 62-532, F.A.C., are also incorporated by reference herein:

(a) American Society for Testing and Materials (ASTM) A53/A53M-99b (1999); A135-01 (2001), A252-98 (1998), and A589-96 (1996), incorporated by reference in paragraph 62-532.500(1)(a), F.A.C. Copies of these copyrighted standards may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, P. O. Box C700, West Conshohocken, PA 19428-2959;

(b) American Petroleum Institute (API) 5L-2000 (2000), incorporated by reference in paragraph 62-532.500(1)(a), F.A.C. Copies of this copyrighted standard may be obtained from the American Petroleum Institute, 1220 L Street N.W., Washington, DC 20005-4070;

(c) ANSI/ASME B36. 10M-2000, incorporated by reference in paragraph 62-532.500(1)(a), F.A.C. Copies of this copyrighted standard may be obtained from the American National Standards Institute, 1819 L Street N.W., Washington, DC 20036;

(d) Schedule 10S and Schedule 40 of the ANSI/ASME B36. 19M-1985, incorporated by reference in paragraph 62-532.500(1)(d), F.A.C. Copies of this copyrighted standard may be obtained from the American National Standards Institute, 1819 L Street N.W., Washington, DC 20036;

(e) 2008 NSF International Standard/American National Standard NSF/ANSI 14-2008e, Plastics Piping System Components and Related Materials; NSF International Standard/American National Standard NSF/ANSI 61-2008, Drinking Water System Components – Health Effects, incorporated by reference in paragraph 62-532.500(1)(a), F.A.C. Copies of these copyrighted standards may be obtained from NSF International, P. O. Box 130140, Ann Arbor, MI 48113-0140;

(f) Closed-Loop/Geothermal Heat Pump Systems Design and Installation Standards, Revised Edition 2008, published by the International Ground Source Heat Pump Association, Oklahoma State University; Closed-Loop/Ground-Source Heat Pump Systems Installation Guide, 1988, Oklahoma State University, incorporated by reference in subsection 62-532.500(2), F.A.C. Copies of these

copyrighted materials may be obtained from the International Ground Source Heat Pump Association, Oklahoma State University, 374 Cordell South, Stillwater, OK 74078-8018;

(g) Appendix C of American Water Works Association (AWWA) Standard A100-97 (1997), AWWA Standard for Water Wells, incorporated by reference in subparagraph 62-532.500(3)(i)6., F.A.C. Copies of these copyrighted, recommended practices and methods may be obtained from the American Water Works Association, 6666 West Quincy Avenue, Denver, CO 80235;

(h) Grouting for Vertical Geothermal Heat Pump Systems Engineering Design and Field Procedures Manual, published by the International Ground Source Heat Pump Association, First Edition 2000, Oklahoma State University, incorporated by reference in subparagraph 62-532.500(3)(i)6., F.A.C. Copies of these copyrighted, recommended practices and methods may be obtained from the International Ground Source Heat Pump Association, Oklahoma State University, 374 Cordell South, Stillwater, OK 74078-8018.

(3) Rule 62-555.310, F.A.C., Source and Siting Requirements for Public Water Systems (8-28-03), <http://www.flrules.org/Gateway/reference.asp?No=Ref-01538>, a copy of which may be obtained by writing or calling the Department, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, telephone (850) 245-8648, or the South Florida Water Management District, 3301 Gun Club Road, West Palm Beach, FL 33406, telephone (561) 682-6436.

(4) Rule 62-555.312, F.A.C., Location of Public Water System Wells (8-28-03), <http://www.flrules.org/Gateway/reference.asp?No=Ref-01539>, a copy of which may be obtained by writing or calling the Department, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, telephone (850) 245-8648, or the South Florida Water Management District, 3301 Gun Club Road, West Palm Beach, FL 33406, telephone (561) 682-6436.

(5) Subsection 62-555.315(1), F.A.C., Public Water System Wells – Well Security (8-28-03), <http://www.flrules.org/Gateway/reference.asp?No=Ref-01540>, a copy of which may be obtained by writing or calling the Department, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, telephone (850) 245-8648, or the South Florida Water Management District, 3301 Gun Club Road, West Palm Beach, FL 33406, telephone (561) 682-6436.

(6) Chapter 62-524, F.A.C., New Potable Water Well Permitting in Delineated Areas (6-27-00), <http://www.flrules.org/Gateway/reference.asp?No=Ref-00572>, and the maps containing Delineated Areas for the following Counties: Broward, Glades, Highlands, Martin, Miami-Dade, Orange, Osceola, Polk, and St. Lucie, incorporated by reference in Rule 62-524.430, F.A.C. <http://www.flrules.org/Gateway/reference.asp?No=Ref-01529>. Copies may be obtained, upon receipt of reproduction and other appropriate costs, from the Department of Environmental Protection, Bureau of Information Systems, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, telephone (850) 245-8648, or the South Florida Water Management District Clerk's office, 3301 Gun Club Road, West Palm Beach, FL 33406, telephone (561) 682-6436.

(7) The Department's Florida Unified Citations Dictionary for Well Construction (October 2002), <http://www.flrules.org/Gateway/reference.asp?No=Ref-03078>, a copy of which may be obtained by writing or calling the Department, 2600 Blair Stone Road, Tallahassee, FL 32399-2400, telephone (850)245-8648, or the South Florida Water Management District, 3301 Gun Club Road, West Palm Beach, FL 33406, telephone (561)682-6436.

(8) The following Department forms are incorporated by reference into this chapter and shall apply to the well contractor licensing program administered by the District and to all wells constructed, repaired, or abandoned in the District:

(a) State of Florida Permit Application to Construct, Repair, Modify, or Abandon a Well, DEP Form 62-532.900(1), incorporated by reference in subsection 40E-3.101(1), F.A.C.

(b) State of Florida Well Completion Report, DEP Form 62-532.900(2), incorporated by reference in subsection 40E-3.411(1), F.A.C.

(c) Application for a State of Florida Water Well Contractor's License, Form 0186, incorporated by reference in subsection 40E-3.038(3), F.A.C.

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.103, 373.308, 373.309, 373.323, 373.324, 373.326, 373.329, 373.333 FS. History—New 3-16-05, Amended 9-8-13.

40E-3.038 Violations of Contractor Licensing and Well Construction Requirements.

(1) Applications for a water well contractor license shall be filed with the District on Form 0186, (09-2012), "Application for a State of Florida Water Well Contractor License", incorporated by reference herein: <http://www.flrules.org/Gateway/reference.asp?No=Ref-01635>. Form 0186 is available at no cost by contacting the South Florida

Water Management District Clerk, 3301 Gun Club Road, West Palm Beach, FL 33406, (800)432-2045, ext. 6436 or (561)682-6436, and the delegated permitting authorities' offices, as identified in Rule 40E-3.035, F.A.C.

(2) Each well contractor meeting the licensing requirements set forth in Chapter 62-531, F.A.C., incorporated by reference in paragraph 40E-3.036(1)(a), F.A.C., will be assigned a permanent license number and shall be issued a certificate with that number.

(3) Violations of the contractor licensing requirements and well construction requirements are provided by Chapter 373, F.S., and Chapter 62-531, F.A.C.

(4) The licensed contractor must submit any change of address to the District within 30 days.

Rulemaking Authority 373.044, 373.113, 373.171, 373.333 FS. Law Implemented 373.323, 373.326, 373.333, 373.336 FS. History--New 12-19-89, Amended 3-16-05, 9-26-12.

40E-3.040 Scope of Part I.

The rules in this part relate to the permitting requirements applicable to the construction, repair or abandonment of wells. Unless expressly exempt by statute or this rule, all wells must be permitted prior to construction, repair or abandonment and must be constructed, repaired or abandoned by a licensed water well contractor. This exemption does not relieve the applicant from obtaining permits which may be required under Chapter 40E-2 (Consumptive Use), Chapter 40E-4 (Surface Water Management), or Chapter 40E-40 (General Surface Water Management Permits), F.A.C.

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.303, 373.308, 373.309, 373.316, 373.326, 373.342 FS. History--New 1-1-85, 7-14-14.

40E-3.041 Permits Required.

(1) Unless expressly exempted by statute or District rule, a permit must be obtained from the District or delegated agency prior to the construction, repair or abandonment of any water well within the District's jurisdiction.

(2) No test hole or water test well shall be converted to a water well until a well construction permit or modification is obtained. No monitoring well shall be converted to a production well until a well construction permit or modification thereof is obtained for each production well.

(3) If a potable well is proposed to be constructed in an area of known groundwater contamination, the well shall be permitted pursuant to Chapter 62-524, F.A.C.

(4) Permits for construction, repair, modification or abandonment of wells for which a water use permit is required under Chapter 40E-2, F.A.C., shall not be issued prior to issuance of the water use permit authorizing water use withdrawals.

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.103, 373.309, 373.313, 373.316 FS. History--New 1-1-85, Amended 3-16-05, 7-14-14.

40E-3.051 Exemptions.

(1) The following wells are exempt from Rule 40E-3.041, F.A.C.:

(a) Existing wells exempted under Section 373.316, F.S.

(b) A well exempted under Section 373.303(7), F.S.

(c) A test hole, as defined in subsection 40E-3.021(27), F.A.C.

(d) A well intended for use as an injection well, which has received a permit under Chapter 62-528, F.A.C. Such wells are exempt from the construction standards in this chapter, provided the applicable standards of Chapter 62-528, F.A.C., are met.

(2) These exemptions do not relieve the applicant from obtaining permits which may be required under Chapter 40E-2 (Consumptive Use), Chapter 40E-4 (Environmental Resource Permits), or Chapter 40E-40 (Environmental Resource Standard General Permits), F.A.C.

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.303, 373.308, 373.309, 373.313, 373.316, 373.326 FS. History--New 1-1-85, Amended 3-16-05, 7-14-14.

40E-3.0511 Exceptions and Variances for Well Construction Permits.

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.303, 373.308, 373.313, 373.316, 373.326 FS. History--New 1-1-85,

Amended 12-19-89, 7-2-98, 9-2-98, 6-12-00, Repealed by Section 3, Chapter 2012-31, Laws of Florida, 5-27-12.

40E-3.101 Content of Application.

(1) All applications shall be submitted to the permitting authority, as identified in Rule 40E-3.035, F.A.C., by the owner or by the water well contractor on behalf of the owner. All applications shall be submitted on DEP Form 62-532.900(1), (10-07-10), <http://www.flrules.org/Gateway/reference.asp?No=Ref-00576>, "State of Florida Permit Application to Construct, Repair, Modify, or Abandon a Well," incorporated by reference herein and available at no cost by contacting the South Florida Water Management District Clerk, 3301 Gun Club Road, West Palm Beach, FL 33406, (800) 432-2045, ext. 6436 or (561) 682-6436, and the delegated permitting authorities' offices, as identified in Rule 40E-3.035, F.A.C.

(2) All applications shall be submitted with the required non-refundable fee pursuant to Rule 40E-1.607, F.A.C., or the fee schedule established by the agency to which permitting authority has been delegated, as identified in Rule 40E-3.035, F.A.C., shall be submitted with the permit application.

(3) Applications for permits required by this chapter shall be filed with the District or the entity to which the authority to issue a permit has been delegated, as identified in Rule 40E-3.035, F.A.C. The application for the construction, repair or abandonment of water wells shall contain:

(a) The name, address, telephone number, license number and signature of the licensed contractor who will be constructing the well, except in the case of a state agency or political subdivision that needs an indication of approval from the District in order to obtain financing to construct a well. In this case, the District will take action on the application for a permit not signed by a licensed water well contractor with the following condition: "Prior to well construction, a copy of the original application, signed by the licensed water well contractor chosen to construct the well, will be submitted to the District",

(b) The name, address, telephone number and signature of the property owner or his agent, if applicable, on whose property the well is being drilled,

(c) Written authorization from the owner designating the authorized agent, if any,

(d) The location of the well (to the nearest one-quarter-quarter section, or latitude and longitude to the nearest second, or Florida State Planar Coordinates to the nearest one hundred feet), and property site map of the well location, depicting land marks and providing a scale,

(e) The expected cased depth and total depth of the well,

(f) The proposed use of the well,

(g) The proposed grouting interval,

(h) The specification for well construction including the size(s) of the casing to be used, the proposed construction, repair or abandonment methods, specifications including casing types, casing diameters; open hole or screened intervals, sizes and screen openings; and proposed grouting materials;

(i) The proposed method of construction and completion of the well, or the method of plugging and abandoning of the well,

(j) The anticipated starting date to begin drilling,

(k) The District water use permit number, the water use application number, and the well number from the water use permit Table A, if applicable,

(l) A well completion report and/or lithologic or cuttings log for any test hole or water test well and testing results, which is being requested to be converted to a water well,

(m) Applications for public supply wells shall include: the name and address of the water system; the number of persons the well is intended to serve; and a scaled map showing the well location, property boundaries, existing buildings or physical features, the location of all known and proposed sources of contamination within a 500 foot radius of the proposed well location, and

(n) Applications for water test wells must be accompanied by a description of the proposed test. The description at a minimum shall include:

1. Purpose of the test, a brief description of the testing method, and a summary of the results to be provided to the District within 30 days of completion of the testing.

2. Name, address, and telephone number of the person or consulting firm performing the test.

3. A site map showing the location of the water test well and any observation wells.

(4) In addition to the information required to be submitted on the District form, the District staff may specifically request such reasonable additional information as may be necessary to evaluate the hydrologic impacts of the withdrawal to ensure that the

impacts will not be harmful to the water resource of the District as set forth in Chapter 40E-2, F.A.C., and that the withdrawals are in compliance with statutory and rule requirements. Pursuant to Section 373.314, F.S., the District will cite a specific rule when requesting such additional information. Such requests for additional information will be made in compliance with Section 120.60, F.S., and Chapter 40E-1, F.A.C.

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.308, 373.309, 373.313, 373.326, 373.342 FS. History—New 1-1-85, Amended 12-19-89, 11-8-99, 3-16-05, 9-26-12.

40E-3.301 Conditions for Issuance of Permits.

- (1) The applicant shall comply with the applicable provisions of Chapter 373, F.S., and this chapter.
- (2) A water use permit, if applicable under Chapter 40E-2, F.A.C., must have already been obtained. If a water use permit has not been obtained, an application for a consumptive use permit must be submitted concurrently with the well construction application and must also be approved by the District prior to issuance of the well construction permit.
- (3) The proposed well must not harm the water resources of the District or interfere with existing legal users.
- (4) The application must be complete and must meet the requirements of Chapter 373, F.S., and this chapter.
- (5) The District or delegated agency shall impose on any permit issued under this chapter such reasonable conditions as are necessary to protect the water resource and to assure that the permitted activity will be consistent with the overall objectives of the District. The District or delegated agency shall attach such conditions to the well construction, repair, or abandonment permit and the conditions shall be performed accordingly.

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.103, 373.306, 373.308, 373.309, 373.313, 373.342 FS. History—New 1-1-85, Amended 3-16-05, 7-14-14.

40E-3.321 Duration of Permits.

- (1) Each permit shall be valid for a period of six (6) months, unless the time limit is extended by the District or delegated agency.
- (2) Construction, repair or abandonment of a well shall not commence or continue after the expiration of a permit.
- (3) Extensions of an existing permit shall be granted by the District or delegated agency upon written request if:
 - (a) Submitted by the permittee prior to the expiration date of the permit, and
 - (b) The permittee shows circumstances and conditions have not changed substantially since the permit issuance so that the proposed well will not harm the water resource.
- (4) A well construction permit may be transferred from one licensed water well contractor to another if the owner or his agent agree to the transfer prior to permit expiration.

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.308, 373.309, 373.313, 373.326, 373.342 FS. History—New 1-1-85, Amended 3-16-05.

40E-3.341 Suspension and Revocation.

The District or delegated agency may suspend or revoke a permit to construct, repair or abandon a well by written notice to the permittee under any of the following circumstances:

- (1) Material misstatement or misrepresentation in the application for a permit;
- (2) Failure to comply with the provisions set forth in the permit;
- (3) Disregard or violation of any provisions of this chapter or Part III of Chapter 373, F.S.;
- (4) Unforeseen circumstances which may create a danger to the water resources or the public health, safety or welfare, if the well is constructed as permitted; or
- (5) Material change of circumstances or conditions from those existing at the time such permit was issued.

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.103, 373.306, 373.308, 373.309, 373.313, 373.342 FS. History—New 1-1-85, Amended 3-16-05.

40E-3.411 Well Completion Reports.

(1) The water well contractor shall complete and submit DEP Form 62-532.900(2), (10-07-10), <http://www.flrules.org/Gateway/reference.asp?No=Ref-00578>, "State of Florida Well Completion Report," incorporated by reference herein, to the District and delegated agency, as identified in Rule 40E-3.035, F.A.C., for the construction, repair or abandonment of all wells, regardless of whether a permit is required under Rules 40E-3.101 and 40E-3.600, F.A.C. Well completion reports shall be filed with the District and delegated agency, as identified in Rule 40E-3.035, F.A.C., within 30 days of the completion of the work, using DEP Form 62-532.900(2). Copies of DEP Form 62-532.900(2) are available at no cost by contacting the South Florida Water Management District Clerk, 3301 Gun Club Road, West Palm Beach, FL 33406, (800) 432-2045, ext. 6436 or (561) 682-6436, and the delegated permitting authorities' offices, as identified in Rule 40E-3.035, F.A.C. Well completion reports for sites controlled by Chapter 62-761, F.A.C., Underground Storage Tank Systems, may include all monitoring wells for the same site on a single form.

(2) The water well contractor shall keep or cause to be kept by a person in his employ an accurate field log of all well construction, repair or abandonment activities performed under each permit. Such logs shall be available for inspection at the site during all times when work is in progress.

(3) If no work is performed or if the well is not completed, a report shall be filed within 30 days of the expiration of the permit stating that no well construction was performed under the permit or outlining the status of the incomplete well.

(4) For water test wells, a report on the test results shall be submitted to the District within 30 days of completion of the testing. The report shall also include a request and a proposed schedule to either abandon the water test well or convert the water test well to a production well or monitoring well.

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.308, 373.309, 373.313, 373.326, 373.342 FS. History—New 1-1-85, Amended 3-16-05, 9-26-12.

40E-3.451 Emergency Authorization.

(1) Emergency water well construction permits may be issued by the Executive Director or their designee when one of the following conditions exist which justifies the issuance:

(a) An existing well supplying a particular use has failed and must be immediately replaced;

(b) The health, safety, or general welfare of the people affected by said emergency would be jeopardized without such authorization;

(c) Emergency authorization is needed to immediately mitigate or resolve potentially hazardous degradation of water resources;

or

(d) A serious set of unforeseen circumstances occurs which creates the emergency.

(2) Emergency permits may be applied for and issued orally. Mere carelessness or lack of planning on the part of the applicant, contractor or driller will not constitute sufficient cause for the issuance of an emergency permit. If Chapter 40E-2, F.A.C., also applies to the well, an emergency permit may be issued only if, in addition to qualifying under subsection (1) above, an application for a consumptive use permit has been filed with the District. Issuance of an emergency permit will not be evidence of any entitlement to the consumptive use permit.

(3) The applicant for an emergency permit shall submit the application and fee in accordance with Rule 40E-3.101, F.A.C., along with any other requested information within twenty-four hours after making oral application.

Rulemaking Authority 373.044, 373.119, 373.171 FS. Law Implemented 373.308, 373.309, 373.313, 373.326, 373.342 FS. History—New 1-1-85, Amended 7-2-98, 3-16-05, 7-14-14.

40E-3.461 Inspection.

(1) The District or delegated agency is authorized to inspect any well or abandoned well within its jurisdiction, including those wells permitted under Rule 40E-3.041, F.A.C. Inspections shall be done as necessary to insure conformity with applicable standards. Duly authorized representatives of the District or delegated agency, upon presenting proper identification and at reasonable times, may enter upon any premises for the purpose of such inspection. Such inspection may include but need not be limited to geophysical logging, water level measurements, or other methods.

(2) If, based on such inspection, the District or delegated agency finds the standards of this chapter have not been met, the

District or delegated agency shall proceed with enforcement actions as prescribed by Chapter 62-531, F.A.C.

(3) A site inspection may be conducted by an authorized representative of the District or delegated agency prior to issuing a permit for construction of a public water supply well.

(4) The District or delegated agency shall be notified at least 24 hours in advance of placement of grout in the annular space of any public water supply well. A District or delegated agency representative may be on site to observe the grouting. If the District or delegated agency is properly notified and a representative is not at the site at the appointed time, the grouting may begin in the absence of a representative.

(5) If, based on an inspection, the District or delegated agency finds any well is an abandoned or incomplete well, the well shall be plugged in accordance with Rule 40E-3.531, F.A.C.

(6) If, based on an inspection, the District or delegated agency determines that applicable laws or rules have not been complied with, it shall disapprove the well. A disapproved well shall not be used until brought into compliance. If compliance cannot be achieved in a reasonable time, the well shall be properly abandoned.

(7) If, based on an inspection, the District determines that any well is a potential hazard to the water resource, the well shall be abandoned in accordance with subsection 62-532.500(4) and Rule 40E-3.531, F.A.C.

(8) In all circumstances, a copy of all applicable well construction permits will be available at the construction site during well construction.

Rulemaking Authority 373.044, 373.171 FS. Law Implemented 373.103, 373.308, 373.309, 373.319 FS. History--New 1-1-85, Amended 3-16-05.

40E-3.500 Scope of Part II.

The rules in this part relate to the standards and criteria for the construction, repair and abandonment of wells. All wells within the District unless specifically exempted under Rule 40E-3.051, F.A.C., must comply with these standards regardless of whether a permit is required under Part I.

Rulemaking Authority 373.044, 373.113, 373.171 FS. Law Implemented 373.308, 373.309, 373.313 FS. History--New 1-1-85.

40E-3.502 Construction Methods.

(1) Water wells must be located, constructed, cased, grouted, plugged, capped, or sealed to prevent uncontrolled surface flow, uncontrolled movement of water from one aquifer or water bearing zone of differing water quality to another, contamination of groundwater or surface water resources, or other adverse impacts. The construction methods and standards in this chapter shall apply to all construction, repair, or abandonment of wells in the District except:

(a) In those areas exempted by the District with the concurrence of the Department, or

(b) For public water supply wells or limited use public supply wells, which shall be constructed, repaired or abandoned in accordance with Chapter 62-555 or Chapter 64E-8, F.A.C., respectively, or

(c) For monitor wells, which shall be constructed, repaired, or abandoned in accordance with Chapter 62-761, F.A.C., covering underground storage tank systems, or

(d) For water wells permitted under Chapter 62-524, F.A.C., delineated areas, which shall be constructed, repaired or abandoned in accordance with Chapter 62-534, F.A.C., or special criteria developed for specific designated areas, or

(e) When special well construction conditions have been specified on a water use permit, these conditions shall be attached to applicable well construction permits.

(2) The District may designate special well construction standards areas by Emergency Rule to prevent transport of surface contaminants to groundwater or movement of introduced or natural contaminants from one aquifer or zone to another. Such standards will be the minimum necessary to prevent the movement of contaminants and will be in cooperation with other state agencies, local jurisdictions, and the regulated public, in accordance with Chapter 120, F.S., provisions for emergency rule making.

Rulemaking Authority 373.044, 373.171, 373.309 FS. Law Implemented 373.113, 373.306, 373.308, 373.309 FS. History--New 1-1-85, Amended 12-19-89, 3-16-05.

40E-3.504 Location.

(1) Water wells shall be located so as to not pose a threat of contamination to the water resource and to provide for the protection of the health, safety and welfare of the user.

(2) Water wells shall be located to comply with the setback distances in subsection 62-532.400(7), F.A.C. This subsection does not relieve the applicant from the responsibility of complying with the requirements of any other regulatory agency with jurisdiction over the applicant's activities.

(3) The District shall increase these distances if necessary to protect the health, safety and welfare of individuals who may be exposed to ground water contamination.

Rulemaking Authority 373.044, 373.171, 373.309 FS. Law Implemented 373.113, 373.306, 373.308, 373.309 FS. History--New 1-1-85, Amended 3-16-05.

40E-3.507 Casing and Liner Pipe Standards.

(1) All well casing shall conform to the standards identified in subsection 62-532.500(1), F.A.C., incorporated by reference in paragraph 40E-3.036(1)(c), F.A.C.

(2) Wells constructed using telescoping casings shall be considered as a continuous casing provided the following conditions are met:

(a) Any annular space including the overlapped section shall be grouted in accordance with paragraph 62-532.500(3)(i), subsection (4), F.A.C. incorporated by reference in paragraph 40E-3.036(1)(c), F.A.C. The grout shall extend from the bottom of the casing to the top of the innermost casing. The use of lead packers is prohibited.

(b) The bottom end of the casing shall extend to or below the water level of the aquifer intended to supply water to the well.

(c) All caving zones below the uppermost consolidated unit shall be cased.

(d) A minimum of 10 feet overlap is required for non-public supply wells. One casing centralizer shall be used within the overlapped section.

(e) A minimum of 20 feet overlap is required for public supply wells. Two casing centralizers shall be used within the overlapped section.

Rulemaking Authority 373.044, 373.171, 373.309 FS. Law Implemented 373.113, 373.306, 373.308, 373.309 FS. History--New 1-1-85, Amended 3-16-05, 9-26-12.

40E-3.512 Well Construction Requirements.

(1)(a) Materials used in construction shall be reasonably free of contamination.

(b) Water used during construction shall be supplied from a potable well or potable water supply. If the well or water supply is a known source of contamination or is within a known area of contamination, it shall not be used to provide water for well construction.

(2)(a) The well shall be constructed to prevent caving or pumping of sand. A filter pack shall be installed around the screened portion of the well;

(b) The well shall be adequately developed until clear of any drilling fluids, particulate material and turbidity.

(3) For wells obtaining water from consolidated earth materials, a continuous casing shall extend from the upper terminus of the well to the top of the uppermost consolidated unit.

(4) For artesian wells, the casing shall penetrate the entire thickness of the overlying formation above the aquifer. The District may grant waivers for seating of casing within the confining zone above an artesian aquifer provided that:

(a) The casing extends a sufficient distance into the confining zone so as to prevent movement of water from the artesian aquifer to overlying aquifers;

(b) The District determines that such construction will not harm the water resources.

Rulemaking Authority 373.044, 373.171, 373.309 FS. Law Implemented 373.113, 373.306, 373.308, 373.309 FS. History--New 1-1-85, Amended 3-16-05, 9-26-12.

40E-3.517 Grouting and Sealing.

Wells shall be grouted and sealed in accordance with paragraph 62-532.500(3)(i), F.A.C., incorporated by reference in paragraph

40E-3.036(1)(c), F.A.C., to protect the water resource from degradation caused by movement of waters along the well annulus either from the surface to the aquifer or between aquifers, and to prevent loss of pressure in artesian aquifers.

(1) All wells that are constructed in a manner which creates an annular space between the casing and the naturally occurring geologic formations shall be grouted and sealed in accordance with the methodologies listed in paragraph 62-532.500(3)(i), F.A.C., incorporated by reference in paragraph 40E-3.036(1)(c), F.A.C.

(2) Wells obtaining water from unconsolidated formations, using a method other than jetting or driving a casing, and creating an annular space, shall be grouted from no more than ten (10) feet above the top of the screen to the upper terminus. Borehole cuttings shall not be reintroduced into the annular space.

(3) For jetted wells or sand point wells obtaining water from an unconsolidated formation of a naturally caving nature in which the annular space is completely filled with formation material, only the upper three (3) feet shall be grouted to provide protection from possible contaminated surface water.

(4) For jetted wells or sand point wells circulating drilling fluids to the surface, and obtaining water from a consolidated formation, shall be grouted bottom to top prior to being seated into water bearing formation.

(5) For wells constructed by driven casing, dry bentonite, with an average mesh size of between 4 and 20 U.S. standard sieve size or grain size between 5mm and .85mm, must be added to the continuous casing string at land surface at the beginning and during construction of the well.

(6) All other wells shall be grouted from the bottom of the casing to land surface.

(7) Unless a variance has been granted by the District, grouting and sealing of water wells shall be accomplished in the following manner:

(a) The grout mixture shall consist of either Portland Cement or a natural bentonite slurry for wells and boreholes meeting the requirements in subsection 40E-3.512(7), F.A.C. The mixture shall consist of 5.2 to 5.5 gallons of water per sack of Portland Cement or a mixture of 6.0 gallons of water per sack of Portland Cement with 3 to 7.5 pounds of Bentonite, not to exceed 8% by weight.

(b) The minimum set time for grouting of casing using either Portland Cement or Bentonite before drilling operations may continue is 12 hours.

(c) Grouting of the annular space shall be completed using the tremie pipe, forced pressure, or other equivalent method approved by the District. In all cases, grout will be introduced into the annular space from bottom to top.

(8) Water wells constructed using Bentonite grouts shall meet all the following requirements:

(a) The slurry grout mixture shall be introduced into the annular space from bottom to top. The casing seat must be clean, allowing the casing to set at the total depth bored in a hole reasonably free of drill cuttings;

(b) A formation packer or a 5-foot neat cement plug must be installed at the casing seat;

(c) Neat cement must be placed in the upper ten (10) feet of the annular space to prevent deterioration of, or damage to, the bentonite seal; and

(d) Bentonite grout may be used only on monitor, domestic, irrigation, water source, or ground source heat pump installations with a nominal casing diameter of five (5) inches or less. Use of bentonite grout is not allowed on public supply wells, wells in delineated areas, wells where artesian flow occurs, in any identified contamination sites where the contaminants will prevent an adequate seal, or in wells with the water quality concentrations exceeding 10,000 milligrams per liter total dissolved solids.

(e) Bentonite grout may be used for abandonment purposes for any well. However, it cannot be used to abandon a dry well, or a well which flows to surface and cannot be placed any higher in the well than the height of the static water level. Any unsealed remainder above the height of the static water level must be filled with neat cement.

(f) Bentonite chips or pellets used for abandonment purposes may not be placed in any well casing or hole less than three inches in diameter or for sealing the annular space of any well.

(g) In all circumstances, the manufacturer's mixing instructions shall be followed.

Rulemaking Authority 373.044, 373.171, 373.309 FS. Law Implemented 373.113, 373.306, 373.308, 373.309 FS. History—New 1-1-85, Amended 3-16-05, 9-26-12.

40E-3.521 Well Seals.

Wells shall be covered and sealed in accordance with paragraph 62-532.500(4)(a), F.A.C., incorporated by reference in paragraph 40E-3.036(1)(c), F.A.C.

(1) Permanent Well Seals.

(a) Wells shall be properly sealed to prevent the movement of contaminants and surface water into the well.

(b) The top of the well casing shall at a minimum extend 12 inches above land surface and if practical, 12 inches above the 100-year flood elevation.

Rulemaking Authority 373.044, 373.171, 373.309 FS. Law Implemented 373.113, 373.306, 373.308, 373.309 FS. History—New 3-16-05, Amended 9-26-12.

40E-3.525 Explosives.

The use of explosives in well construction or development is prohibited unless specifically approved by the Department.

Rulemaking Authority 373.044, 373.171, 373.309 FS. Law Implemented 373.113, 373.306, 373.308, 373.309 FS. History—New 1-1-85, Amended 12-19-89, 3-16-05.

40E-3.529 Flowing Wells.

If the well flows at land surface, a valve shall be provided and maintained to control the discharge from the well.

Rulemaking Authority 373.044, 373.171, 373.309 FS. Law Implemented 373.113, 373.306, 373.308, 373.309 FS. History—New 1-1-85, Amended 3-16-05.

40E-3.531 Abandoned Well Plugging.

(1) Any well which was not constructed in accordance with the standards of this chapter and fails to be corrected upon written notice in accordance with subsection 40E-3.461(2), F.A.C., shall be deemed an abandoned well.

(a) Any well, which has been permanently disconnected from pumping equipment and has not been converted to a monitoring well, shall be deemed to be abandoned.

(b) The owner of the property, on which an abandoned well is located, shall be responsible for ensuring that all abandoned wells on the property are properly plugged by a licensed water well contractor.

(2) Any well which is an abandoned artesian well under Section 373.203(1), F.S., shall be plugged in accordance with this section.

(3) All abandoned wells shall be plugged by filling them from bottom to top with grout within a time specified by the District. The work shall be performed by a licensed water well contractor.

(a) Use of clean aggregate to bridge cavernous or lost circulation zones shall be allowed if measurements indicate loss of grout and the borehole or screened portion does not connect two (2) or more aquifers of significantly differing water quality. Prior approval to use aggregate or other material must be obtained from the District.

(b) Obstructions shall be cleared from all wells prior to plugging.

(4) Requests to abandon a well shall be submitted on the application form provided by the District.

Rulemaking Authority 373.044, 373.171, 373.309 FS. Law Implemented 373.113, 373.306, 373.308, 373.309 FS. History—New 1-1-85, Amended 3-16-05.

40E-3.600 Scope of Part VI.

(1) "Part VI of Chapter 40E-3, F.A.C.," grants a general permit for certain specified well construction, repair or abandonment activities which have been determined by the District to exist in unique geographic areas.

(2) The construction, repair or abandonment of wells in accordance with Rule 40E- 3.601, F.A.C., are authorized subject to the requirements of Part VI of this chapter.

Rulemaking Authority 373.044, 373.113, 373.171, 373.309 FS. Law Implemented, 373.113, 373.118, 373.306, 373.308, 373.309, 373.342 FS. History—New 9-26-12.

40E-3.601 General Permit for Water Wells within a Portion of Southern Miami-Dade County.

(1) It is determined that compliance with Rules 40E-3.101, 40E-3.301, 40E-3.321, 40E-3.411, 40E-3.507, 40E-3.512, 40E-3.517 and 40E-3.531, F.A.C., will create an undue hardship to those persons proposing to construct, repair or abandon wells used for agricultural water use within south Miami-Dade County. It is further determined that the continued existence of these wells and method of well construction has not been shown to impair the ground water resources. However, if the continued existence of the rule is determined in any way to impair the purpose and intent of Part III of Chapter 373, F.S., adversely impact the water resources, not be in the public interest, or for any other reason the District may delete the General Permit threshold at any time in accordance with applicable law.

(2) A general permit is granted to those wells intended for agricultural use which do not exceed 25 feet in depth and which are located within the area depicted on Figure 3-1 and described as follows:

BEGINNING at the intersection of the centerline of South Florida Water Management District's Levee 31 West and the south line of Section 7, Township 58 South, Range 38 East; Thence, Easterly along the south line of said Section 7 to the centerline of South Florida Water Management District's Canal 111; Thence, Southeasterly, Southerly and Southeasterly along said centerline of Canal 111 to the centerline of State Road 5 (U.S. Highway 1); Thence, Southerly along said centerline of State Road 5 (U.S. Highway 1) to the Dade-Monroe County line and Florida Bay; Thence, Northeasterly along the Dade-Monroe County line to the Western shore of Little Card Sound; Thence, Northeasterly and Northerly along the Western shore of Little Card Sound and Biscayne Bay to the south line of Section 14, Township 56 South, Range 40 East; Thence, Westerly along the section lines to the centerline of State Road 821; Thence, Northerly along said centerline of State Road 821 to the South line of the North one-half of Section 17, Township 56 South, Range 40 East; Thence, Westerly along the one-quarter section lines to the Southwest corner of the Northwest one-quarter of said Section 18; Thence, Northerly to the Southeast corner of Section 12, Township 56 South, Range 39 East; Thence, Westerly along the south line of said Section 12 to the Southwest corner of said Section 12; Thence, Northerly along the West line of said Section 12 to the centerline of South Florida Water Management District's Canal 1 West; Thence, Northwesterly and Westerly along said centerline of Canal 1 West and its Westerly Extension to the centerline of South Florida Water Management District's Levee 31 North; Thence, Southerly along the centerline of said Levee 31 North and the centerline of South Florida Water Management District's Levee 31 West to the POINT OF BEGINNING.

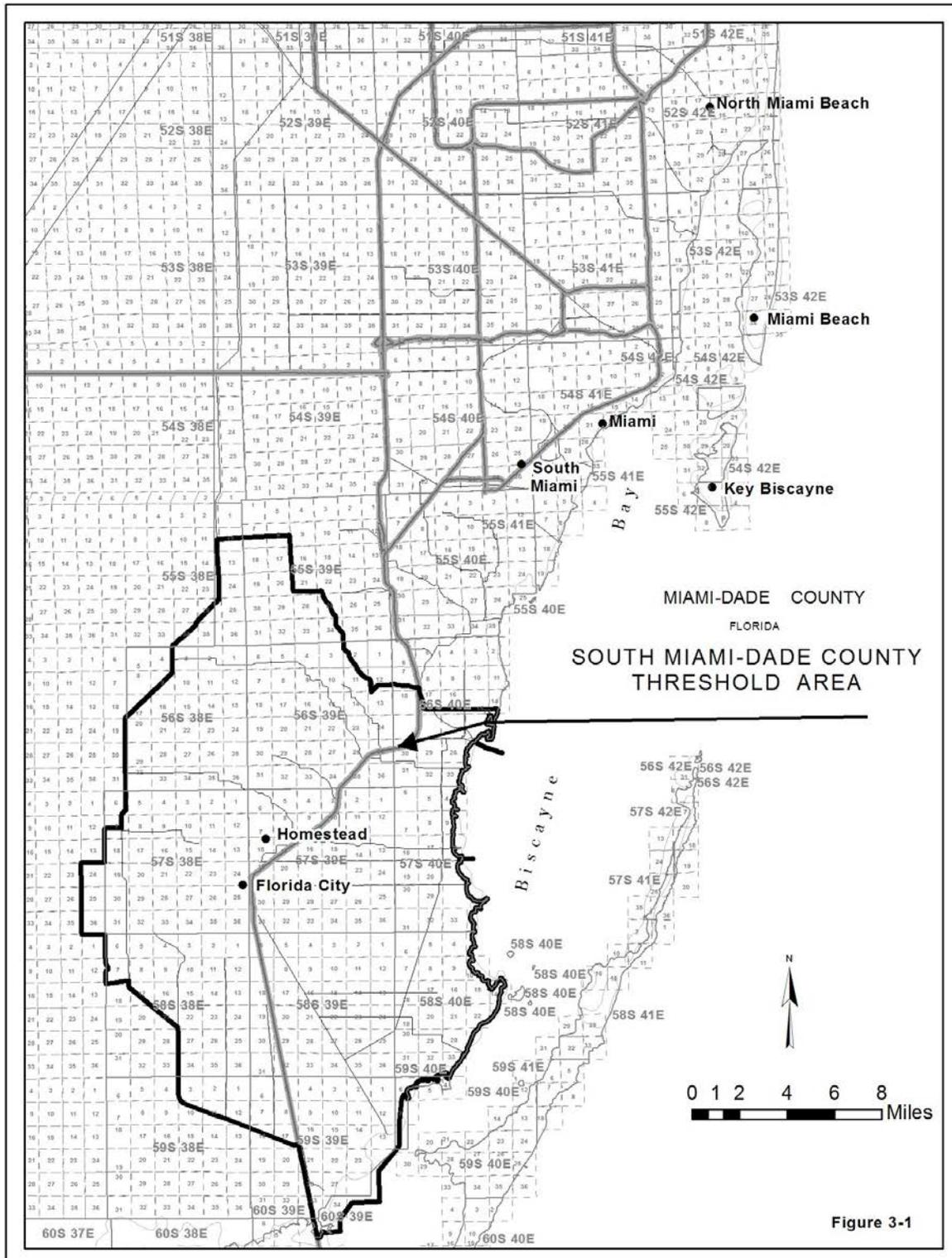


Figure 3-1