

SARASOTA COUNTY HEALTH DEPARTMENT
OFFICE OF ENVIRONMENTAL HEALTH SERVICES

Well Drilling Policy and Procedures Manual
As Amended and Filed October 14, 2008

Version
October 14, 2008

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Scope and Authority

It is the goal of the Sarasota County Health Department (Department) to protect the groundwater resources of Sarasota County from bacteriological and chemical contamination, thus protecting the health, safety, and welfare of the residents and visitors. This policy manual is intended to assist both the drilling community and the Department in carrying out this goal. It is our intent that the following objectives will be achieved with this manual:

- Better communication between the regulatory and drilling communities by clarifying unclear or conflicting rules.
- More efficient permitting process by putting the most common and necessary information in one document.

Southwest Florida Water Management District (SWFWMD) / Sarasota County contract authorizes the department to enforce Chapters 62-532 and 40D-3, F.A.C. This policy manual is authorized and adopted by Chapter 54, Article XIII of the Sarasota County Code of Ordinances (Well Ordinance).

Definitions

Well Types

Augmentation Well: A well that provides non-potable water to supplement a separate source of non-potable water for irrigation purposes.

DEP Public Supply Well: A well that serves a water system serving 25 or more individuals daily or 15 or more service connections (Regulated under chapters 52-550, 62-555, 62-560, and 62-524, F.A.C).

Domestic Well: *See* Private Well

Geothermal Well: *See* Heat Exchange Well

Heat Exchange Well: A well used to draw from, and/or return to the aquifer water; used for heating or cooling.

Industrial Supply Well: A well that provides non-potable water for industrial or commercial purposes.

Injection Well: A well into which fluids are being or will be injected, by gravity flow or under pressure.

Irrigation Well: A well that provides non-potable water for irrigation.

Limited Use Public Supply Well: A well serving a water system regulated under Chapter 64E-8, F.A.C. that serves less than 25 individuals daily and fewer than 15 service connections and that provides water to:

- 1) one or more non-residential establishments, or
- 2) five or more private residences, or
- 3) two or more rental residences.

Monitoring Well: A well used primarily to monitor hydrologic parameters such as water levels or water quality.

Multifamily Well: A well that serves a water system providing piped water to three or four residences, one of which may be a rental residence.

Piezometer: A well constructed for the purpose of determining groundwater pressure.

Private Well: A well that serves a water system providing piped water to one or two residences, one of which may be a rental residence. The term “domestic well” may also be used interchangeably.

Sandpoint Well: A well constructed by driving a screened drive point into a shallow sand and gravel aquifer.

Test Well: A well whose purpose is obtaining exploratory or observational data pursuant to permanent production or observational purposes.

Thermal Exchange Process Well: *See* Heat Exchange Well

Note: In cases where a well is intended to serve multiple functions, the well shall be considered of a type where the most stringent standards apply.

Other Definitions

Backflow: The undesirable reversal of flow of a liquid, gas, or other substance in a water distribution piping system as a result of a cross-connection.

Backflow Prevention Device (BFP): An assembly, device, or method that prohibits the backflow of water.

Air Gap: The unobstructed vertical distance through free atmosphere between the lowest effective opening from any pipe or faucet conveying water or waste to a tank, plumbing fixture, receptor or other assembly and the flood level rim of the receptacle. These vertical, physical separations must be at least twice the effective opening of the water supply outlet, and never less than 1 inch above the receiving vessel flood rim.

Double Check Valve Assembly: A complete assembly consisting of two internally loaded, independently operating check valves.

Reduced-Pressure Principle Backflow Prevention Assembly (RPZ): A complete assembly consisting of a mechanical, independently acting, hydraulically dependent relief valve, located between two independently operating, internally loaded check valves.

Cross-connection: A connection or a potential connection between any part of a water system and any other environment containing other substances in a manner that, under any circumstances, would allow such substances to enter the water system.

Department: The Sarasota County Health Department

Permanent Structure: A structure that is fixed in place and is not readily portable or movable.

Wetlands: Those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils.

Permit Application Requirements

A permit is required for all wells, elevator shafts or soil boring/geo-probe sampling greater than 25 feet in depth. Permits must be obtained by licensed well drilling contractors (exception: permits for 2 inch sandpoint irrigation wells less than 25 feet in depth may be obtained by the property owner).

Permit fees are non-refundable.

—Application Checklist—

The following table may be used as a checklist to assist applicants:

| | |
|-----------------------|--|
| 40D-3.101 (1)* | <p>Application form completely filled out _____</p> <p>Sarasota County Property ID (PID)</p> <p><i>Either of the websites below can be used to locate the PID.</i></p> <p style="padding-left: 40px;">http://www.sarasotaproperty.net _____</p> <p style="padding-left: 40px;">http://maps.scgov.net/website/propertylocate/viewer.htm _____</p> |
| 54-385(a)(2)** | <p>General location map (on the application form) _____</p> <p><i>A map that shows the approximate location of the property where the proposed well is to be drilled. Generally, this map should include the nearest cross-streets or permanent landmarks to allow ease of finding the location. A map created by computer mapping software (i.e. MapQuest, MS Streets and Trips) may be substituted for the locator map.</i></p> <p><i>Electronic applications ONLY: A brief verbal description that should allow ease of finding the location.</i></p> |
| 54-385(a)(2)** | <p>Site plan (separate attachment)</p> <p><i>A detailed site sketch that should allow for locating the well on the property reflecting conditions in place at the time the well is drilled. This site plan is required even for electronic permit applications. It may take the form of:</i></p> <p style="padding-left: 40px;">Minimum 8 ½" x 11" site sketch showing the location of the proposed well in relation to and the approximate distance from nearby permanent fixtures (buildings, lot corners, fire hydrants, etc). This map must also show the proposed setbacks to any potential contamination sources in the immediate area. This may be required to include adjoining properties. _____</p> |

A current engineered site plan may be substituted, provided that the well location is shown and it otherwise meets the criteria set out for the hand-drawn site sketch above.

DEP public supply well applications must contain a scaled site plan prepared and sealed by a professional engineer or professional hydrologist registered in the State of Florida showing the well location and all appropriate setbacks.

54-385(a)(7)**

Should any permit or site conditions change prior to construction or completion of the well, the department must be notified and the permit must be amended.

54-385(b)**

Setbacks

See setbacks table, pp 21-24.

54-385(a)(4)e**

Other

Supporting documentation that may be requested or required by the Department, including but not limited to:

Signed Most Impacted Area (MIA) form

Copies of easements and authorization from the easement holder to drill.

Well / water sharing agreements

Shoreline / wetland buffers and authorization to drill from the appropriate regulatory agency.

Variances

Consumptive Use or Water Use Permit

Monitor well authorization / justification

* Florida Administrative Code

** Well Ordinance

Additional Application / Construction Standards (By Well Type)

—Augmentation Wells—

Augmentation wells are permitted separately by the Department due to special requirements. In addition to the standards or requirements listed under irrigation wells, augmentation wells must have a Reduced Pressure Zone Backflow Preventor (RPZ) installed at the wellhead or discharge through an air gap.

When filling out the permit application for these wells, please write “Augmentation” on the “List Other” (line 7).

Note: Wells that are designed to augment ponds or water bodies for aesthetic purposes alone shall not be approved in Sarasota County.

—Elevator Shafts—

A permit is required for elevator shafts. These cannot be obtained through the SWFWMD electronic permit process.

There are no setbacks, but they must be double-cased with a two (2) inch annular space grouted with neat cement. Additionally, a 5 feet plug of neat cement grout must be installed at the bottom of the shaft.

—Heat Exchange Wells—

Thermal exchange process wells as described in chapter 62-528.300(1)(e)1, F.A.C. also require a permit from the Department. These are systems that are used for heating / cooling purposes where there is no change in water volume or chemical composition.

These systems fall into two types:

1. A system where fluid is circulated through a continuous section of buried pipe such that the earth is utilized as a thermal exchange medium, but no fluid is either extracted

from or injected into any underground formation. This type of well does not receive a DEP permit. Multiple wells may be submitted on the same permit application.

2. A system composed of a supply well and an injection well where water is withdrawn, used for thermal exchange, and then returned to the same permeable zone from which it was removed.

Multiple well systems must have both a supply well and injection well. Both wells must be similar in depth, casing depth, and constructed of the same materials. A single permit may be submitted for both wells.

Heat exchange well permits must submit an approved copy of the DEP permit prior to well construction permit approval.

Wells exempted from the DEP permitting process under chapter 62-528.630(2) must submit the following, as appropriate:

- Systems serving multi-family or business establishments require an approved copy of a DEP *General Permit Form for Closed-Loop Air Conditioning Return Flow and Swimming Pool Drainage Class V Injection Wells* (form 62-528.900 (7)) submitted to the Department prior to well construction permit authorization.
- Systems serving single family residential properties must submit an approved copy of a DEP *Inventory Form for Single-Family Close-Loop Air Conditioning Return Flow and Swimming Pool Drainage Class V Injection Wells* (form 62-528.900 (9)) submitted to the Department prior to well construction permit authorization.

When filling out the permit application for these wells, please write “Heat Pump (Supply/Return)” on the “List Other” (line 7).

—Industrial Supply Wells—

Industrial supply wells are required to draw water from the lowest-quality aquifer that is capable of producing the quality and quantity of water required for its intended purpose. The minimum depth requirement will be determined on a case-by-case basis. If the casing depth of the well is less than 300 ft, a justification letter from SWFWMD or a state-licensed Professional Hydrologist or Professional Geologist familiar with the local conditions shall be required prior to permit approval.

When filling out the permit application for these wells, please write “Industrial” on the “List Other” (line 7).

—Irrigation Wells—

If the well is designed to pump 50 gpm or greater, then the well must be designed to draw water from the lowest quality aquifer required for the property’s need. If the casing depth of the well is less than 300 feet, a justification letter from SWFWMD shall be required prior to permit approval.

Commercial irrigation wells located in the Most Impacted Area also require a signed MIA form prior to permit approval.

—Monitor Wells / Piezometers—

Up to 6 monitoring wells or piezometers may be placed on one permit. Note, however, that each well is still charged a separate permit fee. There are no setback requirements for these types of wells.

Monitor wells that have a depth greater than 25 feet or will penetrate a confining layer must have an approved monitoring plan or justification letter from the appropriate regulatory agency prior to permit approval.

No permit is required for piezometers if all of the following conditions are met:

1. Less than or equal to 20 feet in depth.
2. Less than or equal to 2 inches in diameter.
3. Will be in the ground less than 10 days.

Clarification: Although section 54-385(a)(4)d.1 of the Well Ordinance states that the maximum depth for a piezometer installed without a permit is 25 feet,, Chapter 40D-3.051(1)(c), F.A.C. specifies a maximum depth of 20 feet.. Therefore, the more stringent requirement applies.

—Private (Domestic) Wells—

No additional requirements as of this writing.

—Public Supply Wells—

All public supply wells must be designed and constructed to meet the following criteria:

- The well casing must be at least 18 inches above grade.
- Discharge piping must include a conveniently located, downward-facing, non-threaded sample tap located a minimum of 12 inches above grade, and upstream of any treatment or chemical injection points.
- A concrete apron at least 6 feet by 6 feet, and at least 4 inches thick must be centered around the well. The well apron must be sloped to drain away from the well.

- The well must be equipped with a sealable opening that will allow introduction of disinfectant and measurement of static water level or drawdown.

Clarification: Section 62-532.500(3)(b)4, F.A.C. specifies a 12 inch casing height above grade. However, 40D-3.521(4) mandates an 18 inch height. Therefore, the more stringent rule applies.

Minimum grouting requirements for all public supply wells are as follows:

- Rotary construction: 2 inch annular space between casing and borehole sealed with neat cement grout.
- Cable tool construction: The last 5 feet of the borehole must be under-reamed or undercut and filled with neat cement grout prior to seating the casing. Additionally, the upper 20 feet of casing must be sealed by a minimum of 2 inches of neat cement grout.

DEP Public Supply Wells:

In addition to a completed application form, DEP public supply well applications must contain the following:

- A scaled site plan prepared, signed and sealed by a registered professional engineer, professional geologist or professional hydrologist. *Note: existing projects may substitute existing site plans or legal plats showing sufficient detail as determined by the Department.*
- A completed *Public Supply Well Information and Classification Form* submitted with the application.

Clarification: Section 40D-3.101(2), (3), F.A.C., indicates that Limited Use Public Supply wells must also submit an engineered site plan. However, SWFWMD has determined that this section only applies to DEP public supply wells. Limited Use Public Supply wells must still submit a scaled site plan that meets the requirements listed in 64E-8.002(1)(a), F.A.C.

DEP public supply wells must have a well vent installed terminating at least 24 inches above finished grade (or 12 inches above the 100 year flood elevation, whichever is higher).

Exceptions to the well vent requirement:

- The well pump is a packer-type jet pump, or
- The well casing also serves as the pump suction piping, or
- The well is a flowing artesian well

A written request for exemption, with appropriate justification, by the owner of the Public Water System will be considered on a case-by-case basis by Department Public Water System regulatory staff.

Clarification: 62-555.320(8)(c), F.A.C. states that well vents must be at least 12 inches above the 100-year flood elevation. 40D-3.521(4), F.A.C. specifies that any well vent must be 2 feet above finished grade. Therefore, the most stringent requirement shall apply, dependant upon the 100-year flood elevation. Pump replacement in existing wells may trigger the well vent requirements in 62-555.320, but must only meet the standards within that code. Such retrofits shall be enforced by Department Public Water System regulatory staff.

Limited Use Public Supply Wells:

Per 64E-9.004(1), F.A.C., public swimming pools (as defined in Chapter 514.011(2), F.S.) must be fed by an approved potable water system. Therefore, any well drilled with the intent to provide water to public swimming pools shall be drilled as a limited use public supply well.

—Sandpoint Wells—

Sandpoint wells are unusual in being one of the few well types where an owner may both pull the permit and construct the well for his or her own use, subject to the following limitations:

1. A property owner may permit and construct *one* well for irrigation purposes only.
2. The diameter of the well must be 2 inches or less.
3. The depth of the well must be 25 feet or less.

Clarification: Section 54-385(a)(4)d.2 of the Well Ordinance states that up to 3 sandpoint irrigation wells may be on a single permit. However, Chapter 373.326, F.S. has been interpreted by SWFWMD to mean that a property owner may only pull a permit for a single sandpoint well. Licensed well drillers may still place up to three wells on a permit provided that they are on the same property.

A licensed well driller must still apply for the permit and construct a sandpoint well that is deeper than 25 feet.

—Soil Borings—

Soil borings that are deeper than 25 feet require a permit through the department, and will be permitted as pluggings. Up to *six* soil borings of similar depth and diameter may be put on a single permit.

Clarification: Authorization to permit soil borings greater than 25 feet in depth is given in Section 54-385(a)(1) of the Well Ordinance. However, there is no statement regarding the number of soil borings that may be on a single permit. It therefore shall be the policy of the Department that, for the purposes of assessing fees and allowing multiple soil borings on one permit, that they shall be considered the equivalent of monitor well pluggings.

—Test Wells—

Test wells must be drilled to the appropriate production well standards, including setbacks and materials, for the potential use.

Additional Application / Construction Standards (General)

—Drilling Fluids—

Grout must be mixed in a container that is clean and free of dirt and foreign material. If mixing in a dug hole, the hole must be lined with plastic to prevent mixing of dirt and other debris with the drilling fluids.

In order to prevent contamination of the aquifer and to ensure proper performance of concrete grout, bentonite, etc; clean, fresh water should be used to mix all drilling fluids. Under no circumstances shall a well be approved if the water used to mix grout or clay was taken from a surface water source unless previously and explicitly approved by the department.

Spent drilling fluids must be disposed of in a manner consistent with local pollution control rules and policies.

—Plugging Permits—

Pluggings must meet the criteria set forth in Section 54-385(j), County Code of Ordinances. Plugging Inspection requirements are detailed on p 19.

Bentonite:

Bentonite used in well pluggings must meet the criteria set forth in Chapter 62-532.200(4), F.A.C. If the bentonite bridges during the plugging procedure, the bridge must be cleared.

Neat Cement Grout:

Neat cement grout must meet the criteria in 40D-3.021(21), F.A.C. Cement is required under the following conditions:

- The well is obstructed.
- The chloride concentration of the well is greater than 2,000 ppm.
- The TDS of the well is greater than 10,000 ppm.
- To top off the well from the static water level or 10 feet to the surface, whichever is greater.
- The well has caved in due to sand.
- Otherwise stipulated on the permit.

If neat cement is used from below the casing, the grout must be pumped from bottom to top. When cement is used inside the casing, or when topping off a bentonite-plugged well, it may be hand-fed by gravity using a tremie.

Clarification: Chapter 62-532.500(4), F.A.C. specifies a minimum 1foot cap of neat cement grout for wells plugged with bentonite. However, 40D-3.517(2)(b)3 specifies a minimum of 10 feet. In this case, the most stringent Rule 40D-3 applies.

Using neat cement is not generally recommended by the Department to plug a well that is in close proximity to another, as cement may be drawn into the functioning well. In situations where using cement is unavoidable, the driller should make a good-faith attempt to contact and notify nearby property owners / residents and recommend that they do not use their wells for 8-12 hours following the plugging.

Special Circumstances—Double-cased Wells:

Prior to plugging, the proper grouting of the annular space between inner and outer casings must be verified. If there is an acceptable grouting inspection report in the file, it will be assumed to be properly grouted. If not, the area around the well must be excavated to 3-4 feet and the outer casing cut open in order to determine if the entire annular space has been properly sealed. If it cannot be determined whether the annular space has been properly grouted, the driller must notify the Department. Department personnel will make a site visit to determine what, if any, plugging stipulations may be required.

Special Circumstances—Non-Movable Obstructions:

Obstructions must be cleared from wells prior to plugging. If there is an obstruction that cannot be cleared, the driller must call the Department and inform them as soon as possible so that a representative may witness a reasonable and good-faith effort using appropriate equipment capable of removing the obstruction or driving it to the bottom of the borehole.

If the inspector is satisfied that the obstruction cannot be removed or forced to the bottom of the borehole, the Department may allow the plugging to proceed with or without stipulations. Common situations and resolutions may include, but not be limited to:

- If the obstruction is within the casing *and* the well takes water, plugging may commence using neat cement grout.
- If the obstruction is below the casing *and* the open borehole does not pass through multiple aquifers, plugging may commence. Deep wells or wells where the total depth can not be determined may require a SWFWMD variance or waiver.

Special Circumstances—Sand Cave-in:

Prior to plugging, a well that has caved in due to sand must be jetted out using water or bentonite slurry. In such cases, cement grout must be used to plug the well from bottom to top.

Special Circumstances—Sandpoint / Monitor Wells less than 25 feet:

Sandpoint wells 25 feet or less in depth and 2 inches or less in diameter may be pulled from the ground. A representative from the Department is still required to witness the abandonment and verify that the borehole has properly collapsed. If the borehole has not caved in or the casing has broken off underground, the hole must be filled with neat cement grout.

Special Circumstances—Voids/Caverns:

In situations where a well with a known void must be plugged, the driller must request a SWFWMD variance or waiver to use sand or gravel to bridge the cavernous zone and prevent loss of grout to the formation. Under no circumstances may gravel or sand be used unless approved by the Department.

—Redrills and Replacement Permits—

Clarification: Section 54-385(i)(1) of the Well Ordinance states that a replacement well shall be permitted regardless of the availability of central water. Please be aware that some municipalities have mandatory connection ordinances which may affect a redrill application.

Location: In selecting the location for a replacement potable well, the driller shall attempt to meet all applicable setbacks as stated in Chapters 62-532, F.A.C., 40D-3, F.A.C., and the Sarasota County Well Ordinance. However, if current setbacks cannot be achieved, a variance is required per 64E-8.009, F.A.C.

If the distance from the well to any OSTDS is between 50 feet and 75 feet, and the well meets the minimum required setback from a chemically treated concrete pad, an in-house variance may be granted by the Department based on the criteria in 64E-8.009(2), F.A.C. and this manual. The state-supplied variance form shall be used.

If the distance from the well to any OSTDS is less than 50 feet or the well cannot meet the minimum setback requirements from a chemically treated concrete pad, a variance package must be submitted to the Department of Health (DOH) Bureau of Water Programs for consideration.

Existing well: If the replaced well is still existing, then it must either be plugged or approved for use as an irrigation well. A well may be approved for irrigation purposes provided that it meets all of the following criteria:

1. All required chemical analyses from section 54-385(h), Sarasota County Well Ordinance must be performed on the existing well by a Department-approved laboratory and acceptable results submitted to the Department within 30 days of replacement well completion.
2. The existing well casing must remain at or be extended to 12 inches above finished grade. (Note: a repair permit may be required).

3. The existing well and any irrigation plumbing must be physically disconnected from the domestic plumbing. Verification must be provided to the Department upon request.
4. The existing well must be functioning and capable of producing water using either an electrically interlocked pump system, an operating valve if the well is flowing, or a hand pump approved by the Department. (See Appendix A-5 for general technical specifications and diagrams.)

If the existing well does not or can not meet all of the above criteria, then it must be plugged within 30 days of new well completion. A plugging permit will be required.

—Repair Permits—

Repair permits are required for any procedure that alters or replaces any part of the well that is or will be below ground. This includes, but is not limited to:

- Replacing or extending casing downward
- Adding a liner to a casing or borehole
- Deepening the existing borehole for open-hole depth but not to interchange aquifers
- Plugging a portion of the borehole

The materials used to bring casing above grade must be of an approved casing material. All well casings shall conform to one of the following standards as described in Chapter 62-532 Florida Administrative Code 62-532(1)(a) Water Well Construction Standards: American Society for Testing and Materials (ASTM) A53/A53M.99b, A135-01, A252-98, A589-96, or American Petroleum Institute (API) 5L-2000. It must be a food grade material and installed in a water proof, sanitary manner. Examples are: chemically bonded couplings, threaded couplings or welded couplings. Other examples exist. Once the joint is completed, the annular space surrounding the joint must be filled with neat cement grout.

All procedures that open the well to the atmosphere, chlorinating the well and having a bacteriological sample tested by a state-certified lab is recommended.

—Variances / Waivers—

In general, all requests for variance or waiver from any rule enforced by the Department must be in writing. General rules and procedures for variances can be found in Section 120.542, F.S.

- Requests for variance from the requirements of Chapters 62-532 and 40D-3, F.A.C. shall be handled in accordance with Section 40D-1.1001, F.A.C.

Exceptions: Variances from setback requirements for private, multi-family, or limited use public supply wells are handled in accordance with Section 64E-8.009, F.A.C. Setback waivers for DEP public supply wells will be handled in accordance with Section 62-555.312(6), F.A.C. and this manual.

- Requests for variances from the requirements of the Sarasota County Well Ordinance are to be handled in accordance with Section 54-387, Sarasota County Code.
- Requests for waivers from rules or policy where there is no requirement for a formal variance will be handled on a case-by case basis.

At minimum, requests for variance or waiver shall consider the following:

1. The level at which strict enforcement of the rule will result in substantial hardship to the applicant or will violate the principles of fairness as defined in Section 120.542(2), F.S.
2. The level at which granting of the waiver or variance, with or without appropriate stipulations will still meet the purpose and intent of the policy, rule, or underlying statute.
3. The availability of a reasonable alternative location, material, or technique that will meet all appropriate rules.

Note: in general, situations caused by malicious actions by the applicant / agent, or resulting from an error that should reasonably have been avoided by the applicant / agent are not considered substantial hardships.

It shall be Department policy to witness the start of construction of wells that have been granted variances to setback regulations in order to verify that the location of the well is in the proper place.

If the well has not yet been drilled, variances or waivers to setback/location criteria shall have the following stipulation attached to the permit and, in the case of a formal variance recommended to the variance body as a stipulation:

“The well contractor will call the Sarasota County Health Department 24 hours prior to commencement of construction. A Department representative must be on site prior to commencement of construction unless explicit permission to proceed has been given by the Department.”

If a separate grouting operation is required, and a grouting inspection is not otherwise required by law, then the following stipulation shall be attached to the permit:

“The well contractor will call Sarasota County Health Department 24 hours prior to grouting. A Department representative must be on site prior to the commencement of grouting unless explicit permission to proceed has been given by the Department.”

Owners of irrigation wells that fail to meet the 50 feet setback from sanitary hazards may request a waiver from the Department. The waiver request will be considered based upon the criteria in this manual.

—Water Use Permits—

If a SWFWMD Water Use Permit (WUP) is necessary, an approved copy of the permit will be required prior to construction permit issuance. WUPs are required under any of the following conditions:

- Total withdrawal capacity for the well or combination of wells exceeds 1,000,000 gpd.
- Average withdrawal for the well or combination of wells exceeds 100,000 gpd.
- The well is 6 inches or greater in diameter.

Additionally, if the well is located in the Most Impacted Area, a WUP is required when the well or cumulative diameter of wells is equal to or greater than 6 inches (see p 42).

Note: test wells may be exempt from WUP requirements until such time as they are converted into production wells.

—Well Sharing Agreements / Well Use Easements—

The Department generally recommends that a well serve the single property upon which it is drilled. It is recognized that there are occasions when it is not possible or practical to drill a well on a parcel where water quality and/or setback requirements cannot be met.

Wells Serving Multiple Properties Held by Different Owners:

A recorded well use agreement shall be required by the Department as a condition of permit issuance if the well is located on a property other than one it is meant to serve and the properties are owned by different individuals or entities.

Additionally, a recorded well use agreement or easement may be required by the Department if the properties are owned by a development company or similar organization.

This document should address the following:

1. A legal description of all properties that the well is intended to serve
2. A statement as to which property the well is located on
3. Maintenance/repair costs and responsibilities
4. Right of access for all parties concerned

It is highly recommended that property owners consult with their legal council prior to drawing up and/or signing any agreement.

Wells Serving Multiple Properties Held by the Same Owner:

In cases where all properties are held by a single individual or entity, the property owner may be required to provide a letter stating upon what property the well is located and what properties it is intended to serve.

Note: The Department is not an arbiter of civil disagreements. If one or more properties are later sold, we strongly recommend having an agreement or easement drawn up at that time. Having a recorded easement for the well may save many hours of money and effort down the line.

Exceptions: A well use agreement / easement shall not be required in the following cases:

1. Public Water System supply wells serving systems regulated under Chapter 62-555, F.A.C. where the well is located on property held by the owner of the system.
2. Irrigation or augmentation wells serving a community where the ownership of the well *and* the property or tract is held by an entity that has sole responsibility for operation and maintenance (e.g. condominium / neighborhood associations).
3. Agricultural wells serving large concerns that are held under unified ownership.
4. Temporary connections between potable water systems due to well failure or repair on the part of one of the systems.

Note: Please be aware that based upon the number and nature of the living units that a well-sharing agreement may cover, the permit requirements for the well may be more stringent than that of a private well. Please refer to the well use definitions in this manual.

Well Completion and Inspections

—Completion Reports—

Completion reports must be turned in to the Department within 30 days from the permit expiration date. In addition to the completion report, raw water samples must be analyzed for the following after the well has been properly pumped and developed:

1. Total Dissolved Solids
2. Sulfates
3. Chlorides
4. Iron
5. Total Hardness
6. Color
7. pH

These samples must be analyzed by a laboratory approved by the Department and submitted with the completion report. No completion report will be accepted by the Department without the required chemical analysis.

Exception: The following well types are exempted from the chemical analysis requirement: monitor wells, piezometers, sandpoint wells, elevator shafts, pluggings, cancelled permits, boreholes and recovery wells 25 feet or less in depth.

—Construction Inspections —

The Department is required to conduct random construction site inspections. These inspections are generally concerned with verifying compliance with required equipment standards, permit accuracy, site location and setbacks. The well driller is not required to notify the Department that construction has commenced unless a grouting / plugging inspection is required for the well, or notification is stipulated on the permit.

—Grouting Inspections—

It is the policy of the Department to witness as many well grouting operations as possible. Drillers must call the office 24 hours in advance of any grouting operation and schedule an appointment with a representative of the Department. Each will receive a unique grouting number.

If there is a significant difference in time between the appointment time and when the well is actually ready to be grouted, the driller must notify the department as soon as possible. Failure to do so may result in the completed well being disapproved or enforcement action taken.

If a representative of the Department is unable to be on site, or a representative is not on site within 15 minutes of the scheduled start time, the driller may proceed with the grouting.

Public Supply Wells / Special Grouting Stipulations: For Public Supply Wells or wells with a special grouting stipulation, the well driller may *not* begin grouting the well(s) without a representative on site unless:

- The Department has given explicit permission to begin grouting; and
- The driller is in compliance with the Department's notification requirements; and
- The driller is in full compliance with Chapter 40D-3.461(6)

—Plugging Inspections—

It is the policy of the Department to witness all plugging operations. Contractors must call the office 24 hours in advance of any plugging and schedule an appointment. Like grouting inspections, if there is a significant difference in time between the appointment and when the well is actually ready to be plugged, the driller must notify the Department as soon as possible. Failure to do so may result in enforcement action.

Representatives will make every effort to be on site at the scheduled (or rescheduled) appointment time. If they will not be able to arrive on time, they will attempt to contact the driller and make alternate arrangements. Due to the importance of proper plugging to the groundwater supply, contractors may *not* proceed with a plugging without a representative on site unless explicit permission has been granted by the Department.

Setbacks

All citations in the following tables refer to the Florida Administrative Code unless otherwise specified.

—Private / Multifamily Well (all setbacks shown in feet)—

| | | | |
|--------------------------|--|-----|-------|
| | Reuse of Reclaimed Water and Land Application | | |
| 62-610.421(3) | Slow Rate Land Application—Restricted Public Access | 500 | _____ |
| | Class I reliability provided | 200 | _____ |
| | Class I reliability and high-level disinfection | 100 | _____ |
| 62-610.521(2) | Rapid Rate Land Application | 500 | _____ |
| | Class I reliability and high-level disinfection | 200 | _____ |
| 62-610.621(2) | Overland Flow Systems | 100 | _____ |
| 62-610.621(3) | Public Access, Residential Irrigation or Edible Crop Slow-Rate Land Application Systems | 75 | _____ |
| 62-640.700(4)(b) | Domestic Wastewater Residuals Land Application Areas | 300 | _____ |
| 62-761.500(1)(a) | Aboveground or Underground Fuel Storage Tanks | 100 | _____ |
| 62-701.300 | Solid Waste Disposal | | |
| 62-701.300(2)(b) | Solid Waste Disposal Facilities | 500 | _____ |
| 62-701.300(12)(a) | Yard Trash Disposal Facilities | 100 | _____ |
| | <i>Note: This does not apply to on-site yard trash</i> | | |
| 62-701.300(1)(a) | Storage or Treatment of Solid Waste in Tanks | 100 | _____ |
| 64E-8.003(1) | Onsite Sewage Disposal Systems | 75 | _____ |
| 64E-8.002(2)(b)2 | Sanitary Hazard*** | 75 | _____ |
| 64E-8.002(2)(b)2 | Pesticide Treated Slab | 25 | _____ |
| | Well installed through impervious strata and constructed in accordance with 62-532.500(2)(f)3 | 15 | _____ |
| | <i>Note: Slabs treated with boric acid products and/or bait-type systems have no setback requirements.</i> | | |
| 62-670.500(6) | Dairy Farm Waste | | |
| 62-670.500(6)(a) | Unlined Storage and Treatment, or High-Intensity Areas | 300 | _____ |
| 62-670.500(6)(b) | Land Application | 200 | _____ |
| 54-385(b)(5)* | Retention / Drainage Ponds or Lakes** | 12 | _____ |

*Citation refers to Sarasota County Well Ordinance

**See further clarification under “Water Bodies and Wetlands” below

*** All private domestic wells shall meet a setback requirement of seventy-five feet (75') from sanitary sewers, or meet public health equivalency as described in Chapters 62-604, Florida Administrative Code (F.A.C.).

—DEP-regulated Public Supply Well (all setbacks shown in feet)—

| | | | |
|--------------------------|--|-----|-------|
| | Reuse of Reclaimed Water and Land Application | | |
| 62-610.421(3) | Slow Rate Land Application—Restricted Public Access | 500 | _____ |
| | Class I reliability provided | 200 | _____ |
| | Class I reliability and high-level disinfection | 100 | _____ |
| 62-610.521(2) | Rapid Rate Land Application | 500 | _____ |
| | Class I reliability and high-level disinfection | 200 | _____ |
| 62-610.621(2) | Overland Flow Systems | 500 | _____ |
| 62-610.621(3) | Public Access, Residential Irrigation or Edible Crop Slow-Rate Land Application Systems | 75 | _____ |
| 62-610.621(3)(4) | Transmission Facilities Conveying Reclaimed Water to: Restricted Public Access Land Application Systems or Overland Flow Systems | 100 | _____ |
| | Public Access, Residential Irrigation, or Edible Crop Slow-Rate Land Application Systems | 75 | _____ |
| 62-640.700(4)(b) | Domestic Wastewater Residuals Land Application Areas | 500 | _____ |
| 62.673.340(2)(d) | Phosphogypsum Stack Systems | 500 | _____ |
| | <i>Note: this only applies to wells pumping from an unconfined aquifer</i> | | |
| 62-761.500(1)(a) | Aboveground or Underground Fuel Storage Tanks | 100 | _____ |
| 62-701.300 | Solid Waste Disposal | | |
| 62-701.300(2)(b) | Solid Waste Disposal Facilities | 500 | _____ |
| 62-701.300(12)(a) | Yard Trash Disposal Facilities | 200 | _____ |
| | <i>Note: This does not apply to on-site yard trash</i> | | |
| 62-701.300(1)(a) | Storage or Treatment of Solid Waste in Tanks | 100 | _____ |
| 64E-8.002(2)(b)2 | Onsite Sewage Disposal Systems | | |
| | Total Flow > 2000 gpd | 200 | _____ |
| | Total Flow ≤ 2000 gpd | 100 | _____ |
| 62-555.312(4) | Sanitary Hazard*** | 100 | _____ |
| 62-670.500(6) | Dairy Farm Waste | | |
| 62-670.500(6)(a) | Unlined Storage and Treatment, or High-Intensity Areas | 300 | _____ |
| 62-670.500(6)(b) | Land Application | 200 | _____ |
| 54-385(b)(5)* | Retention / Drainage Ponds or Lakes** | 12 | _____ |

*Citation refers to Sarasota County Well Ordinance

**See further clarification under “Water Bodies and Wetlands” below

*** All private domestic wells shall meet a setback requirement of seventy-five feet (75’) from sanitary sewers, or meet public health equivalency as described in Chapters 62-604, Florida Administrative Code (F.A.C.).

— Limited Use Public Supply Well (all setbacks shown in feet)—

| Reuse of Reclaimed Water and Land Application | | | |
|--|--|-----|-------|
| 62-610.421(3) | Slow Rate Land Application—Restricted Public Access | 500 | _____ |
| | Class I reliability provided | 200 | _____ |
| | Class I reliability and high-level disinfection | 100 | _____ |
| 62-610.521(2) | Rapid Rate Land Application | 500 | _____ |
| | Class I reliability and high-level disinfection | 200 | _____ |
| 62-610.621(2) | Overland Flow Systems | 100 | _____ |
| 62-610.621(3) | Public Access, Residential Irrigation or Edible Crop Slow-Rate Land Application Systems | 75 | _____ |
| 62-610.621(3)(4) | Transmission Facilities Conveying Reclaimed Water to: Restricted Public Access Land Application Systems or Overland Flow Systems | 100 | _____ |
| | Public Access, Residential Irrigation, or Edible Crop Slow-Rate Land Application Systems | 75 | _____ |
| 62-640.700(4)(b) | Domestic Wastewater Residuals Land Application Areas | 50 | _____ |
| 62.673.340(2)(d) | Phosphogypsum Stack Systems | 500 | _____ |
| | <i>Note: this only applies to wells pumping from an unconfined aquifer</i> | | |
| 62-761.500(1)(a) | Aboveground or Underground Fuel Storage Tanks | 100 | _____ |
| 62-701.300 | Solid Waste Disposal | | |
| 62-701.300(2)(b) | Solid Waste Disposal Facilities | 500 | _____ |
| 62-701.300(12)(a) | Yard Trash Disposal Facilities | 100 | _____ |
| | <i>Note: This does not apply to on-site yard trash</i> | | |
| 62-701.300(1)(a) | Storage or Treatment of Solid Waste in Tanks | 100 | _____ |
| 64E-8.002(2)(b)2 | Onsite Sewage Disposal Systems | | |
| | Total Flow > 2000 gpd | 200 | _____ |
| | Total Flow ≤ 2000 gpd | 100 | _____ |
| 64E-8.002(2)(b)2 | Sanitary Hazard*** | 100 | _____ |
| 64E-8.002(2)(b)2 | Pesticide Treated Slab | 25 | ===== |
| | Well installed through impervious strata and constructed in accordance with 62-532.500(2)(f)3 | 45 | ===== |
| 62-670.500(6) | Dairy Farm Waste | | |
| 62-670.500(6)(a) | Unlined Storage and Treatment, or High-Intensity Areas | 300 | _____ |
| 62-670.500(6)(b) | Land Application | 200 | _____ |
| 54-385(b)(5)* | Retention / Drainage Ponds or Lakes** | 12 | _____ |

*Citation refers to Sarasota County Well Ordinance

**See further clarification under “Water Bodies and Wetlands” below

*** All private domestic wells shall meet a setback requirement of seventy-five feet (75') from sanitary sewers, or meet public health equivalency as described in Chapters 62-604, Florida Administrative Code (F.A.C.).

— Irrigation / Industrial Supply / Sandpoint Well (all setbacks shown in feet)—

| | | | |
|------------------------|---|----|-------|
| 64E-8.005(1)(d) | Onsite Sewage Disposal Systems | 50 | _____ |
| 40D-3.301(1)(f) | Sanitary Hazard*** <i>Under SCHD conditions for Issuance of Permits, the Department is adopting as policy a 50 ft setback from sanitary hazards in order to protect the groundwater supply.</i> | 50 | _____ |
| 54-385(b)(5)* | Retention / Drainage Areas, Ponds, or Lakes** | 12 | _____ |

*Citation refers to Sarasota County Well Ordinance

**See further clarification under “Water Bodies and Wetlands” below

*** All private domestic wells shall meet a setback requirement of seventy-five feet (75') from sanitary sewers, or meet public health equivalency as described in Chapters 62-604, Florida Administrative Code (F.A.C.).

Other Limitations on Well Placement

Note: Well permitting staff are not experts in easement recording, wetland delineation, or coastal ecology. If there is a known restriction in or around the proposed well location, staff will inform the applicant and assist as best as they can. However, the ultimate responsibility to ensure that placement of a well does not intrude upon restricted areas or protected habitat rests with the property owner / agent.

—Easements / Rights-of-Way—

If the well is to be located in a known easement or right of way, then the owner/agent must submit documentation that they have the authority and permission to drill within the easement/right-of-way prior to permit approval.

—Permanent Structures—

No permanent structure may be placed on top of an existing well. Wells should be placed in such a location that will allow access to the wellhead and equipment for purposes of maintenance, repair or abandonment.

Exceptions:

1. Elevator shafts
2. Wells designed to use wind-powered pumps may have the appropriate equipment and structure placed above the wellhead as necessary to enable the functionality of the well.
3. Wells where, due to security or location concerns require a well pit or pumphouse. See below.

Special circumstance—Well pits and pump houses:

In some instances, well pits or pump houses are required due to security or location concerns. Such enclosures must be designed and constructed in compliance with 62-532.500(3)(b)2 and/or 62-555.320(8)(a)3. Requests to place a well within a well pit or pump house will be reviewed on a case-by-case basis.

—Water Bodies and Wetlands—

Wells shall not be placed within the high water mark of any water body, drainage area, stormwater retention area, or in any place where there is a strong likelihood of the wellhead being inundated with surface water or floodwaters.

If there is an obvious bank or control structure that limits the water level of a water body or drainage area, the driller should attempt to place the well a minimum of twelve feet from the top of bank or high water line, provided all other setbacks and limitations are met. The well may be placed closer in order to meet other setbacks with Department approval. In no case is the well to be placed within the water line.

Clarification: Section 54-385(b)(5) of the Well Ordinance includes reference to a twelve-foot easement from the top of bank. The Department is aware that not all water bodies have recorded maintenance or access easements. However, in order to protect the aquifer from potential surface water contamination, the twelve foot setback is policy. Requests to drill a well closer than twelve feet due to other setbacks will be handled on a case-by-case basis.

Special circumstance—Wetlands and Watercourses:

Wetlands and other water bodies may also have buffers around them that prohibit the placement of wells. Sarasota County Resource Protection should be consulted if there is a question on a specific property. If there is a known buffer, the permit will not be granted without written approval from the appropriate regulatory agency.

Special Circumstance—Shoreline Setback:

Properties located on or near the Gulf of Mexico may fall under coastal setback lines as set by Sarasota County (Chapter 54, Article XXII, SC Code of Ordinances) and/or the Department of Environmental Protection (62B-33, F.A.C.). Permits will not be granted without approval from the appropriate regulatory agency. Questions as to whether a proposed well location falls within one of these setback lines should be directed to Sarasota County Resource Protection.

Wells that are proposed to be drilled seaward of the State Coastal Construction Control Line must have either a permit or written exemption from the DEP.

Wells that are proposed to be drilled seaward of the Sarasota County Gulf Beach and Barrier Island Hazard Setback Line or the Barrier Island Pass Twenty-Year Hazard Line must have a written exemption from Sarasota County Resource Protection.

Violations and Enforcement

—Abandoned Wells—

Wells that meet any of the following criteria must be properly plugged or brought into compliance:

- The well is not in use and there is no intended use for the immediate future.
- For non-flowing wells, there is no consistent and reliable source of power.
- The well is an actual or potential source of contamination to the aquifer.
- The well is located in a water body or stormwater retention area and does not meet the criteria set forth in Chapter 373.213, F.S.
- The well is located within the footprint of a proposed building, building addition, parking lot or other permanent structure and there is a reasonable alternative source of water for the property.

Once a well has been deemed abandoned, it is the policy of the Department to require plugging or approval for use within 30 days of notification of the appropriate property owner or agent. The time frame may be significantly reduced if there is an immediate threat to the water resource. Requests for extension of the 30 day deadline will be considered on a case-by-case basis.

Wells that are intended for use must meet the following minimum criteria:

- An iron and chloride analysis must be taken by a laboratory acceptable to the Department and acceptable results submitted to this office (sandpoint wells less than 25 feet in depth are exempt from this requirement).
- The casing must remain at, or be raised to, a minimum of 12 inches above finished grade.
- The well must be demonstrated to meet minimum standards for setbacks and location in place when the well was drilled, in addition to 50 feet from sanitary hazards, or meet public health equivalency as described in Chapters 62-604, F.A.C. ***
- The well must be functioning, and have a consistent and reliable source of power or be a flowing well with the appropriate control valve.

Note: Nothing in the above paragraph shall be interpreted to limit the ability of the Department to add any additional stipulations that may be appropriate.

*** Any replacement wells shall meet public health equivalency as described in Chapters 62-604, Florida Administrative Code (F.A.C.)

Demolitions / Site & Development Projects:

Wells located on properties that are undergoing demolition and/or Site & Development (S&D) have special issues. If the property is undergoing development, the developer/owner may attempt to save the well for later use. However, if the intent is not to redevelop the property within a reasonable time frame, then the well must be plugged.

Note: In this context, development includes a tear-down/rebuild of a single structure up to large commercial and residential developments.

Site & Development:

Wells that are located on properties that are slated for development are exempt from the 30-day plugging requirement, provided that the following criteria are met:

- The developer/owner must make a written request to keep the well within 30 days of notification.
- Start of construction on the new development must be demonstrated to begin within 12 months of cessation of use. Documentation in the form of approved S&D or construction plans may be required. Requests for extension of the 12-month deadline will be considered on a case-by-case basis.
- The well must be protected during all phases of demolition, earthmoving and construction.
- The well must have a watertight, tamper-resistant seal.

Note: Development projects must still meet the iron and chloride, casing height, location, and setback requirements prior to approval.

Demolition:

The Department of Health will not sign off a Demolition Permit until the following conditions are met:

- If the owner intends to keep the well, the well must be analyzed for iron and chlorides by a laboratory approved by the Department.
- The existing well location must meet all applicable setback requirements and location restrictions for the intended well use.
- The well casing(s) will be a minimum of 12 inches above final grade.
- A site sketch showing the location(s) of the well(s) on the site must be submitted to the department. The sketch must include measurements to a minimum of 2 points that will remain after demolition.
- The well(s) will be protected during the demolition and construction phases.
- If the well(s) do not meet the above conditions or the owner does not intend to use the well(s), the well(s) must be properly abandoned prior to this Department's release of the demolition permit.

Note: Demolition projects must still meet the iron and chloride, casing height, location, and setback requirements prior to approval.

—Certificates of Occupancy—

No C.O. will be approved by the Department without the following:

- The well construction must have final approval (meet all construction, setback, and completion requirements).
- Public Supply wells must meet appropriate regulatory requirements.
- Private wells must have a satisfactory raw water bacteriological analysis from a state-certified laboratory taken less than 60 days prior to the request for Certificate of Occupancy (C.O).

Authority: Section 602, Florida Plumbing Code.

—Enforcement—

Civil penalties for rule violations by certified well drilling contractors are authorized under Chapter 373.333, F.S. The Department shall follow the procedures outlined in the DEP *Water Well Contractor Disciplinary Guidelines and Procedures Manual*.

Violations by persons or organizations other than well drillers shall be handled in accordance with Sections 54-388 and 54-389 of the Well Ordinance.

Depending upon the severity of the violation, criminal charges may be filed under Chapter 373.336(3), F.S.

Nothing in this section shall prevent the Department from utilizing any other method as provided by law to ensure compliance with appropriate laws and procedures.

Areas of Special Concern

Areas of Special Concern (ASCs) are areas where conditions exist that may affect water quality or quantity. Several areas have been identified by the Sarasota County Health Department and/or SWFWMD. These areas have specific stipulations attached to well permit approvals.

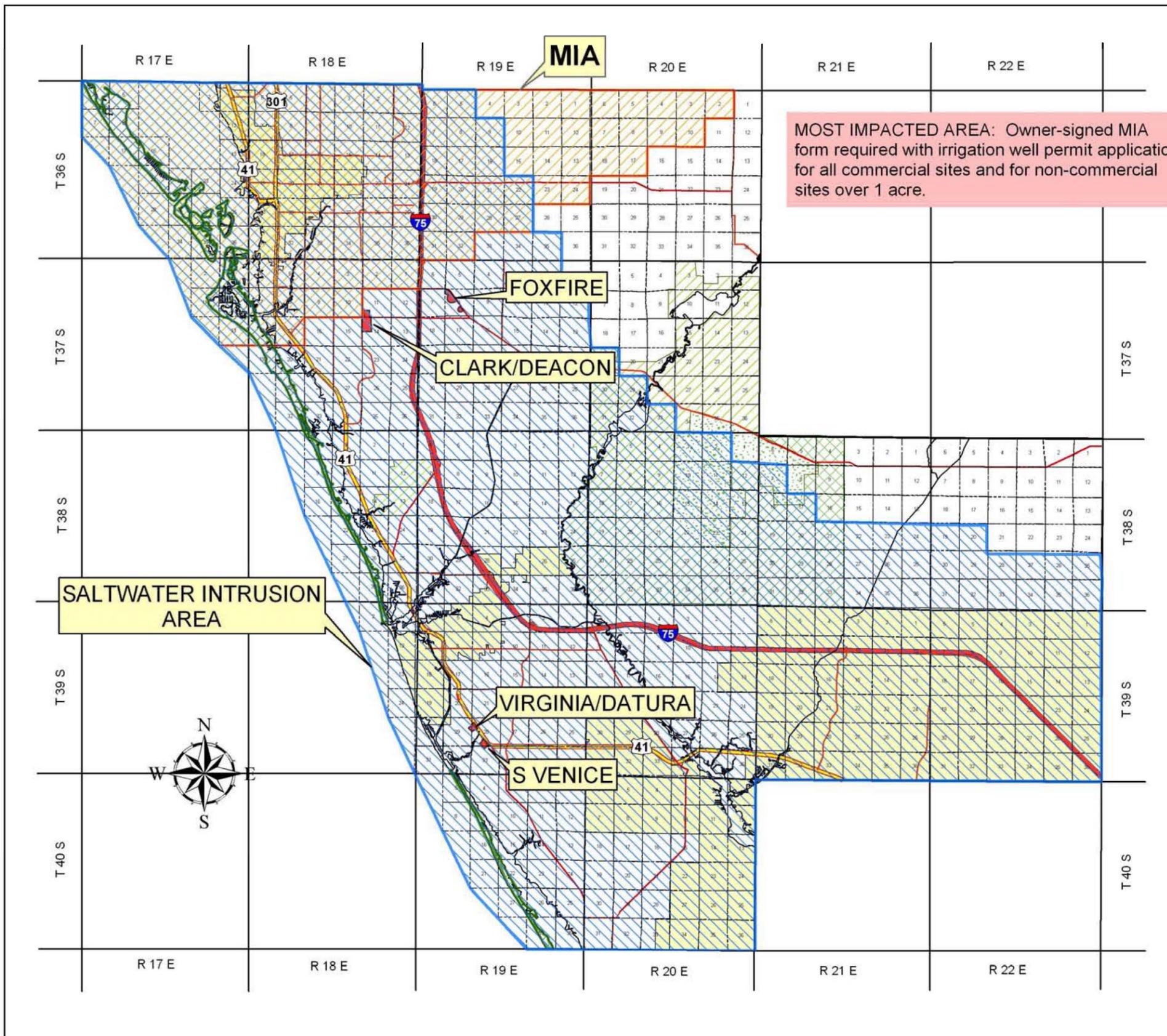
The following Areas of Special Concern have been designated:

1. Clark/Deacon Area
2. Foxfire Subdivision
3. South Venice Contamination Area
4. Virginia/Datura Contamination Area
5. Barrier Islands
6. Salt Water Intrusion Area (SWFWMD)
7. Most-Impacted Area (SWFWMD)

The Department shall notify the drilling community if further Areas of Special Concern (ASC) are identified. Correspondence regarding new ASCs should be inserted into this manual when received.

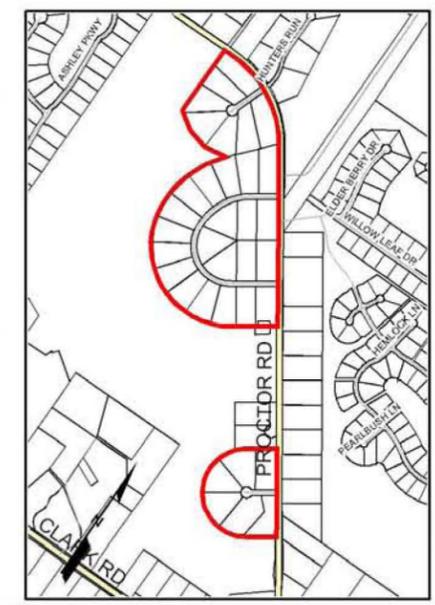
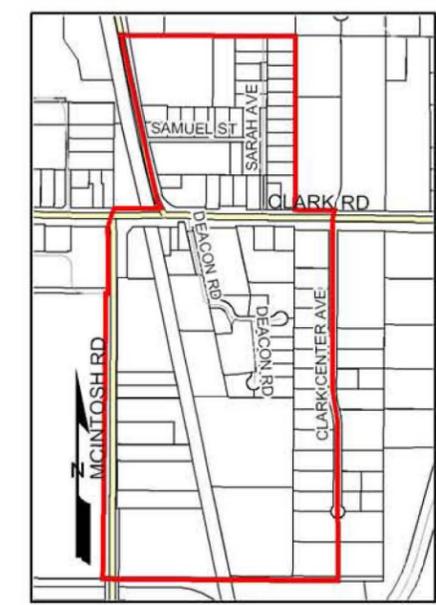
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14. _____
15. _____
16. _____

AREAS OF SPECIAL CONCERN



MOST IMPACTED AREA: Owner-signed MIA form required with irrigation well permit application for all commercial sites and for non-commercial sites over 1 acre.

CLARK/DEACON INDUSTRIAL AREA: Type D well construction required. Outer well casing grout sealed to 30 ft min. Inner casing must be galvanized steel, grout sealed to 160 ft min.



FOXFIRE SUBDIVISION: Type D well construction required. Inner casing must be 60 ft minimum.



SOUTH VENICE & VIRGINIA DATURA CONTAMINATION AREAS: Wells must be grouted with minimum 100' of galvanized steel casing.

SALTWATER INTRUSION AREA

VIRGINIA/DATURA

S VENICE

MIA

FOXFIRE

CLARK/DEACON

BARRIER ISLANDS: Type D well construction required. Outer casing must be minimum of 20 ft deep. Annular space between inner and outer casings must be grout sealed. Plugging: wells must be plugged with cement grout if TDS level is greater than 10,000 ppm.

SALT WATER INTRUSION AREA: A copy of SWFWMD Stipulation #1 is to be attached to the permit.

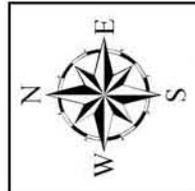
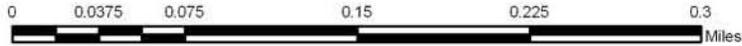
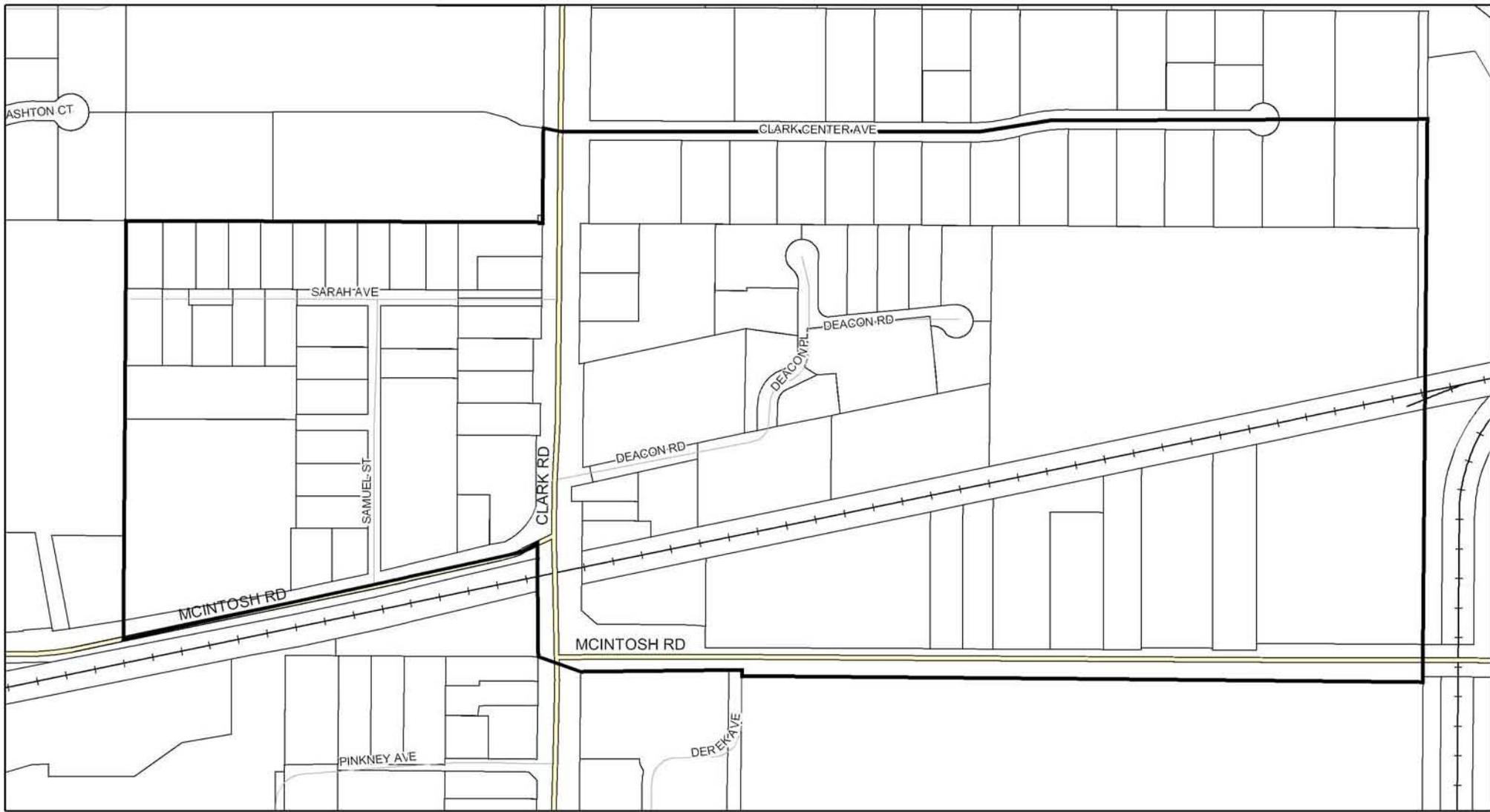
—Clark/Deacon Area of Special Concern—

An area of groundwater contamination has been confirmed in the industrial area centered around Clark Rd and Deacon Rd. This area includes all lots on Sarah Ave and Samuel St, all lots on the W side of Clark Center Ave, all lots on Deacon Rd and Deacon Pl, and all lots on the E side of McIntosh Rd to a point running from approximately 1300 feet N to 2700 feet S of Clark Rd.

The groundwater in this area contains the solvents Trichloroethene (TCE) and Dichloroethene (DCE) in addition to the petroleum compounds benzene and Methyl Tertiary-Butyl Ether (MTBE). TCE and DCE are heavier than water and will sink to the bottom of an aquifer. To protect the existing confining layer and prevent the contaminants from penetrating to a lower aquifer, special well construction details are required.

All wells installed in the Clark/Deacon Industrial Area will be required to be type “D” construction with the outer casing grout sealed to a minimum depth of 30 feet and the inner casing grout sealed to a minimum depth of 160 feet. As TCE’s chemical composition will penetrate PVC well casing, this inner casing must be galvanized steel.

All grouting operations are to be witnessed by a representative of the Sarasota County Health Department.



CLARK / DEACON INDUSTRIAL AREA

The groundwater in this area contains contamination by industrial solvents and petroleum products. All wells installed in this area are required to be type "D" construction with an outer casing grout sealed to a minimum depth of 30 feet. The inner casing must be galvanized steel, grout sealed to a minimum depth of 160 feet.

Revision Date:
6/16/2006



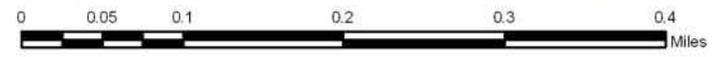
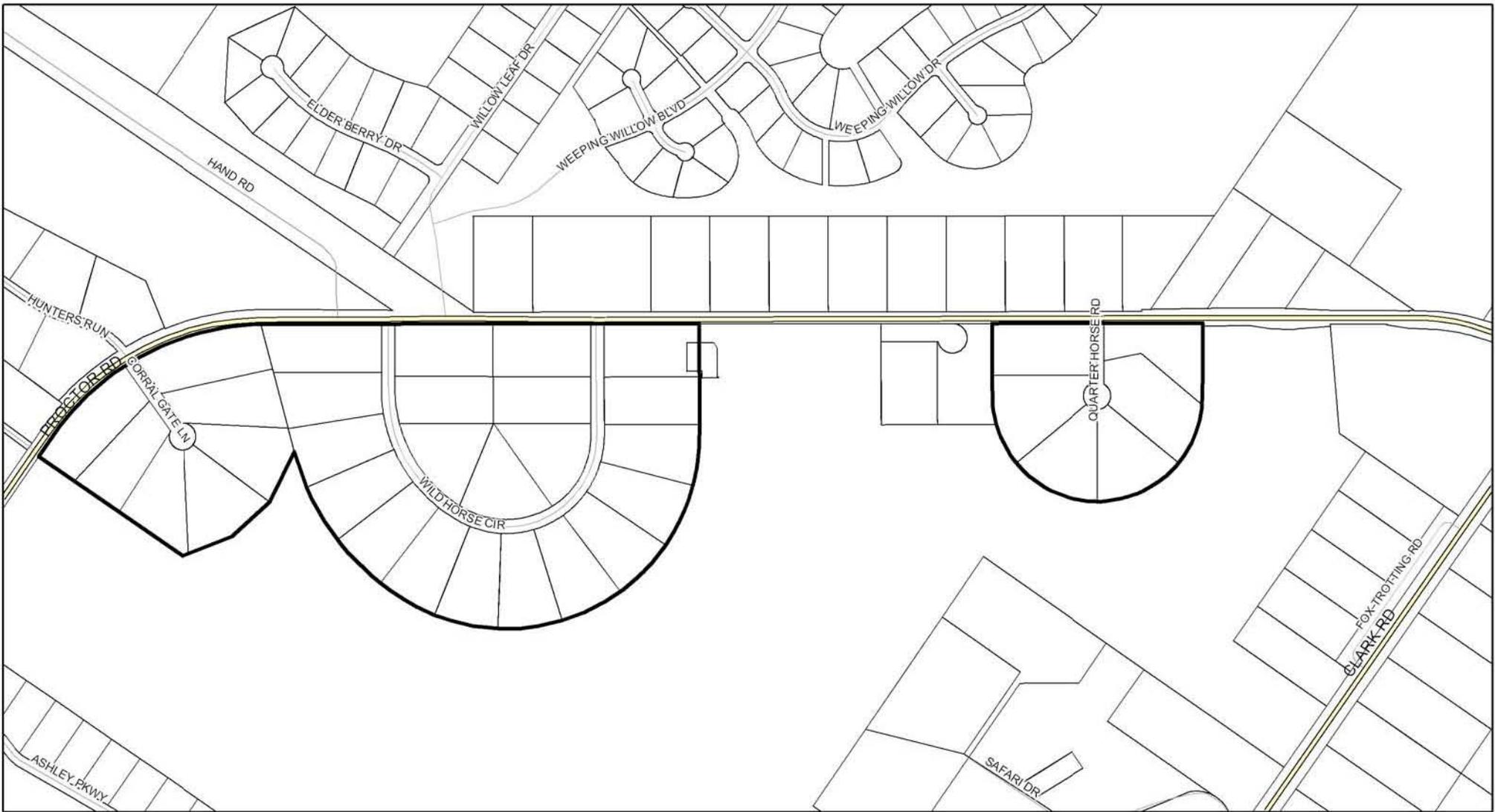
SARASOTA COUNTY HEALTH DEPARTMENT
OFFICE OF ENVIRONMENTAL HEALTH SERVICES



—Foxfire Subdivision—

The area around the Foxfire Subdivision is a former landfill. Lots 1-39 of the Foxfire Subdivision, which includes all parcels on Corral Gate Ln, Wild Horse Cir, and Quarter Horse Rd are in this area of special concern. To prevent the potential contamination of the drinking water aquifer, special well construction techniques are required.

All wells must be double cased with a minimum inner casing depth of 60 feet.



FOXFIRE SUBDIVISION

Revision Date:
6/16/2006

This area is a former landfill. Wells must be double-cased with a minimum inner casing depth of 60 feet.

FLORIDA DEPARTMENT OF HEALTH
SARASOTA COUNTY HEALTH DEPARTMENT
OFFICE OF ENVIRONMENTAL HEALTH SERVICES

SCGIS
SARASOTA COUNTY
Improve Government Services

—South Venice Contamination Area—

An area of groundwater contamination exists in this area. The approximate location is bordered by US 41 in the north to Tarpon Rd in the south and from S Venice Blvd in the east to Crane Rd in the west.

The groundwater in this area contains Trichloroethylene (TCE), which is a breakdown product of dry cleaning fluid. TCE is heavier than water and will sink to the bottom of an aquifer. Additionally, it may permeate through PVC pipe. In order to protect the drinking water supply, special well construction techniques are required.

Wells must be grouted with a minimum of 100 feet of galvanized steel casing. PVC is not allowed in this area.



SOUTH VENICE CONTAMINATION AREA

Revision Date:
6/16/2006

This is an area of known groundwater contamination by drycleaning solvent. A minimum of 100 feet of galvanized steel casing must be used. Casings must be grouted into place.

FLORIDA DEPARTMENT OF HEALTH
SARASOTA COUNTY HEALTH DEPARTMENT
OFFICE OF ENVIRONMENTAL HEALTH SERVICES
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—Virginia Datura Area of Special Concern—

An area of groundwater contamination exists in this area. The approximate location is bordered by US 41 in the east to Orange Rd in the west and from W Seminole Dr in the north to W Baffin Rd in the south.

The groundwater in this area contains Vinyl Chloride, which is an industrial solvent. Vinyl Chloride is heavier than water and will sink to the bottom of an aquifer. Additionally, it may permeate through PVC pipe. In order to protect the drinking water supply, special well construction techniques are required.

Wells must be grouted with a minimum of 100 feet of galvanized steel casing. PVC is not allowed in this area.



VIRGINIA / DATURA CONTAMINATION AREA

Revision Date:
6/16/2006



This is an area of known groundwater contamination by industrial solvent. A minimum of 100 feet of galvanized steel casing must be used. Casings must be grouted into place.

FLORIDA DEPARTMENT OF HEALTH
SARASOTA COUNTY HEALTH DEPARTMENT
OFFICE OF ENVIRONMENTAL HEALTH SERVICES
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—Barrier Islands—

Barrier islands include the following: Bird Key, the Sarasota County portion of Longboat Key, Lido Key, Siesta Key, St Armands Key, Casey Key, and Manasota Key.

In order to prevent potential salt water intrusion into wells drilled in this area, special well construction and/or plugging techniques are required.

Construction: Wells shall be Type D construction with a minimum of 20 feet of outer casing and 100 ft of inner casing. The annular space between the inner and outer casings must be grouted. Inner casing diameter must be a minimum of 4 inches.

Plugging: It is recommended that wells be plugged using cement grout. This is mandatory if the TDS level is > 10,000 ppm and/or chloride levels are > 2,000 ppm.

A signed statement from the property owner acknowledging that the location of the well is marginal and accepting responsibility to plug the well if the water quality is not acceptable is required prior to permit issuance.

—SWFWMD Salt-Water Intrusion Area—

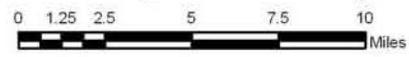
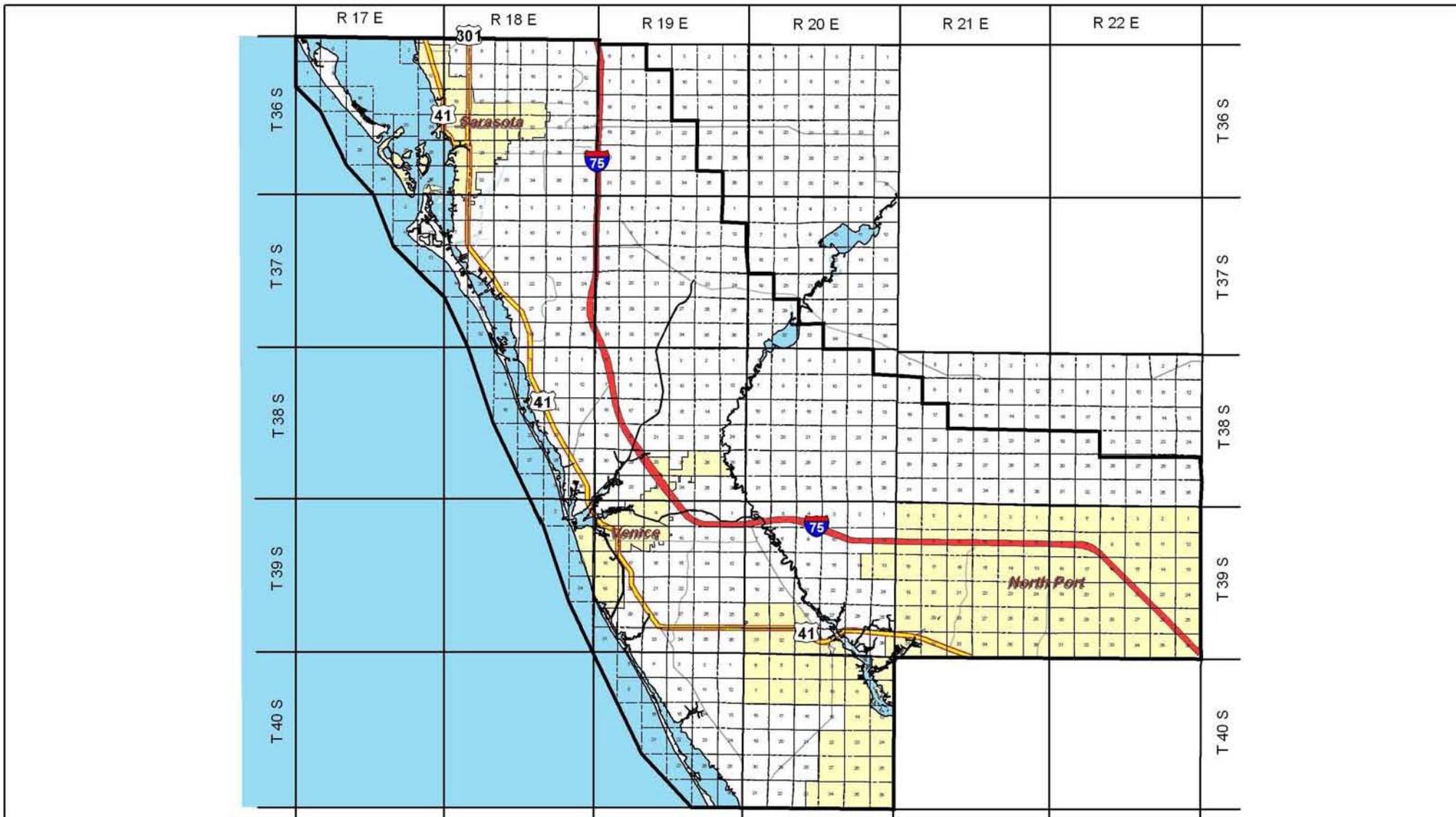
The Southwest Florida Water Management District has designated a large tract of Sarasota County as an area where the potential for salt-water intrusion is elevated. This area includes most of the cities of Sarasota, Venice and North Port in addition to a large portion of unincorporated Sarasota County east of I-75.

Well permits that are approved by the Sarasota County Health Department shall have the following stipulation attached:

- A.. The location of the well is marginal due to potential salt water encroachment. It may or may not yield water of acceptable quality in the near future. Therefore, this permit is granted with the understanding that if the well does not produce acceptable water, it will be sealed and properly abandoned.

- B. In the event the well needs to be abandoned, an abandonment permit shall be obtained prior to commencing with abandonment procedures.

- C. An observer from the Sarasota County Health Department is required on all abandonments to ensure compliance with Chapter 62-532, Florida Administrative Code.



SWFWMD SALT WATER INTRUSION AREA

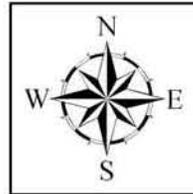
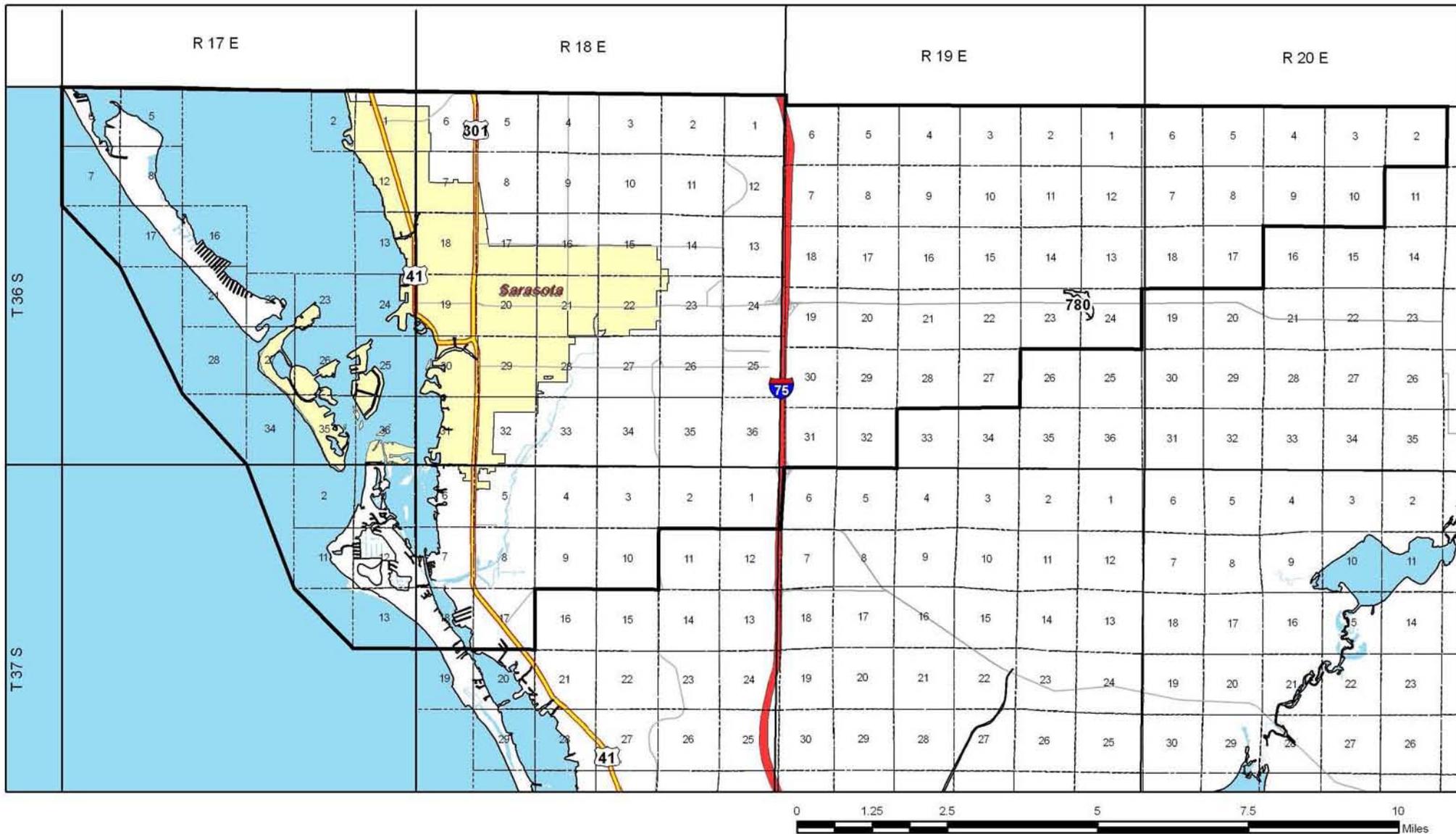
Revision Date:
6/16/2006

This is an area where the potential for salt water encroachment is elevated. All wells approved for construction are approved with the stipulation that if the well does not produce acceptable water, it must be properly abandoned.

—Most Impacted Area—

This is an area designated by the SWFWMD as the most heavily impacted within the Southern Water Use Caution Area.

All commercial irrigation well permits and all non-commercial irrigation well permits for sites over 1 acre must include an owner-signed MIA form.



SWFWMD MOST IMPACTED AREA

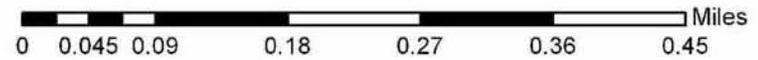
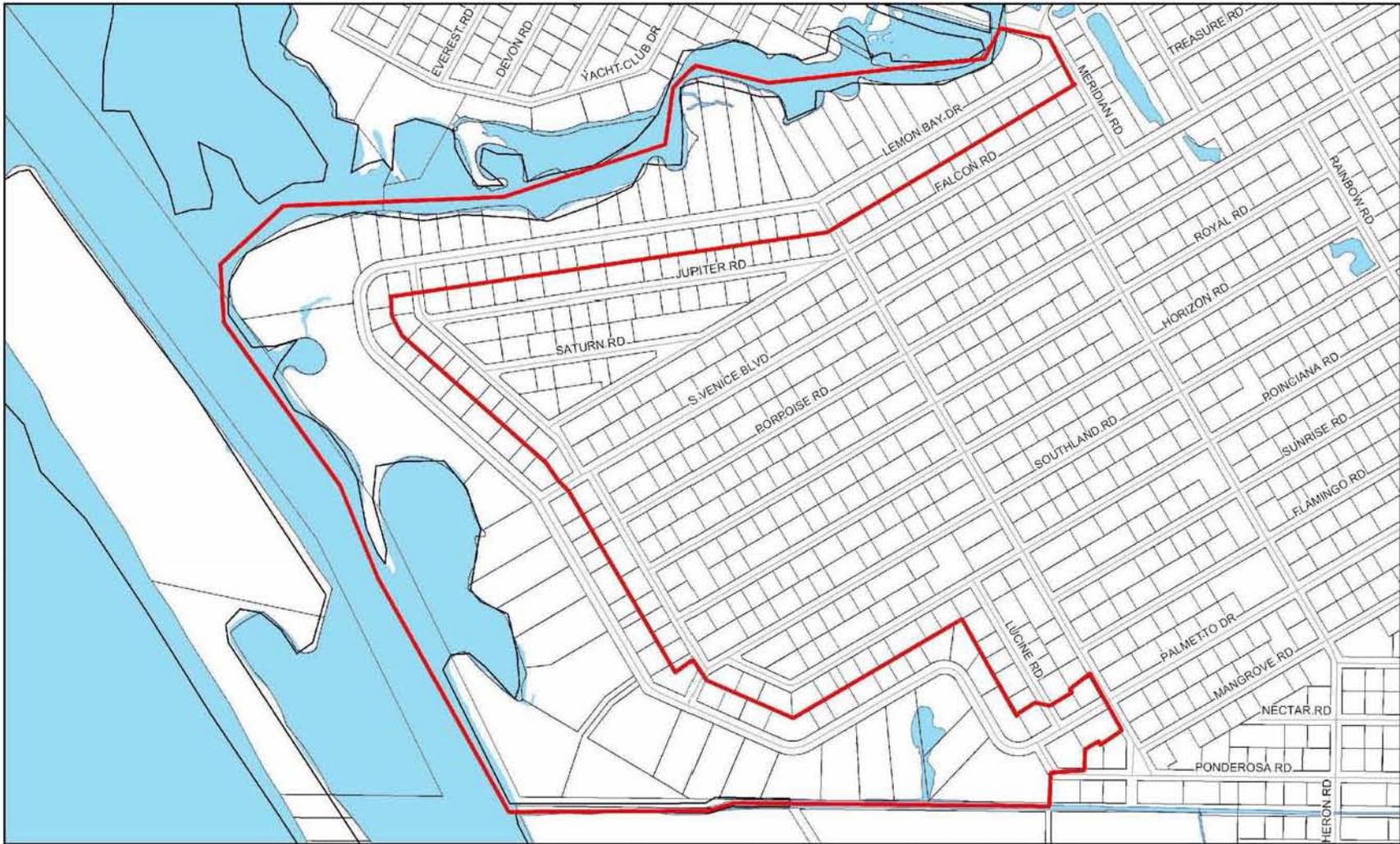
Revision Date:
6/16/2006

This is an area where human activities are the heaviest within the Southern Water Use Caution Area. All commercial irrigation well permits and non-commercial irrigation well permits for sites over 1 acre are required to have an owner-signed MIA form.

FLORIDA DEPARTMENT OF HEALTH
SARASOTA COUNTY HEALTH DEPARTMENT
OFFICE OF ENVIRONMENTAL HEALTH SERVICES
SCGIS
GIS Solutions that Improve Government Services

—Lemon Bay Drive Area—

This area has demonstrated a high risk of salt water intrusion. All wells approved for installation must be constructed according to Section 54-385 E 19c(1)(2) of Chapter 54 Article XIII of the Sarasota County Code. All wells approved for construction are approved with the stipulation(s) that if the well does not produce acceptable water, (Stipulation #1 and Stipulation #39) and/or cannot be used for the purpose intended, it must be properly (plugged) abandoned.



Lemmon Bay Drive Area

Revision Date:
9/26/2007

This area has demonstrated a high risk of salt water intrusion. All wells approved for installation must be constructed according to Section 54-385 E 19c(1)(2) of Chapter 54 Article XIII of the Sarasota County Code. All wells approved for construction are approved with the stipulation that if the well does not produce acceptable water, (Stipulation #39) and/or cannot be used for the purpose intended, it must be properly (plugged) abandoned.



Appendix 1: Fee Schedule

Effective 2/16/2004

Permit Fees

| | |
|---|----------|
| Augmentation Well..... | \$300.00 |
| Public Supply Well (WUP Required)..... | \$500.00 |
| Public Supply Well..... | \$300.00 |
| Commercial Irrigation Well (WUP Required)..... | \$300.00 |
| Commercial Irrigation Well..... | \$200.00 |
| Other Irrigation Well (excluding sandpoint)..... | \$115.00 |
| Private Well (New)..... | \$140.00 |
| Redrill..... | \$125.00 |
| Repair..... | \$150.00 |
| Sandpoint Well (up to 3 wells)..... | \$150.00 |
| Elevator Shaft..... | \$500.00 |
| Monitor Wells (per well)..... | \$75.00 |
| Plugging (6" diameter or greater)..... | \$100.00 |
| Plugging (less than 6")..... | \$50.00 |
| Heat Exchange (Geothermal) Well (commercial)..... | \$300.00 |
| Heat Exchange (Geothermal) Well (residential)..... | \$150.00 |
| Air Sparging Well (up to 8 wells)..... | \$75.00 |
| Demolition Permit Processing..... | \$75.00 |
| Setback Variance Permit Processing..... | \$75.00 |
| Late fee for Limited Use Public Water System | |
| Permit renewal after October 1..... | \$100.00 |
| Change of permitted well use..... | \$75.00 |

Water Sample / Analysis Fees

| | |
|---|----------------------------|
| Sample Collection Fee..... | \$40.00 |
| Bacteriological (Bact)..... | \$15.00 |
| Partial Chemical Testing..... | \$50.00 |
| Single Chemical Analysis..... | \$10.00 |
| Monthly Public Bact (includes collection fee)..... | \$50.00 \$55.00 |
| Public Supply Well Clearance (20 samples)..... | \$250.00 |
| Public Supply Well Retest (per sample)..... | \$40.00 \$15.00 |
| Late fee for Public Water Systems monthly, quarterly and annual chemical and bacteriological analysis results after the 15th of the following month they are due..... | |
| | \$100.00 |

Appendix 2: Websites of Interest

Sarasota County Health Department

<http://www.sarasotahealth.org/environmental.htm>

Sarasota County Government

<http://www.scgov.net>

Municode.com (*local laws and codes, including Sarasota County Ordinances*)

<http://www.municode.com>

Southwest Florida Water Management District (*online permitting, rules and codes, contact info*)

<http://www.swfwmd.state.fl.us>

Florida Department of Environmental Protection (*rules and codes, contact info*)

<http://www.dep.state.fl.us>

Well Contractor Violation Clearinghouse (*statewide list of well drilling contractors and any violations, relevant DEP codes, and the Disciplinary Guidelines and Procedures Manual*)

<http://water.dep.state.fl.us/wwcvc/>

Florida Department of Health—Division of Environmental Health (*rules and codes, contact info*)

<http://www.doh.state.fl.us/environment/index.html>

Statutes and Constitution (*State of Florida Statutes*)

<http://www.flsenate.gov/Statutes>

Environmental Protection Agency—Water Web Page (*general information*)

<http://www.epa.gov/ebtpages/water.html>

National Groundwater Association (*general information*)

<http://www.ngwa.org>

Appendix 3: Contact Information

Current as of August 1, 2006

—Sarasota County Health Department—

North Office:
1301 Cattlemen Rd
Building A
Sarasota, FL 34232
(941) 861-6133
(941) 861-6152—fax

South Office:
4000 S Tamiami Trl
Venice, FL 34293
(941) 861-3310
(941) 861-3326—fax

—Sarasota County Government—

Main Phone Number:
(941) 861-5000

Resource Protection (*wetlands, watercourses, vegetative buffers, coastal setback issues*)
1301 Cattlemen Rd
Building D
Sarasota, FL 34232
(941) 861-6113

Survey and Mapping (*easements, plats, map books, rights of way*)
1451 Cattlemen Rd
Building E
Sarasota, FL 34232
(941) 861-6865

Utilities (*water / sewer availability, locations*)
1001 Sarasota Center Boulevard
Sarasota, FL 34240
861-6790

County Clerk (*official records—deeds, mortgages, easements, etc*)
2000 Main St
Sarasota, FL 34237
(941) 861-7400

—Other Government—

Department of Environmental Protection
Bureau of Beaches and Coastal Systems (*state coastal setback line*)
Local Field Representative:
1301 Cattlemen Rd
Building D
Sarasota, FL 34232
(941) 861-6357—Office
(877) 314-1329—Field Dispatch

| | |
|---|-------------------------------|
| Southwest Florida Water Management District | |
| Sarasota Service Office | Brooksville Headquarters |
| 6750 Fruitville Rd | 2379 Broad St |
| Sarasota, FL 34240-9711 | Brooksville, FL 34604-6899 |
| (941) 377-3722 | (352) 396-7211 |
| 1-800-320-3503 (Florida Only) | 1-800-423-1476 (Florida Only) |

Department of Health
Bureau of Water Programs (*Private and limited use public supply well variances*)
4052 Bald Cypress Way
Tallahassee, FL 32399-1708
(850) 245-4240
(850) 921-02980—fax

Appendix 4: Driller Correspondence and Notifications

1. Notice from Sarasota County Water Resources: Disposal of Spent Drilling Slurry or Drilling Mud
2. Memo to Drillers: Well Casing Requirements (3/22/2004)
3. Emergency Use of Surface Water for Drilling Needs

Further correspondence relating to well construction standards should be inserted into this manual when received.

4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____



SARASOTA COUNTY
"Dedicated to Quality Service"

NOTICE TO WELL DRILLERS AND WELL PERMIT APPLICANTS

The disposal of spent drilling slurry or drilling mud is an environmental concern in Sarasota County

The introduction of drilling slurry or drilling mud into the surface waters of Sarastoa County, either directly by dumping into a water body, or indirectly by way of a stormwater ditch or swale, is a violation of Chapter 54, Article VII (Water Pollution Control) of the Sarasota County Code.

The recommended disposal methods are*:

- If practical, the material may remain, or be buried at the job site. This should be done in an upland area away from stormwater ditches, swales, or surface water bodies; or,
- The material may be allowed to dewater and dry at the job site (in an area apart from a ditch, swale, or surface water) prior to removal and transport to an approved disposal facility; or,
- If the liquid material must be removed from the job site, the contractor should provide for an off site laydown or drying area into which the material can be placed until it dewateres and dries. The dried material should be disposed of as solid waste. Alternative use as a fill material may be regulated under Chapter 54, Article XII (Earthmoving) of the Sarasota County Code.

If a settling or sedimentation system is used, the clear liquid portion that may contain polymers or other chemical additives must be properly disposed of by:

- Allowing the liquid to percolate into the surrounding soil, away from stormwater ditches, swales, or surface waters; or,
- Discharging the liquid into a sanitary sewer (with approval from the local utility); or,
- The liquid may be transported from to an approved disposal facility.

For information regarding the pollution hazards of drilling mud or drilling slurry please contact Sarasota County Water Resources. For information regarding the stockpiling of, or use of spent drilling mud or slurry as fill material please contact Sarasota County Resource Protection. Either office may be contacted through the County Call Center at (941) 861-5000.

* Drilling equipment and drilling slurry may be exposed to contamination from buried wastes, damaged wastewater lines, or septic systems. Contaminated slurry must be disposed of in a manner consistent with all professional and governmental regulations.



Jeb Bush
Governor

John O. Agwunobi, M.D., M.B.A.
Secretary

DATE: March 22, 2004
TO: All Licensed Well Drillers
FROM: Steven E. Fisher, Environmental Specialist II
SUBJ: Well Casing Requirements

It has been brought to our attention that there is galvanized steel pipe manufactured by Yucel Boro IHR & ITH.PZ.A.S, Turkey that has been purchased by some well drillers for water well construction. This pipe is listed as meeting the following standard: *American Society for Testing and Materials Historical Standard F 1083-97: Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures*. This standard does **NOT** address water well casing or distribution requirements and does not meet the requirements of Chapter 62-532.500 (1)(a), F.A.C.

“All well casing must conform to one of the following standards: American Society for Testing and Materials (ASTM) A53/A53M-99B, A135-01, A252-98, A589-96, or American Petroleum Institute (API) 5L-2000.”

Any Licensed Well Driller found using this material, or any other material that does not meet the requirements of Chapter 62-532, F.A.C. will immediately be required to plug that well at their own cost, and are subject to fines and points against their license.

If you have any questions or concerns, please do not hesitate to contact our office at (941) 861-6133.

Thank you,

A handwritten signature in black ink, appearing to read "Steve Fisher".

Steven E. Fisher
Environmental Specialist II
Public Drinking Water Program

EMERGENCY USE OF SURFACE WATER FOR DRILLING NEEDS

Normally, only sanitary water that is "reasonably free of contamination" may be used for drilling make-up water, as per Chapter 40D-3.502(3) (Construction of Wells). However there may be an occasion where no such source is available and an undue hardship would result in obtaining it. Therefore, in this instance, the following procedure should be followed:

- I. Determine the best possible "fresh" water source and extract that water using due care in order to limit the amount of organic matter drawn in by placing a fine mesh screen or cloth over the intake.
- II. Add 1 quart (32 oz.) of basic / simple "house-hold" bleach (such as Chlorox, Purex, etc. Not the types with scented additives) to 100 gallons of water and thoroughly mix together up for drilling needs. Be sure to maintain the ratio of 1 quart bleach per 100 gallons of water if more is needed. **This should result in a Chlorine strength of approximately 125 mg/l (however the dissolved organic content in the source water will likely reduce this level) see comment in item III below.**
- III. Allow this mixture to stand in a containerized vessel (water truck) not a mud pit or tub for a time period of 30 minutes at a minimum. **At this point a check for Chlorine strength must be preformed with a "Hach Kit" (for product information call 1 800 558-9595) or equivalent in order to determine the residual Chlorine strength. If it is not in the range of 50 to 100 mg/l, add more bleach, mix and check again after another wait time of 10 minutes. Repeat this process until the proper Chlorine strength is achieved.**
- IV. Once all water needs are met, the remaining water that was mixed up with bleach should be treated as follows: **A product containing Sodium Bromide such as "Yellow-Out" (obtainable from a Pool Supply Store) will reduce the Chlorine to a level of approximately .01 mg/l or less. A dosing rate of approximately 3 to 6 oz* per 100 gal of water, dependent upon Chlorine strength, should be used and a contact time of a minimum of ½ hr is required. After mixing and waiting the proper amount of time, a check with the "Hach Kit" (or equivalent) must be preformed in order to determine the residual Chlorine strength. If the Chlorine has not been reduced to the required strength, repeat this process until it is achieved. Then the water may be discharged on the land surface, away from surface water bodies.**
- V. The water well should be able to be finished up using the natural ground water. When completed, the well should be disinfected, pumped off and developed.

This procedure should only be used in an "emergency" situation and not to be construed as a alternative from the normal practice of obtaining make-up water for drilling needs.

Note: mg/l stands for milligrams per liter, which is equivalent to ppm (parts per million).

*** The Sodium Bromide product will come with a measuring device, in ounces (oz).**

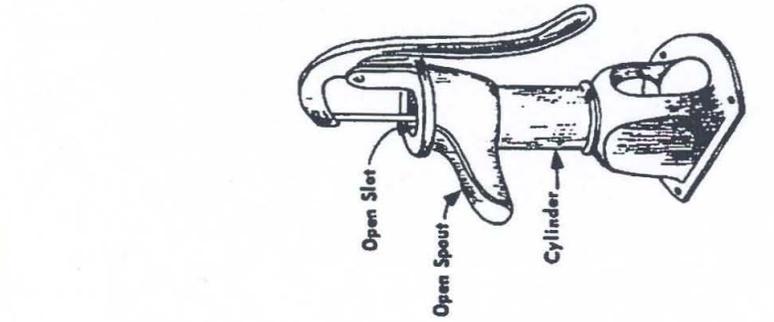
Appendix 5: General Technical Specifications and Diagrams

Hand pumps that are open to the environment serve as a direct conduit for ground water contamination. Therefore, if a hand pump is to be installed on a well, the following are guidelines for the type of hand pump to be installed:

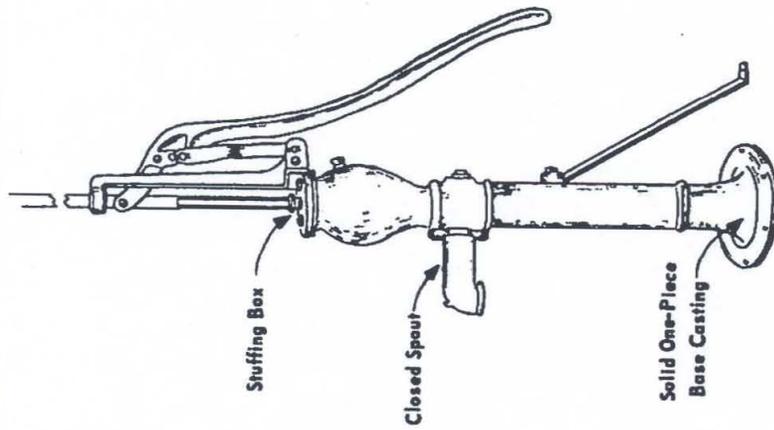
- The hand pump must have a closed spout directed downward
- The pump rod must operate through a stuffing box and packing nut.

This construction method prevents the groundwater from being contaminated by rain, insects, birds and other animals. There are numerous hand pumps available that may protect the ground water, however, the Department must approve the model you intend to install. Included are 3 drawings of types of hand pumps.

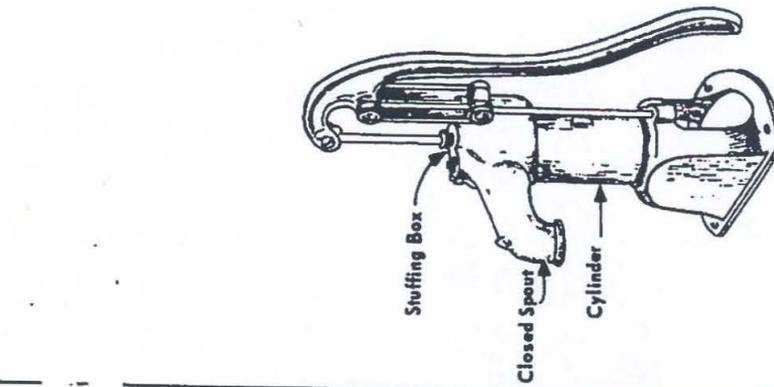
Hand Pumps



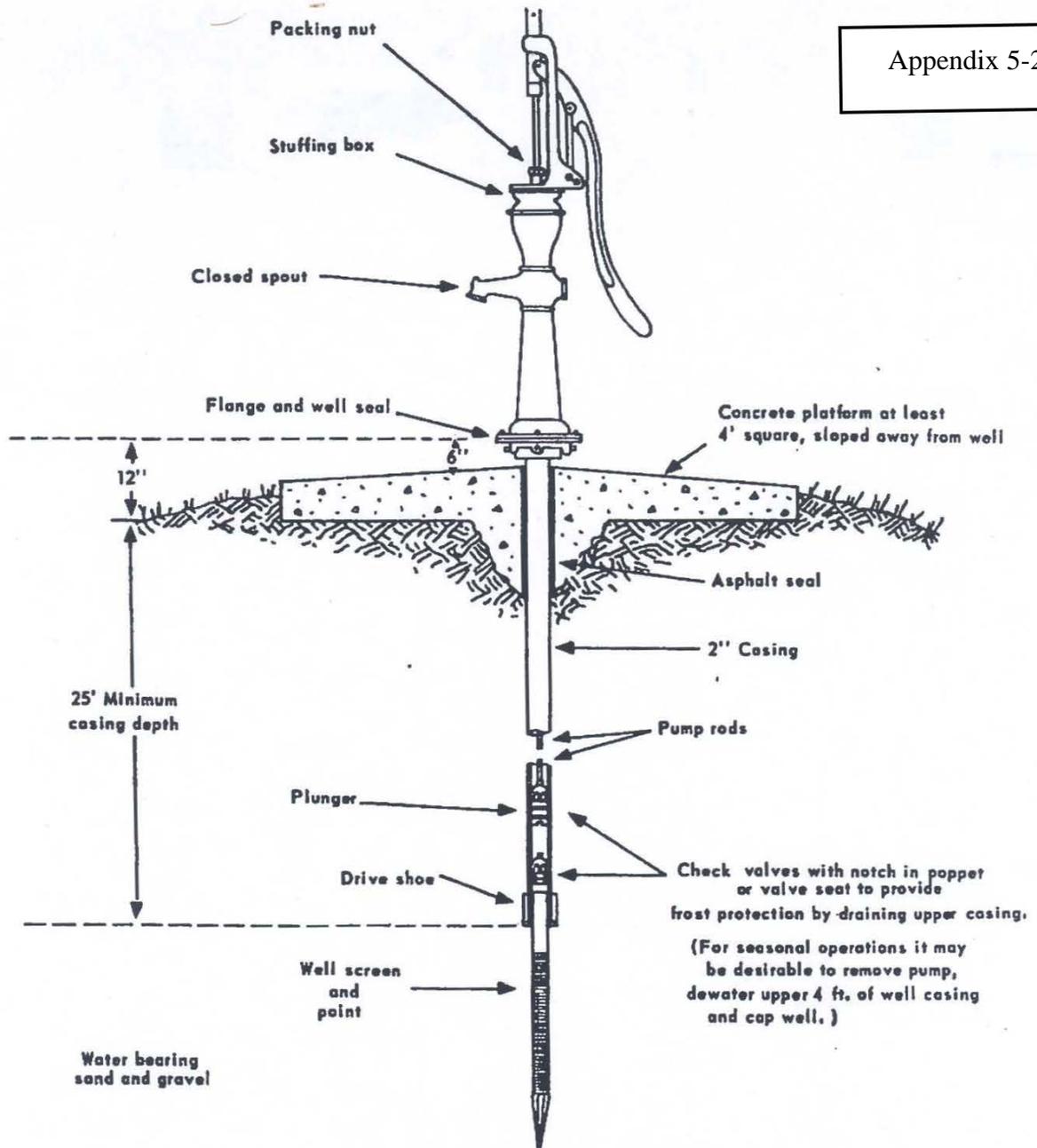
Pitcher Spout Pump-Net Approved.



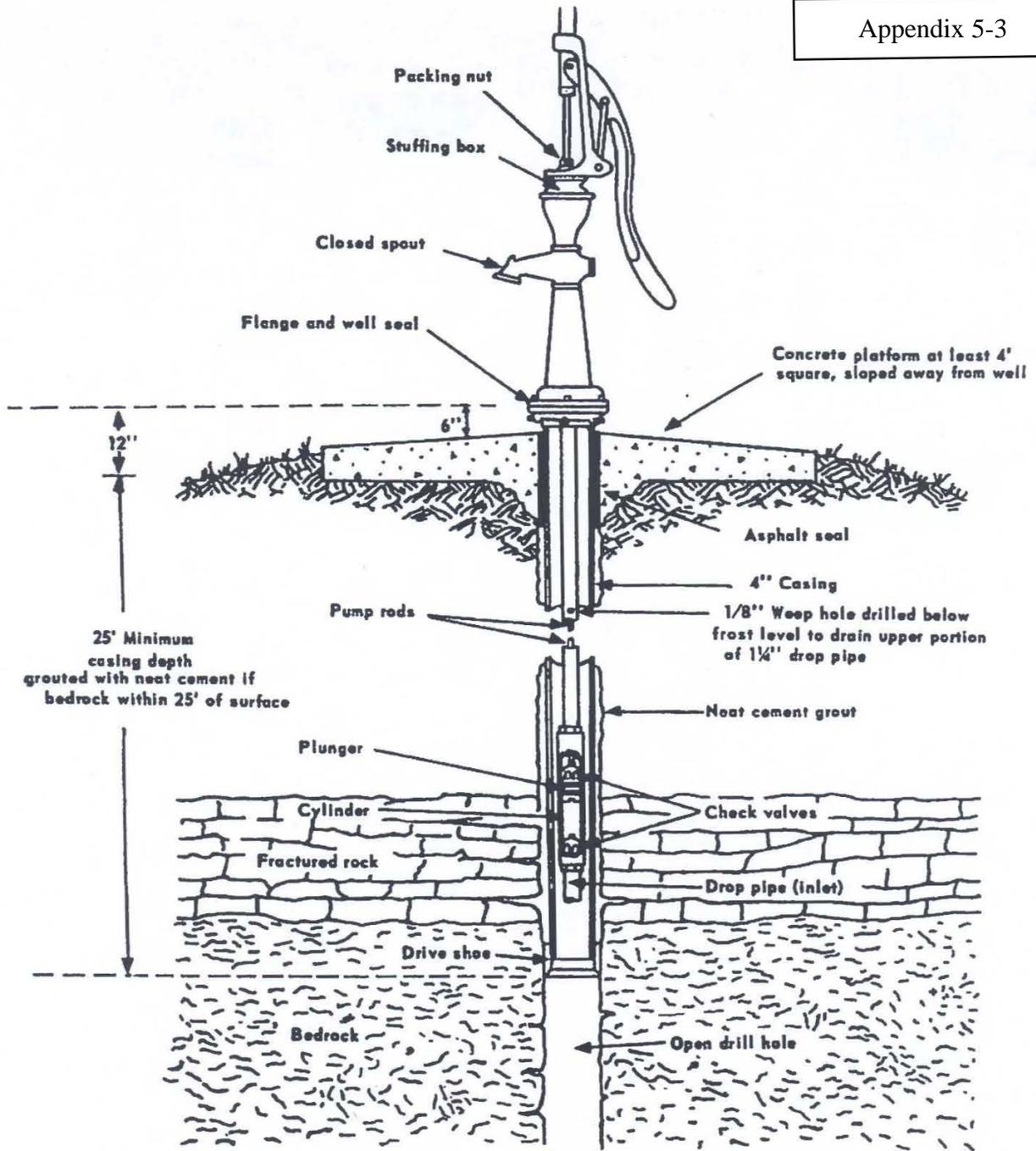
Force Pump-Approved



Suction Force Pump-Approved



Hand pump on a 2" well



Hand pump on a 4" rock well

