

UIC PERMIT PROCESSING GUIDANCE CLASS I AND MAJOR CLASS V WELLS March 2020

Note: This document is only meant to be guidance for application preparation and submittal through the Aquifer Protection Program - Underground Injection Control (UIC). This does not address everything required to be addressed by Department rules during the application process but serves as a guide to the common items that often require further information from the applicant after the application is submitted. Please keep in contact with the FDEP permit processor to ensure the completeness of all necessary parts of the application. Additional guidance, forms and other related information for the Aquifer Protection Program can be found at [Aquifer Protection Program - UIC](#).

Pre-application Meetings

Class I and Major Class V injection well permits are processed in Tallahassee. Pre-application meetings with the Tallahassee office are strongly encouraged for any new UIC facility, for the addition of new wells at existing facilities, or for first-time operation permits for existing wells. This is likely to be a teleconference. The pre-application meeting is where many of the applicant's/permittee's questions can be answered and the Department can provide guidance prior to the application submittal, which often results in a smoother permit application process.

The following list is some of the items that should be supplied for review by DEP prior to the pre-application meeting:

- Project location
- Project owner
- Project purpose
- Type of wastewater
- Map of the project area, site map
- Number of injection wells
- Expected well capacity (volume injected)
- Class I, Class V, or Exploratory wells?
- Injection well casing and total depths, aquifers targeted
- Monitoring wells (number, depth)
- Water quality of injectate, especially important for Class V wells
- Is it anticipated that a "relief mechanism" will be needed (zone of discharge, variance, water quality criteria exemption)?
- Discuss financial responsibility requirement (if applicable), especially for a non-local government applicant
- Will a second pre-application meeting be needed?
- When can we expect the application?

Some of this information may not be available at the time of the pre-application meeting. To reduce the questions associated with determining project feasibility, the DEP suggests that as much of the above information as is available be submitted prior to the pre-application meeting.

Application Form and Submittal

Submittals – Class I and Major Class V well applications and fees should be submitted to the Tallahassee office. Electronic submittals are strongly encouraged. A pdf document is ideal.

Receipt of Application – The application is considered received when a properly completed application form **and** the appropriate fee is received by the Department.

Fee –The fee schedule for injection well processing is found in Rule 62-4.050(4)(m), F.A.C. The application fee is per injection well. However, modification and permit transfer fees are per UIC facility.

The check should be made to the Florida Department of Environmental Protection or FDEP; the program name is not needed. The applicant name and a well identifier should be included with the check.

On-line payments can be made through the FDEP Business Portal at <http://www.fldepportal.com/go/>. In order to pay through the portal, the application will need to be submitted and entered into the Permit Application system. Once an application number is assigned to the project, FDEP will send that number to the applicant and payment can then be made through the portal.

Form – Nearly all major well applications should be made using form 62-528.900(1), Application to Construct/ Operate/ Abandon Class I, III, or V Injection Well Systems. The signatory on page 3 must meet the requirements of 62-528.340(1). Also, a professional engineer must sign and seal page 3. If the PE certification is a non-ink seal and is not legible on an electronic copy, a hard copy of the form with the applicant's signature included must be submitted with the appropriate fee in order to consider the application "received".

Application form 62-528.900(3) may be acceptable in the case of a simple Class V project where a professional engineer is not needed for the project.

Multiple Wells – When more than one injection well is to be permitted at the same facility, one application form can be used for multiple wells to be covered under the same permit if page two specifies which wells or the number of wells which are to be permitted, with well locations (latitude/longitude) noted there or on a separate page of the application. Alternately, multiple copies of page 2 or multiple application forms may be submitted.

Other Programs – Other programs may have permits or authorizations that need to be obtained in connection with the UIC project. This process is the applicant's responsibility, as the UIC permit does not provide authorization for activities that also fall under another Department program.

Permit Application Information

General – The requirements for a Class I permit are found on form 62-528.900(1). These are based on the requirements of Rule 62-528.405 through 62-528.460, F.A.C. Class V application information requirements are found in Rules 62-528.600 through 62-528.645, F.A.C. Keep in mind that Major Class V projects usually require more information than what is stated in Rule 62-528 or on the application form. Rule 62-528.605(2) allows the Department to require any of the Class I well criteria

for the construction, monitoring, reporting, and permitting of Class V wells. The applicant for a Major Class V well should review the Class I permitting requirements to determine which ones might apply to the Class V project and submit supporting information as appropriate.

Information Requirements, Class I Construction and Testing Application, 62-528.450

62-528.425(1)(a) and (b), 62-528.450(2)(i), (j), (k), and (l), and for municipal wells 62-600.540(4), F.A.C. Engineering Design

These rules contain much of the key information requirements for above-ground engineering, including pump type, wet well, pipeline from wet well or pump to the wellhead, flow meters, totalizers, meters and gauges, and wellhead design and materials. However, many of the above-ground details are tentative at the time of UIC well construction permitting and may not be available. Signed and sealed engineering drawings will be required prior to operational testing approval. At a minimum, downhole well drawings showing casing or tubing materials and cement type and thickness should be submitted for a well construction permit.

62-528.450(2)(a), (b) AOR Maps and Tables

Well locations for known wells in area of review (AOR) may be located by showing coordinates or addresses on the table, as is typically obtained from public record searches, rather than to show each well on a map. However, for wells whose total depths are equal to or deeper than the monitor zones, these wells should be listed on a table **and** their locations shown on a map. Well inventory sources should be provided. Typically, the local water management district, county records, FDEP Oil and Gas Program, and USGS are queried. Additional databases may also be queried as available. The AOR should be calculated using the maximum requested volume for a ten-year period, porosity of 20%, and aquifer thickness of 200 feet. Re-permitting for sites with an injection history should include the historic volume injected plus the ten-year future injection volume. For an exploratory well, a one-mile AOR is adequate in most cases.

62-528.450(2)(f)3. Wastestream Characterization Analysis

When different wastestreams are to be permitted, a separate analysis of each major wastestream is required. For example, a well permitted for WWTP effluent and ROWTP concentrate should have an analysis for each wastestream. For an industrial waste with many components this is not practical, and one blended sample of the typical discharge may be accepted. For all analyses, the primary and secondary drinking water standards of 62-550.310 and .320, F.A.C., should be analyzed.

For some facilities, especially municipal effluent, an existing recent comprehensive analysis may be submitted to satisfy this information request. The wastestream analysis should be less than one year old.

62-528.450(2)(i), (j), (k), (l) Above-ground Engineering Aspects

"Contingency plans" includes alternate and emergency discharge. For municipal effluent or blended wells (municipal and desalination/reverse osmosis {RO}) the application should address if the injection well is the backup discharge to reuse of reclaimed water.

62-528.450(2)(n) Construction and Testing

The well construction and testing program should be adequate to locate the base of the Underground Source of Drinking Water (USDW) with packer tests and geophysical logs. In Southeast Florida, a pilot hole through the surficial sediments and Hawthorn Group is generally not needed; a large

diameter borehole may be drilled to the bottom of the Hawthorn. Otherwise, a 12-inch pilot hole should be used for each drilling segment. Geophysical logs should include at a minimum gamma ray, dual induction, BHC sonic, and caliper in all other pilot holes.

For industrial wells with a tubing, packer, and fluid-filled annulus, the maximum injection velocity of 10 feet/second should be based on the internal diameter (ID) of the final casing. If the annulus is cemented, the velocity is based on the ID of the cemented tubing. Interim mechanical integrity tests of wells with a cemented annulus are no longer required if the final casing and the tubing extend to the top of the injection zone and there are no factors which put the well at risk for a loss of mechanical integrity without the extra testing.

Injection test timings – Either the injection test or the RTS may be performed first. If injection is to be with effluent, however, the full mechanical integrity must be demonstrated prior to initiation of the injection test. The level of background water quality of the proposed injection test fluid depends on the type of fluid proposed; the permit will specify the sampling requirement. The injected water should be of a low density to initiate upward movement if a pathway exists. RTS tests are not conducted on Class V wells completed in an USDW.

62-528.450(2)(o)-Financial Responsibility, Plugging and Abandonment Plans

A plugging and abandonment (P&A) plan and estimated costs in current dollars should be made to support the demonstration of financial responsibility. The cost estimate must be itemized and be current (no more than one year old). The cost estimate must include a contingency amount equal to at least 10% of the total cost. Financial Responsibility is a completeness item for the application and must be demonstrated and approved prior to application completeness.

For the P&A plan, all injection and monitor wells must be covered. The injection well(s) must be cemented from ten feet below the bottom of the final casing to surface with neat cement. All calculations and costs should be based on neat cement in the injection well. Uncemented tubing must be removed prior to cementing unless otherwise approved to remain in place; non-retrievable packer elements may remain in place. Monitor wells may generally be cemented with neat cement at the bottom and the remainder with up to 6% bentonite. Drawings of the plugged wells are recommended but are not necessary unless the well has an unusual design.

The options for financial responsibility demonstration are contained in the document [Financial Responsibility Options for Owners and Operators of Injection Wells](#), which is posted on the program website. Local Government Guarantee certification forms must be signed by a person who can “bind” the local government to the guarantee, such as Mayor, head of City or County Commission, chief attorney, or chief financial officer. Only a written delegation by the local government may allow another person, such as Utilities Manager, to sign the form. The signature must be notarized using one of the approved formats specified in Chapter 117.05, Florida Statutes. The program website also has the Local Government Guarantee certification form.

Information Requirements, Class I First-Time Operation Application, 62-528.455

General

A revised AOR is not required for a first-time operation permit, although it is preferred in the case of several years passing since the last one was done. A minimum of six months of operational testing data should be required to evaluate the operation permit application.

62-528.455(1)(c)1. Results Reporting

The monitoring results for operational testing should be submitted in tabular and graphical format. Injection and monitor well physical and chemical parameters should be included. High level disinfection results for domestic effluent should be included where applicable. For industrial wells with annular pressure monitoring, graphs of daily maximum and minimum readings of annular pressure should be included with all instances of addition/removal of annular pressure/annular fluid noted. Parameters with many results of "undetectable" or less than the laboratory detection limit do not need to be graphed unless the parameter exhibits detections above the MCL established in 62-550.310 and .320. The period since the last permit submittal should be included. For facilities where vertical fluid movement has been questioned in the past, has been identified, or where trends need to be viewed over a longer time period, longer monitoring histories should be submitted (since the beginning of UIC monitoring). A narrative of the data results should be included. Trends, erratic data, or changes in data values should be addressed.

62-528.455(1)(c)4. Operation and Maintenance Manual

If this was submitted as a draft earlier to obtain operational testing approval, a final version must be submitted for the operation permit application. If no changes were made since the draft version, it should be stated as such and a revision will not be necessary.

62-528.455(1)(c)6. Proof of Well Existence

This is the land survey conducted by a Florida-certified land surveyor. Proof that the survey showing the well was recorded must be submitted if this documentation has not previously been submitted to the Department. In most cases this is done by filing at the county courthouse.

62-528.455(3)(b)8. Plugging and Abandonment Plan, Cost Estimate, Financial Responsibility

A revised P&A plan and cost estimate based on as-built well details should be submitted. If costs increased since the last approved estimate, a new submittal for financial responsibility approval is necessary. The same guidelines apply as in the construction permit application above.

Information Requirements, Class I Operation Renewal Application, 62-528.455(3)(b)1. Area of Review

The AOR should be calculated using the maximum permitted volume for the next 10-year period plus the historic volume injected for the wellfield. A porosity of 20% and aquifer thickness of 200 feet should be used.

62-528.455(3)(b)3. Wastestream Characterization Analysis

Include a recent completed analysis for the same parameters as for a construction permit. The wastestream characterization analysis cannot be more than a year old. See the construction permit guidelines for more information.

62-528.455(3)(b)4. Wastestream Processes

The process types that are generating the wastestream.

62-528.455(3)(b)5. Mechanical Integrity Tests

Documentation of the last Mechanical Integrity Test (MIT) demonstration must be included with the application. A reference to that document (name and data) is sufficient.

62-528.455(3)(b)6. Monitoring Results
See above under **First-time Operation Permit**

62-528.455(3)(b)8. Plugging and Abandonment Plan, Cost Estimate, Financial Responsibility
As above under Class I Operation Application.

Information Requirements, Class I Plugging and Abandonment Application, 62-528.460

Well Abandonment Method – Neat cement should be used for injection wells and monitor wells in the injection zone unless additives are approved; a technical rationale of why the additives are required must be included for this request. Monitor wells in overlying aquifers may be plugged with neat cement at the bottom and up to 6% bentonite within the casing.

See 62-528.435, F.A.C., for plugging and abandonment criteria and procedures.

Information Requirements, Class V ASR and other Major Class V Construction Applications

DEP may apply any Class I construction requirements to Class V wells when necessary to protect waters of the State 62-528.605(2). See **General Information** section above for more details.

62-528.450(2)(a), (b) AOR Maps and Tables

The calculation of the AOR may be based on site-specific porosity and thickness plus the expected injected volume of fluid over the next 10-year period, not necessarily 20% porosity or 200 feet of thickness. ASR and aquifer recharge projects should use a minimum of a one-mile AOR. For small projects a one-half mile AOR may be acceptable, with a focus on potable wells.

62-528.450(2)(k) Contingency Plans

These are not generally appropriate for ASR or aquifer recharge; may be needed for other major Class V projects.

62-528.450(2)(o) Financial Responsibility, Plugging and Abandonment Plans

Financial responsibility not needed for Class V wells except a few deep wells (not exploratory wells). Plugging and abandonment plans should be submitted for all deep wells, ASR and aquifer recharge wells, including exploratory wells.

For ASR and aquifer recharge projects, a scaled map showing the entire property owned by the applicant must be submitted. Distances from each injection well to property boundaries and to monitoring wells should be shown or stated. Any water quality standards which will not be met need to be addressed. Generally, all primary and secondary drinking water standards need to be met in injected water in the USDW.