

**RULES OF THE  
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT  
CHAPTER 40D-3  
REGULATION OF WELLS**

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**40D-3.011 Policy and Purpose.**

The rules in this Chapter govern the construction of water wells and water well contractor licensing, and implement the provisions of Part III of Chapter 373, Florida Statutes (F.S.), and

rules promulgated by the Florida Department of Environmental Protection in Chapters 62-524, 62-531, 62-532 and 62-555, Florida Administrative Code (F.A.C.). These rules are adopted to ensure that all water wells, soil borings and foundation holes within the District are located, constructed, maintained, used, and abandoned in a manner that protects the water resources. Additional District rules relating to water wells are found in Chapter 40D-2, F.A.C., entitled Consumptive Use of Water, and Chapter 40D-21, F.A.C., entitled Water Shortage Plan.

Specific Authority 373.044, 373.113, 373.171, 373.309(1), 373.333(1), 373.337 F.S. Law Implemented 373.306, 373.308, 373.309, 373.313, 373.316, 373.323(2), 373.324, 373.326, 373.329, 373.333, 373.337 F.S. History – Readopted 10-5-74, Formerly 16J-3.01, 16J-3.06(1), Amended 7-1-90, 9-30-91, 12-31-92.

#### **40D-3.021 Definitions.**

When used in this Chapter:

(1) “Abandoned well” means a well the use of which has been permanently discontinued. Any well shall be deemed abandoned which is in such a state of disrepair, that continued use for the purpose of obtaining groundwater or disposing of water or liquid wastes, or for observation is impracticable.

(2) “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 or liner pipe.

(3) “Aquifer” means a geologic formation, group of formations, or part of a formation that contains sufficient saturated, permeable material to yield useful quantities of ground water to wells and springs.

(4) “Casing diameter” or “diameter of casing” means the largest nominal permanent water bearing casing. For the purposes 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.

(5) “Confining unit” means a body of relatively impermeable material stratigraphically adjacent to one or more aquifers in which hydraulic conductivity may range from nearly zero to some value distinctly lower than that of the aquifer.

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

(7) “Construction of water wells” means all parts and acts necessary to obtain ground water by wells, including the location and excavation of the well, but excluding the installation of pumps and pumping equipment.

(8) “Contractor” means any person licensed by the Department, or a water management district, in accordance with Chapter 62-531, F.A.C., and engaged in the business of construction, repair, or abandonment of wells.

(9) “Department” means the Florida Department of Environmental Protection.

(10) “District” means the Southwest Florida Water Management District.

(11) “Driller” means a licensed contractor, or a person working for a licensed contractor who actually constructs the well.

(12) “Drilling equipment” means a drilling rig or other apparatus used in constructing a well.

(13)“Drive shoe” means any device specifically designed, fabricated and installed to protect the lower end of a water well casing or liner pipe from collapse or other damage while the casing or liner pipe is being driven into place in a well.

(14)“Field log” means an accurate, written documentation of all construction activities needed to fill out well completion reports.

(15)“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.

(16)“Gang well” means a system where two or more water wells are coupled together with a common header or manifold.

(17)“Incomplete well” means any attempted well the construction of which has been discontinued and which is unsuitable for any permitted use.

(18)“Inspection port” means any opening in the well seal or casing wall not less than one-quarter 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.

(19)“Liner” means a pipe which is installed within the permanent water bearing casing to repair, or protect the casing or is installed below and separate from the casing to seal off caving material which may be encountered in the open hole of the well.

(20)“Monitor well” means a well used primarily to monitor hydrologic parameters such as water levels or water quality.

(21)“Neat cement grout” or “grout” means a mixture of water and Portland cement (American Concrete Institute Types I, II or III), or any other approved types of cement, or Bentonite for applications specified in Rule 40D-3.517, F.A.C, and acceptable amounts of additives approved by the District for use in cement grouts.

(22)“Nominal” means the standard size of the well casing and may be less than or greater than the number indicated. Nominal when referring to the grouting annulus means the available void thickness between telescoped casings or the average available void thickness between the borehole and outside wall of the casing at any point.

(23)“Packer” means a device made from material other than lead placed within the well casing that seals the joint between two pieces of casing, between the casing and screen, between one formation or water bearing strata and another, or between the formation and the casing.

(24)“Potable water” means water suitable for human consumption and approvable by the county health unit (Florida Department of Health and Rehabilitative Services).

(25)“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.

(26)“Public water system” means a community or non-community system for the provision to the public of piped water for human consumption, provided that such system has at least 15 service connections or regularly serves at least 25 individuals daily at least 60 days out of the year, as set forth in Chapters 62-550, 62-555, 62-560 and 62-524, F.A.C.

(27)“Soil boring” or “foundation hole” means a hole in the ground drilled, bored, cored, washed, driven, dug or jetted, the intended use of which includes obtaining data for engineering, geophysical or geological exploration, or prospecting for minerals or products of mining or quarrying, but not for producing, disposing of, or searching for water.

(28)“Telescoped casing” means an interior casing extending below and sealed within an exterior casing.

(29)“Water Use Permit” means a permit issued under Chapter 40D-2, F.A.C.

(30)“Water well” or “well” means 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, monitoring 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 construction, mining or quarrying purposes.

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

(32)“Well completion” means termination of all construction, repair, modification or abandonment activities.

(33)“Well completion report” means the well completion form as described in paragraph 40D-3.411(1)(a), F.A.C., supplied by or approved by the District.

(34)“Well seal” means an arrangement or device approved by the District that prevents contaminants from entering the well at the upper terminus.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.106, 373.306, 373.308, 373.309, 373.313, 373.316, 373.319, 373.323, F.S. History – Readopted – 10-5-74, Formerly 16J-3.02, Amended 7-1-90, 9-30-91, 12-31-92, 8-19-08.

#### **40D-3.031 Implementation.**

This Chapter was implemented on October 16, 1978, throughout the sixteen counties comprising the District.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 383.103(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, F.S., 78-65, Laws of Florida. History – Readopted – 10-5-74, Amended 9-4-77, 10-16-78, Formerly 16J-3.03, Amended 7-1-90.

#### **40D-3.032 Delegation.**

The authority for general administration of this Chapter is delegated to the Executive Director of the District. It is the policy of the Board that in making this delegation the Executive Director may 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 authorized to issue permits under this Chapter as provided in Section 373.342(1), F.S.

Specific Authority 373.044, 373.113, 373.309, F.S. Law Implemented 373.342, F.S. History – New 7-1-90, Amended 9-30-91.

#### **40D-3.037 Rules and Publications Incorporated by Reference.**

(1) The regulations promulgated by the Department governing the construction of water wells as set forth in Chapter 62-532, F.A.C. (3-28-02), the construction of water wells in delineated areas as set forth in Chapter 62-524, F.A.C. (6-27-00), the licensing requirements for

Water Well Contractors as set forth in Chapter 62-531, F.A.C. (11-25-07), and the construction of public supply water wells as set forth in Chapter 62-555, F.A.C. (1-17-05), are hereby incorporated by reference and made a part of this rule and shall apply to all water wells constructed, repaired, modified or abandoned in the District.

(2) The Department's Water Well Contractor Disciplinary Guidelines and Procedures Manual (October 2002) and the Department's Florida Unified Citations Dictionary for Water Well Construction (October 2002) are hereby incorporated by reference and made a part of this rule.

(3) Well Construction Forms are incorporated by reference into Rule 40D-1.659, F.A.C., and are available from the District upon request and from the District's website at [www.watermatters.org](http://www.watermatters.org).

Specific Authority 373.044, 373.113, 373.309, F.S. Law Implemented 373.046, 373.308, 373.309, 373.323, 373.324, 373.333, F.S. History – New 7-1-90, Amended 12-31-92, 4-11-94, 6-27-94, 9-22-94, 7-5-95, 10-19-95, 7-15-99, 6-23-03, 1-8-04, 8-19-08.

#### **40D-3.038 Violations of Contractor Licensing Requirements.**

(1) Violations of the contractor licensing requirements of this Chapter are specifically listed in Chapter 62-531, F.A.C.

(2) A contractor is requested to inform the District within 15 days of any change in the contractor's mailing address.

(3) Actions which may be taken by the District upon determination that a violation has occurred are set forth in Section 373.333, F.S., and Chapter 62-531, F.A.C.

(4) Sections 373.323, 373.333 and 373.336, F.S., provide disciplinary procedures and penalties for unlicensed persons violating the provisions of Chapter 373, F.S., these rules or District orders.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.323(8), 373.337, F.S. Law Implemented 373.323, 373.324, 373.333, 373.336, F.S. History – New 7-1-90, Amended 12-31-92, 2-1-05, 8-19-08.

#### **40D-3.039 Penalties.**

Specific Authority 373.044, 373.113, 373.171, F.S. Law Implemented 373.129, 373.308, 373.309, 373.336, F.S. History – New 7-1-90, Amended 12-31-92, Repealed 3-18-98.

#### **40D-3.040 Scope of Part III.**

Specific Authority 373.044, 373.113, 373.171, F.S. Law Implemented 373.303, 373.308, 373.309, 373.316, 373.326, 373.342, F.S. History – New 7-1-90, Amended 12-31-92, Repealed 3-18-98.

#### **40D-3.041 Permits Required.**

(1) Unless expressly exempted by statute or District rule, a permit must be obtained from the District prior to construction, repair, modification or abandonment of any water well, including:

(a) Water wells not in areas delineated pursuant to Chapter 62-524, F.A.C.

- (b) Potable water wells in areas delineated pursuant to Chapter 62-524, F.A.C.
  - (c) Non-potable water wells in areas delineated pursuant to Chapter 62-524, F.A.C.
  - (d) Dewatering wells for construction, mining or quarrying purposes that will be in existence for six months or longer.
  - (e) Public supply water wells.
  - (f) Monitor wells.
  - (g) Injection wells.
  - (h) Abandoned wells.
  - (i) Incomplete wells.
- (2) The permit shall be available at the well site during construction, repair, modification or abandonment.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.106, 373.306, 373.308, 373.309, 373.313, 373.316, F.S. History – Readopted 10-5-74, Amended 12-31-74, 12-1-77, 2-4-79, 11-8-82, Formerly 16J-3.06(2) – (5), 16J-3.10, Amended 7-1-90, 9-30-91, 12-31-92.

#### **40D-3.042 Multiple Wells Under a Single Permit.**

- (1) The construction, repair, modification or abandonment of:
- (a) Up to eight (8) sandpoint irrigation, monitor, recovery, dewatering, or gang wells 4 inches or less in diameter; or
  - (b) A Class V air conditioning heat pump system consisting of one supply well and one return well; may be included under one permit provided the conditions of subsection (2) are met.
- (2) A multiple well permit as described in subsection (1) will be issued provided:
- (a) The wells are constructed in the same geologic material, completed in the same hydrogeologic unit, and drilled on a contiguous tract of land owned or controlled by the same individual or entity; and
  - (b) Each well is the same diameter and constructed of a similar material.
- (3) The District requires both a supply well and a return well in the construction of an open heat pump system. A supply well without a return well is not permitted.
- (4) The District will authorize multi-zone monitor wells consisting of multiple observation tubes monitoring different depths all located in a single larger diameter well casing under a single permit. Provisions listed in subsection (2) do not apply to this type of well.
- (5) When a single well construction permit is issued for multiple wells as described above, a separate well completion report is required for each of the wells or tubes.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.106(1), 373.309, F.S. History – New 12-31-92, 4-22-07.

#### **40D-3.045 Water Use Permit Required.**

- (1) Permits for construction, repair, modification or abandonment of wells for which a water use permit is required under Chapter 40D-2, F.A.C., shall not be issued prior to issuance of the water use permit authorizing such water use withdrawals.
- (2) Notwithstanding the provisions of subsection (1) above, the District shall issue permits for construction, repair, or modification of any well when:

(a) The well to be constructed, repaired, or modified is to be used for aquifer testing, hydrologic monitoring, water quality monitoring, or otherwise for the purpose of gathering hydrogeologic data; or

(b) The applicant demonstrates that a compelling need exists to commence construction, repair or modification of the well while an application for a water use permit is pending; and

1. The Applicant has filed an application for Water Use Permit including all information required by Rule 40D-2.101, F.A.C., and the application has been deemed complete; and

2. It appears that the proposed use of water represented in the pending complete Water Use Permit application is a reasonable and beneficial use, will not interfere with any presently existing legal use of water, and is consistent with the public interest.

(c) The applicant agrees to all conditions attached to the well permit.

(3) The District is under no obligation to issue a water use permit merely because construction, repair or modification of a well has been authorized.

Specific Authority 373.044, 373.113, 373.171, 373.309 and 373.337, F.S. Law Implemented 373.309, F.S. History – New 7-1-90, Amended 9-30-91, 12-31-92, 3-30-93, 8-10-93.

#### **40D-3.051 Exemptions.**

(1) The following wells are exempt from the requirements of Rule 40D-3.041, F.A.C.:

(a) Wells exempted under Section 373.303(7), F.S.

(b) Wells used for the purpose of temporary dewatering of subsurface formations for construction, mining or quarrying purposes for a period of less than six months.

(c) Wells two inches or less in diameter and less than 20 feet in depth used for no more than ten days for the purpose of obtaining shallow soil or water information.

(2) In emergency situations when compliance with the requirements of Part III of Chapter 373, F.S., or Chapter 40D-3, F.A.C., will result in undue hardship, including those situations when an unexpected problem is encountered during the construction, repair or abandonment of a well, the Executive Director, or the Executive Director's designee, shall authorize an exemption, by telephone, from the conditions required by a permit or rule requirements for a well. A Well Completion Report documenting the exemption must be submitted to the District in writing within 30 days of completion.

(3) Qualifying for one of the above exemptions does not relieve the applicant from obtaining any other applicable permits required by law or District rule.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.306, 373.308, 373.309, 373.313, 373.316, 373.326, F.S. History – Readopted 10-5-74, Formerly 16J-3.13, Amended 7-1-90, 9-30-91, 12-31-92, 8-24-99.

#### **40D-3.091 Registration of Drillers, Contractors, and Engineering Testing Laboratories.**

Specific Authority 373.044, 373.149, 373.171, F.S. Law Implemented 373.323, 373.339, F.S. History – Readopted 10-5-74, Formerly 16J-3.04, Repealed 7-1-90.

**40D-3.092 Refusal, Suspension, or Revocation of Licensing Registration and Forfeiture of Bond.**

Specific Authority 373.044, 373.149, 373.171, F.S. Law Implemented 373.339, F.S. History – Readopted 10-5-74, Formerly 16J-3.05, Repealed 7-1-90.

**40D-3.101 Content of Application.**

(1) Applications for permits required by this chapter shall be submitted to the District. All permit applicants shall submit the form entitled “State of Florida Permit Application to Construct, Repair, Modify or Abandon a Well”, adopted by reference in Rule 40D-1.659, F.A.C. Except for replacement and domestic use wells, all applications to construct a well within the Most Impacted Area of the Southern Water Use Caution Area, as set forth in subparagraph 40D-2.801(3)(b)2, and Figure 2.1, F.A.C., shall include the form entitled “Well Verification For All Non-Domestic Use Wells Located in the Most Impacted Area of the Southern Water Use Caution Area”, adopted by reference in Rule 40D-1.659, F.A.C.

(2) A permit applicant seeking to drill a public supply well shall submit:

(a) A completed well permit application, as set forth in subsection (1) above, signed and accompanied by an applicable permit fee;

(b) A completed Southwest Florida Water Management District “Public Supply Well Information and Classification Form”, adopted by reference in Rule 40D-1.659, F.A.C.; and

(c) Four sets of site plans signed, sealed and dated by a licensed professional engineer. Applicants for permits on existing projects may submit pre-existing site plans or detailed legal plats.

(3) A permit applicant seeking to convert an existing non-public supply well to public supply standards shall submit all the above and:

(a) The cased depth and total depth of well;

(b) The lithology encountered, if available;

(c) The diameter, type of casing and static water level of the well.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.109, 373.308, 373.309, 373.313, 373.316, F.S. History – Readopted 10-5-74, Formerly 16J-3.07, Amended 7-1-90, 9-30-91, 12-31-92, 4-11-94, 10-19-95, 2-26-07, 8-19-08.

**40D-3.201 Permit Processing Fee.**

A non-refundable permit processing fee shall be required for permit applications filed pursuant to this chapter as provided in subsection 40D-1.607(9), F.A.C.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.109, 373.309, F.S. History – Readopted 10-5-74, Formerly 16J-3.071, Amended 7-1-90, 9-30-91.

**40D-3.301 Conditions for Issuance of Permits.**

(1) In order to obtain a water well construction, repair, modification or abandonment permit, an applicant must demonstrate compliance with the following conditions:

(a) The applicant shall have a current, valid water well contractor license from the State of Florida unless the permit is for a water well two (2) inches or less in diameter constructed by

an individual for his own private use on his own or leased property as specified in Section 373.326(2), F.S.

(b) The applicant shall submit a permit application as specified by Rule 40D-3.101, F.A.C.

(c) The application must be complete and meet the requirements of Chapter 373, F.S., and this chapter.

(d) A Water Use Permit, if applicable under Chapter 40D-2, F.A.C., shall have been obtained.

(e) The applicant shall not have overdue well completion reports.

(f) The proposed water well shall not adversely impact the water resource.

(2) The District shall impose on any permit issued under this Chapter such reasonable conditions as are necessary to protect the water resource and assure that the permitted activity will be consistent with the overall objectives of the District. The District shall attach such conditions to the permit, and well construction, repair, modification or abandonment shall be performed accordingly. An applicant who believes that a condition is unreasonable or is not necessary to protect the water resource or to assure that the permitted activity is consistent with the District's overall objectives, has the right to petition and be heard in an administrative hearing pursuant to Chapter 120, F.S., regarding imposition of the condition.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.109, 373.306, 373.308, 373.309, 373.313, F.S. History – Readopted 10-5-74, Formerly 16J-3.11(1) – (3), Amended 1-8-87, 7-1-90, 12-31-92, 7-2-98, 8-19-08.

#### **40D-3.310 Conditions for Transfer of Permits.**

(1) Permit Transfers from One Contractor to Another.

A well construction permit may be transferred from one licensed water well contractor to another if:

(a) Both contractors agree to the transfer;

(b) The owner or his agent agree to the transfer;

(c) The original contractor relinquishes the initial permit and forwards his or her copy of the initial permit to the District within ten days of requesting such action;

(d) The permit has not expired; and

(e) The new contractor obtains a valid permit for the well site, for which no additional fee shall be required.

(2) Permit Transfers from One Well to Another.

A well construction permit for a well which is not completed and becomes an “incomplete well” as defined in subsection 40D-3.021(17), F.A.C., may be used to construct a replacement well if:

(a) The incomplete well has been properly abandoned as described in Rule 40D-3.531, F.A.C., and a completion report on the abandonment submitted;

(b) The construction permit has not expired;

(c) The replacement well is in the same quarter section as the incomplete well; and

(d) No completion report has been submitted for the construction permit.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.308, 373.309, 373.342, F.S. History – New 12-31-92.

**40D-3.321 Duration of Permits.**

(1) Each permit shall be consecutively numbered, dated, and valid for a period of 90 days, unless the time limit is extended by the District pursuant to subsection (3) or (4), below.

(2) Construction, repair, modification or abandonment of a well shall not commence or continue after the expiration of a permit.

(3) One extension of an existing permit for a period not to exceed 90 days shall be granted by the District 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 permit issuance so that the proposed well will not adversely impact the water resource.

(4) Public water supply well permits shall be extended for a period of not more than one (1) year from the date of issuance, in increments of ninety (90) days per written request for permit extension, provided the requirements of subsection (3) have been met. Extensions pursuant to subsections (3) or (4) will be covered under the original permit fee, with no additional fee required.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.308, 373.309, 373.313, F.S. History – Readopted 10-5-74, Formerly 16J-3.08, Amended 7-1-90, 9-30-91, 12-31-92, 10-19-95.

**40D-3.341 Suspension, Revocation and Cancellation of Permits.**

(1) The Governing Board may suspend or revoke a permit, at any time after notice and hearing, based on one or more of the following grounds:

(a) Material misstatement or misrepresentation in the application for a permit;

(b) Failure to comply with the provisions set forth in the permit;

(c) Disregard or violation of any of these rules or Chapter 373, Part III, F.S.; or

(d) Material change of circumstances or conditions from those existing at the time such permit was issued.

(2) The District may administratively cancel a permit upon the request of the permittee or permittee's authorized agent, and confirmation by the District that no activity has taken place under the permit.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.306, 373.309, 373.313, F.S. History – Readopted 10-5-74, Formerly 16J-3.11(4), Amended 7-1-90, 7-2-98, 2-1-05.

**40D-3.411 Well Completion Report.**

(1) Well completion reports are required for the construction, repair, modification or abandonment of all wells. The District's receipt of a well completion report raises the rebuttable presumption that all work under the permit has been completed or has ceased.

(a) The water well contractor or any individual permittee shall submit to the District the form entitled "Well Completion Report", adopted by reference in Rule 40D-1.659, F.A.C., within 30 days of the expiration of the permit.

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

(c) The District shall require a record of the well construction at any time prior to the submittal of the completion report if any drilling problems are encountered during well construction. The District may request a record either orally or in writing. The water well contractor or individual permittee shall provide the record within seven days of receipt of the District's request.

(d) The record of the well construction shall include the depth of the well, the depth of the well casing, the amount of grout material used, and a description of the geologic material and any drilling problems encountered during the well construction.

(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, modification 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.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.308, 373.309, 373.313, F.S. History – Readopted 10-5-74, Amended 10-24-76, Formerly 16J-3.09, 16J-3.14, Amended 7-1-90, 9-30-91, 12-31-92, 10-19-95, 1-1-01, 2-26-07, 8-19-08.

#### **40D-3.451 Emergency Authorization.**

Specific Authority 373.044, 373.171, 373.309, 373.326, 373.342, F.S. Law Implemented 373.306, 373.308, 373.309, 373.313, 373.342. F.S. History – Readopted 10-5-74, Formerly 16J-3.12, Amended 7-1-90, 9-30-91, Transferred to 40D-1.1022.

#### **40D-3.461 Inspection.**

(1) The District shall inspect any water well it deems necessary to insure conformity with applicable standards. Duly authorized representatives of the District may, at reasonable times, enter upon and shall be given access to any premises for the purpose of such inspection. Such inspection may include, but need not be limited to, geophysical logging, water level measurements, water quality sampling, and other methods.

(2) If, upon the basis of an inspection, the District 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.

(3) If, upon the basis of an inspection, the District determines that any well is an abandoned or incomplete well as defined in this chapter, the property owner shall have the well abandoned in accordance with subsection 62-532.500(4) and Rule 40D-3.531, F.A.C.

(4) If, upon the basis of 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 40D-3.531, F.A.C.

(5) The permittee shall notify the District at least 24 hours in advance of:

(a) Grouting a public supply well,

(b) Plugging an abandoned well that is greater than two inches in diameter, or that is more than 20 feet in depth, or

(c) The construction of any well under a permit issued with special grouting conditions.

(6) For wells identified in subsection (5) above, a District representative must be on site to observe the grouting or plugging procedure, except for wells that are two inches or less in diameter, and wells that are 20 feet or less in depth. The District shall grant a variance to this requirement upon oral request at the time of the 24-hour notification by a contractor provided that:

(a) The contractor is currently in compliance with all other District Rules;

(b) The contractor has not violated any conditions of his license or any District rule within the past two years;

(c) The District has observed the grouting, plugging or abandonment of at least ten prior wells by the requesting contractor; and

(d) A District representative cannot be at the well site at the time of the grouting or plugging.

Specific Authority 373.044, 373.171, 373.309, 373.337, F.S. Law Implemented 373.308, 373.309, 373.319, F.S. History – Readopted 10-5-74, Amended 8-9-77, 4-27-80, 11-8-82, Formerly 16J-3.12, Amended 7-1-90, 9-30-91, 12-31-92, 2-10-03.

#### **40D-3.500 Construction Standards.**

Specific Authority 373.044, 373.113, 373.171, F.S. Law Implemented 373.309, F.S. History – Readopted 10-5-74, Amended 8-9-77, Formerly 16J-3.202, 40D-3.701, Amended 7-1-90, Repealed 12-31-92.

#### **40D-3.501 Variances.**

Specific Authority 373.044, 373.113, 373.171, F.S. Law Implemented 373.303, 373.308, 33.309, 373.313, 373.316, 373.326, F.S. History – New 7-1-90, Amended 9-30-91, 12-31-92, Transferred to 40D-1.1001.

#### **40D-3.502 Construction Methods.**

(1) Water wells, soil borings or foundation holes may be constructed by drilling, coring, boring, washing, jetting, driving, or digging, but must be so constructed, cased, cemented, plugged, capped, or sealed as to permanently prevent:

(a) The escape of water to waste, either at or above, the land surface, or from a subsurface zone of higher hydrostatic head to a zone of lower hydrostatic head, or

(b) The degradation of water by poor quality water or other substances from surface or underground sources.

(2) For wells constructed using the combination method of drilling a borehole and then driving the casing, the borehole shall be equal to or smaller in diameter than the inside diameter of the casing and shall be sealed by adding dry bentonite to the casing string at land surface and allowing that material to be carried down the outside of the casing as the casing is driven to completion. Dry bentonite shall be applied to maintain a grout seal around the casing. The first length of water bearing casing, excluding the attached drive shoe, shall not exceed 21 feet in length and must be driven into the ground before any additional borehole is constructed.

During construction of a well in a delineated area, as defined in Rule 62-524.200, F.A.C., or

a public supply well using the combination drilling method, the minimum acceptable grout seal shall be accomplished by undercutting or underreaming the last five feet of hole before sealing the casing. A minimum of one foot of such enlarged hole must be into the consolidated formation in which the casing is seated. The entire enlarged portion of the hole shall be filled with cement grout and then the casing shall be driven through the cement grout and seated into the enlarged portion of the consolidated formation. The top 20 feet of casing shall be sealed with no less than a 2-inch nominal thickness of cement grout. Except as described above, the use of a drilling tool, such as an eccentric bit or an underreamer bit, that is capable of drilling a hole larger than the inside diameter of the casing is prohibited when constructing a well by combination method.

(3) In the construction of a well, reasonable caution shall be taken to maintain the premises in sanitary condition and to minimize the entrance of contaminants into the water resource. Water and materials used in construction shall be reasonably free of contamination. 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 to construct the well. For purposes of this rule, a known source or known area of contamination would be any water supply or well within the area specified by Chapter 62-524, F.A.C.

(4) Monitor wells for underground storage systems shall be constructed in accordance with Chapter 62-761, F.A.C., and this Chapter.

(5) Injection wells shall be constructed in accordance with Chapter 62-528, F.A.C., and this Chapter.

(6) Wells permitted under Chapter 62-524, F.A.C., shall be constructed, repaired, modified or abandoned in a manner that meets the special criteria developed for each designated area.

(7) Wells being constructed, repaired, modified or abandoned as part of a water use permit, issued under Chapter 40D-2, F.A.C., must meet all special well construction conditions specified by that permit. When special well construction conditions have been specified on a water use permit, these conditions shall be attached to applicable well construction permits.

(8) The District may designate special well construction standards areas by emergency rule to prevent transport of surface contaminants to ground water 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 developed in cooperation with other state agencies, local jurisdictions, and the regulated public, in accordance with Chapter 120, F.S., provisions for emergency rulemaking.

Specific Authority 373.044, 373.171, 373.309, 373.337, F.S. Law Implemented 373.306, 373.308, 373.309, F.S. History – New 7-1-90, Amended 9-30-91, 12-31-92, 2-19-04.

#### **40D-3.505 Location.**

(1) 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) Minimum spacing between wells and sanitary hazards, including but not limited to, septic tanks, drain fields, and ground water contamination areas, shall be as specified by Section 381.0065, F.S., and subsection 62-532.400(7), F.A.C. 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 through ingestion, inhalation, or dermal absorption.

(3) The District will deny a permit application to construct a water well if use of the well would increase the potential for harm to public health, safety and welfare, or if the proposed well would degrade the water quality of the aquifer by causing pollutants to spread.

(4) A variance from the above specified restrictions may be obtained from the District as provided in Rule 40D-1.1001, F.A.C. The review of a variance request shall include an evaluation of the following criteria, as applicable: surface and ground water gradients, well location, withdrawal amount, well depth (including depth of casing), natural barriers, impermeable geological strata, water quality sampling, compliance with the requirements of Chapter 62-524, F.A.C., other grouting or protective well construction measures, and the use of treatment systems acceptable to the Department or Department of Health.

(5) Nothing in this section relieves an applicant of the responsibility to comply with the requirements of any other regulatory agency with jurisdiction over the applicant's activities.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.306, 373.308, 373.309, F.S. History – New 7-1-90, Amended 12-31-92, 7-2-98, 5-4-05.

#### **40D-3.507 Casing and Liner Pipe Standards.**

(1) Well casing installed by driving shall not have less than the dimensions and weights specified in subsection 62-532.500(1), F.A.C.

(2) Well casing or liner pipe set into place without driving shall not have less than the dimensions and weights specified by subsection 62-532.500(1), F.A.C.

(3) Telescoped casings may be used provided that casings of different diameters are joined with an appropriate overlap and any annular space including the overlapped section shall be grouted in accordance with subparagraph 62-532.500(2)(f)(4), F.A.C. To prevent interchanges of water when multiple aquifers or zones are penetrated, grout shall extend from the bottom of the casing to the top of the innermost casing. The use of lead packers for this purpose is prohibited.

(a) A minimum overlap of ten feet and one casing centralizer in the overlapping section shall be required for non-public supply wells which are less than six inches in diameter.

(b) A minimum overlap of 20 feet and two casing centralizers in the overlapping section shall be required for public supply wells and all wells six inches or more in diameter.

(4) When any part of a well casing with an outside diameter of four inches or larger is intended to be installed in a bore hole which is larger in diameter than the inside diameter of the casing, the annular space shall be filled from bottom to top with not less than a nominal two inch thickness of neat cement grout. For those well casings with an outside diameter of less than four inches, the minimum grout thickness shall be a nominal one inch.

(5) Liners may be used in a well provided that cross-connection of aquifers of significantly differing water quality does not occur. Liners installed within a casing shall meet the grouting and sealing requirements of subsection (4) above. Liners installed for the purpose of sealing off casing material in an open borehole are not required to be grouted. A liner installed for the purpose of repairing a well may be overlapped into an existing casing provided it is joined with an appropriate overlap and a watertight seal and provided that loss of artesian pressure or cross connection of aquifers of significantly differing water quality does not occur.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.306, 373.308, 373.309, F.S. History – New 7-1-90, Amended 9-30-91, 12-31-92, 2-19-04.

**40D-3.517 Grouting and Sealing.**

Wells shall be grouted and sealed in accordance with paragraph 62-532.500(2)(f), F.A.C., and this section, 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 artesian 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(2)(f), F.A.C., and this section. The use of lead packers for this purpose is prohibited.

(2) Grouting and sealing of water wells shall be accomplished in the following manner using neat cement or bentonite grouts unless otherwise granted a variance by the District. The slurry grout mixture shall be introduced into the annulus space from bottom to top; the casing seat shall be clean allowing the casing to set at the total depth bored in a hole reasonably free of drill cuttings; the manufacturer's mixing instructions shall be followed and any polymers added to bentonite slurry mixes must be approved by the District prior to use.

**(a) Grouting and Sealing Using Neat Cement Grout.**

1. Composition of neat cement grout shall consist of 5.2 to 5.5 gallons of water per cubic foot or 94-pound 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 eight percent by weight.

2. The minimum set time for grouting of casing using neat cement grout before drilling operations may continue is 12 hours. The minimum set time for grouting of casing with Portland cement and two percent calcium chloride by weight as an accelerator will vary with depth and are listed in Table 1 below.

TABLE 1  
INITIAL SET TIMES FOR SPECIFIED DEPTH RANGES WHEN 2% CALCIUM  
CHLORIDE IS MIXED BY WEIGHT WITH PORTLAND CEMENT

Depth (in feet)	Set Time (in hours)
0-200	4
201-400	3.5
401-600	3
601-800	2
801 & greater	1

**(b) Grouting and Sealing Using Bentonite Grouts.**

1. A Bentonite grout shall consist of a high solid sodium montmorillonite. The grout shall yield solids ranging from 20 to 30 percent, with a minimum density equal to or greater than 9.4 pounds per gallon, and a permeability of approximately  $1 \times 10^{-7}$  centimeters per second or less.

2. Bentonite slurry grout used for sealing purposes is restricted to wells with an outside diameter of five inches or less in diameter nominal size. A formation packer or a five foot neat cement plug must be installed at the casing seat and an upper ten feet of neat cement is required to prevent deterioration of or damage to the bentonite seal.

3. Bentonite grout used for abandonment purposes is not restricted by well size but cannot be used to abandon a dry well 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. At a minimum, an upper ten feet of neat cement is required to prevent deterioration of or damage to the bentonite seal.

4. Only Bentonite grout approved by the National Sanitation Foundation is allowed on public supply wells or in any identified contamination areas. If artesian flow conditions occur, a neat cement plug shall be installed to stop the flow prior to the use of Bentonite grout. Use of Bentonite grout shall not be allowed in contaminated wells when the contaminants will prevent an adequate seal, or in wells with water quality concentrations exceeding 10,000 milligrams per liter total dissolved solids.

(3) For wells constructed by driving well casing, dry bentonite with an average mesh size 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.

(4) Soil boring and foundation holes, as defined in subsection 40D-3.021(27), F.A.C., drilled into limestone or a similar carbonate material shall be sealed with an appropriate cement or bentonite grout mixture to prevent any uncontrolled movement of water between aquifers and to prevent surface contaminants from entering the hole. Other soil boring and foundation holes shall also be sealed unless they are in an unconsolidated material that will collapse upon completion of the drilling activity.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.306, 373.308, 373.309, F.S. History – New 7-1-90, Amended 9-30-91, 12-31-92.

#### **40D-3.521 Well Seals.**

(1) Temporary Well Seals. Whenever there is a temporary interruption in work on the well during construction, repair, modification or abandonment, the well opening shall be sealed with a watertight cover. Except in areas designated by the District, any well in which pumping equipment is installed seasonally or periodically shall, whenever pumping equipment is not installed, be capped with a watertight cap or valve. The top of the well casing shall at a minimum extend one foot above land surface and, if practical, one foot above the 100-year flood elevation.

(2) Permanent Well Seals. Wells shall be properly sealed to prevent the movement of contaminants and surface water into the well. The top of the well casing shall at a minimum extend one foot above land surface and, if practical, one foot above the 100-year flood elevation, for all wells except those outlined in Chapter 62-761, F.A.C. A flush mounted protective cover can be installed as an alternative to the one foot casing extension on surficial screened wells that are two inches or less in diameter. The flush mounted protective cover shall be constructed of one continuous piece of material resistant to deterioration and rusting. The flush mounted protective cover shall be fitted with a lid for easy access to the well point and a minimum dimension of 15 inches in length by ten inches in width by 13 inches in depth. When a flush mounted protective cover is used as an alternative in accordance with this section, the pipe connecting the well point must be continuous to the pump, and the cover must allow adequate drainage to prevent ponding or mounding of water inside the box.

(3) Pumping equipment and any necessary pipe or electrical connections shall be installed to prevent inadvertent introduction of contaminants into the well, and if installed within the casing, shall be installed through a watertight seal.

(4) The finished height of public supply wells shall be at a minimum 18 inches above finished grade, and, if practical, one foot above the 100-year flood elevation. The upper end of the well casing shall include a watertight seal with any vent located two feet above finished grade.

Specific Authority 373.044, 373.171, 373.309, 373.337, F.S. Law Implemented 373.306, 373.308, 373.309, F.S History – New 7-1-90, Amended 12-31-92, 2-8-99.

#### **40D-3.525 Explosives.**

The use of explosives in well construction or development is prohibited unless it can be shown their use will not cause degradation of the water resource and will not endanger the health, safety or welfare of the people. The use of explosives must be specifically approved by the District.

Specific Authority 373.044, 373.309, 373.317, 373.337, F.S. Law Implemented 373.306, 373.308, 373.309, F.S. History – New 7-1-90.

#### **40D-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.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.206, 373.306, 373.308, 373.309, F.S History – New 7-1-90.

#### **40D-3.531 Abandoned Well Plugging.**

(1) The form entitled "State of Florida Permit Application to Construct, Repair, Modify or Abandon a Well", adopted by reference in Rule 40D-1.659, F.A.C., shall be submitted to the District prior to the abandonment of any well, including an incomplete well.

(2) All abandoned wells as defined by subsection 373.303(1), F.S. and subsection 40D-3.021(1), F.A.C., abandoned artesian wells as defined by subsection 373.203(1), F.S., and incomplete wells as defined by subsection 40D-3.021(17), F.A.C., shall be plugged in accordance with subsection (3) of this rule and Rule 40D-3.517, F.A.C., unless they can be repaired in accordance with this chapter.

(3) All abandoned and incomplete wells shall be plugged by filling them from bottom to top with grout. The work shall be performed by a licensed water well contractor except for wells exempted under subsection 40D-3.051(1) and wells permitted to be constructed or abandoned pursuant to paragraph 40D-3.301(1)(a), F.A.C.

(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 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) The contractor must notify the District at least 24 hours in advance of a well abandonment. A District representative must be on site to observe the abandonment procedure unless the following criteria are met and the District authorizes the contractor to proceed without a District representative on site:

- (a) The contractor is currently in compliance with all other District rules;
- (b) The contractor has not violated any conditions of his license or any District rule within the past two years;
- (c) The District has observed the abandonment of at least ten prior wells by the requesting contractor; and
- (d) A District representative cannot be at the well site at the time of abandonment.

(5) The "Well Grouting/Abandonment Form", adopted by reference in Rule 40D-1.659, F.A.C., will be used to document the well abandonment.

Specific Authority 373.044, 373.113, 373.171, 373.309, 373.337, F.S. Law Implemented 373.206, 373.207, 373.209, 373.306, 373.308, 373.309, F.S. History – New 7-1-90, Amended 9-30-91, 12-31-92, 7-2-98, 9-26-02, 2-26-07, 8-19-08.

#### **40D-3.600 Special Well Construction Standards.**

To prevent impacts to water wells from periodic high water use, in addition to complying with the other construction requirements of this chapter, the construction of potable water wells in the area of the Dover community shall also comply with the requirements set forth below. (1) Potable water wells constructed in the Dover area north of Interstate 4 (North Dover), as identified in subsection (2) below, shall be cased to a minimum depth of 105 feet below land surface.

(2) The area of North Dover is as follows:

Township 28, Range 20, Sections 12 through 14, 23, 24 and those portions of 25 and 26 lying north of Interstate 4;

Township 28, Range 21, Sections 1 through 19 and those portions of 20 through 24 and 30 lying north of Interstate 4; and

Township 28, Range 22, Sections 2 through 10, 15 through 18 and that portion of 20 lying north of Interstate 4.

(3) Potable water wells constructed in the Dover area south of Interstate 4 (South Dover), as identified in subsection (4) below, shall be cased to a minimum depth of 147 feet below land surface.

(4) The area of South Dover is as follows:

Township 28, Range 20, those portions of Sections 25 and 26 lying south of Interstate 4 and Sections 35 and 36;

Township 28, Range 21, those portions of Sections 20 through 24 and 30 lying south of Interstate 4 and Sections 25 through 29 and 31 through 36;

Township 28, Range 22, that portion of Section 20 lying south of Interstate 4;

Township 29, Range 20, Sections 1, 2, 11 through 13 and 24;

Township 29, Range 21, Sections 1 through 29, 33 and 34; and

Township 29, Range 22, Sections 4 through 9 and 15 through 21.

Specific Authority 373.044, 373.113, 373.171, 373.308, F.S. Law Implemented 373.308, 373.309, F.S. New 4-9-02.

**40D-3.701 Construction Standards.**

Specific Authority 373.044, 373.149, 373.171, F.S. Law Implemented 373.309, 373.339, F.S.  
History – Readopted 10-5-74, Amended 8-9-77, Formerly 16J-3.20, Transferred to 40D-3.500,  
F.A.C.