



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

BOB MARTINEZ CENTER
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

RICK SCOTT
GOVERNOR

CARLOS LOPEZ-CANTERA
LT. GOVERNOR

JONATHAN P. STEVERSON
SECRETARY

SENT VIA ELECTRONIC MAIL

In the Matter of an Application for Permit by:

1 April 2015

Michael F. Bailey, P.E., Utilities Director
Cooper City Utilities
11791 SW 49th Street
Cooper City, Florida 33330
mbailey@coopercityfl.org

Broward County UIC
[153012-006-00/11](tel:153012-006-00/11)
WACS ID [84230](#)
Class I Injection Well System, IW-1
Operation Permit

NOTICE OF DRAFT PERMIT

The Department of Environmental Protection hereby gives notice that a Draft Permit has been developed for the proposed project as detailed in the application specified above, for the reasons stated below.

The applicant, Cooper City Utilities, Michael F. Bailey, P.E., Utilities Director, 11791 SW 49th Street, Cooper City, Florida 33330 applied on January 5, 2015 to the Department of Environmental Protection for a permit to operate a Class I injection well system.

The Department has permitting jurisdiction under chapter 403 of the Florida Statutes and the rules adopted thereunder. The project is not exempt from permitting procedures. The Department has determined that an operation permit is required for the proposed work.

Pursuant to section 403.815 of the Florida Statutes, and Rule 62-528.315 (6)(b) of the Florida Administrative Code, you (the applicant) are required to publish at your own expense the enclosed Notice of Draft Permit. The Notice must be published one time only within 30 days in a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031 of the Florida Statutes, in the county where the activity is to take place. The applicant shall provide proof of publication to the Tallahassee Office of the Department within seven (7) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

Any interested person may submit written comments on the draft permit within 30 days of the

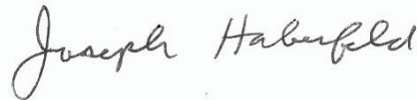
PERMITTEE: Michael F. Bailey, P.E., Utilities Director
Cooper City Utilities
George A. Haughney, P.E., Utilities Complex

Permit Number: 153012-006-UO/II
WACS ID: 84230

public notice. Written comments may be submitted to the Department of Environmental Protection, Aquifer Protection Program, 2600 Blair Stone Road, MS 3530, Tallahassee, Florida 32399-2400. All comments received within the 30-day period and during the public meeting will be considered by the Department in formulating a final decision concerning this project. If a public meeting is arranged it must be held in the area of the well no less than 30 days after publication of this Notice for the purpose of receiving verbal and written comment concerning this project. If a public meeting is not arranged prior to publication, the Notice must provide an opportunity for a public meeting. If a public meeting is later scheduled, there will be another 30-day notice period for that meeting. Please contact Douglas Thornton, Engineering Specialist at 850.245.8666, for additional information.

Executed in Leon County, Florida.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL
PROTECTION



Joseph Haberfeld, P.G.
Aquifer Protection Program Administrator

PERMITTEE: Michael F. Bailey, P.E., Utilities Director
Cooper City Utilities
George A. Haughney, P.E., Utilities Complex

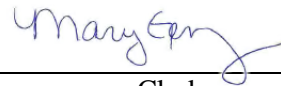
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CERTIFICATE OF SERVICE

The undersigned designated clerk hereby certifies that this NOTICE OF DRAFT PERMIT and all copies were mailed before the close of business on Wednesday, April 01, 2015, to the listed persons.

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section.120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged



Clerk

April 1, 2015

Date

Copies Furnished To:

Joseph Haberfeld, FDEP/TLH	joe.haberfeld@dep.state.fl.us
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STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF DRAFT PERMIT

The Department of Environmental Protection hereby provides Notice that it has prepared a Draft Permit for the proposed project as detailed in application File No. 153012-006-UO/II (WACS #84230), subject to the conditions specified in the draft permit and summarized below. The applicant, Cooper City Utilities, Michael F. Bailey, P.E., Utilities Director, 11791 SW 49th Street, Cooper City, Florida 33330 applied on January 5, 2015 for a permit to operate a Class I injection well system. The project is located at 11791 S.W. 49th Street, Cooper City, Florida 33330.

The facility will operate - A non-hazardous Injection Well System, consisting of one (1) Class I injection well (IW-1), with a twenty-four inch (24") diameter steel casing to 2,975 feet below land surface (bls) and fourteen-inch, (14"), diameter steel casing to 2,955 feet bls, and a total depth of 3,400 feet bls. The annular space between the fourteen-inch, (14"), tubing and twenty four-inch, (24"), final casing is filled with a non-corrosive fluid. Injection will be into the Oldsmar Formation for the primary means of disposal of nanofiltration reject concentrate from the Cooper City WTP membrane treatment process and secondary treated domestic effluent from the Cooper City WWTP. The upper zone of monitor well MW-1 monitors from 1,660 to 1,710 feet bls and the lower zone of monitor well MW-1 monitors from 1,900 to 1,950 feet bls.

The Department has permitting jurisdiction under Chapter 403 of the Florida Statutes and the rules adopted thereunder. The project is not exempt from permitting procedures. The Department has determined that an operation permit is required for the proposed work.

Any interested person may submit written comments on the draft permit and may request a public meeting within 30 days after publication of this public notice. A request for a public meeting shall be submitted in writing and shall state the nature of the issues proposed to be raised in the meeting. If a public meeting is later scheduled, there will be another 30-day notice period for that meeting. Written comments or a public meeting request shall be submitted to the Department of Environmental Protection, Aquifer Protection Program, 2600 Blair Stone Road, MS 3530, Tallahassee, Florida 32399-2400, which is the office processing this permit application. All comments received within the 30-day period will be considered in formulation of the Department's final decision regarding permit issuance.

The application, draft permit, and fact sheet are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Protection, Southeast District Office, 3301 Gun Club Road, MSC 7210-1, West Palm Beach, Florida 33406 and at the Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Any additional information concerning this project may be obtained by contacting Douglas Thornton, Engineering Specialist, at 850.245.8666.



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LT. GOVERNOR

JONATHAN P. STEVERSON
SECRETARY

Underground Injection Control Class I Injection Well System Operation Permit

Permittee:

Michael F. Bailey, P.E., Utilities Director
Cooper City Utilities
11791 SW 49th Street
Cooper City, Florida 33330
m Bailey@coopercityfl.org

Permit/Certification

Permit Number: 153012-006-UO/II
WACS ID: 84230
Date of Issuance: Draft
Date of Expiration: Draft
Permit Processor: Douglas Thornton

Facility

George A. Haughney, P.E., Utilities Complex
11791 S.W. 49th Street
Cooper City, Florida 33330

Location

County: Broward County UIC
Latitude: 26° 3' 32" N
Longitude: 80° 18' 10" W

Project: Class I Injection Well System IW-1.

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and the rules adopted thereunder. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows.

TO OPERATE: A non-hazardous Injection Well System, consisting of one (1) Class I injection well (IW-1), with a twenty-four inch (24") diameter steel casing to 2,975 feet below land surface (bls) and nominal fourteen-inch, (14"), diameter steel casing to 2,955 feet bls, and a total depth of 3,400 feet bls. The annular space between the fourteen-inch, (14"), tubing and twenty four-inch, (24"), final casing is filled with a non-corrosive fluid. Injection will be into the Oldsmar Formation for the primary means of disposal of nanofiltration reject concentrate from the Cooper City Water Treatment Plant (WTP) membrane treatment process and secondary treated domestic effluent from the Cooper City Wastewater Treatment Plant (WWTP). The maximum disposal shall be 5.95 million gallons per day (MGD) and 4132 gallons per minute (gpm). The upper zone of monitor well MW-1 monitors from 1,660 to 1,710 feet bls and the lower zone of monitor well MW-1 monitors from 1,900 to 1,950 feet bls.

PERMITTEE: Michael F. Bailey, P.E., Utilities Director
 Cooper City Utilities
 George A. Haughney, P.E., Utilities Complex

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IN ACCORDANCE WITH: The Application to Operate DEP Form No. 62-528.900(1) received, January 5, 2015, response to the Department’s January 22, 2015, request for additional information, and supporting information submitted to this agency.

LOCATION: George A. Haughney, P.E., Utilities Complex, 11791 S.W. 49th Street, Cooper City, Florida 33330, in the county of Broward.

The injection and monitoring wells at this facility are designated as follows:

Injection Wells:

<i>Well Name</i>	<i>WACS Effluent Testsite ID</i>	<i>Total Well Depth *</i>	<i>Casing Diameter (inches)</i>	<i>Casing or Tubing Type</i>	<i>Casing Depth or Interval*</i>
IW-1	9110	3400	50	Steel	250
			42	Steel	985
			34	Steel	2000
			24	Steel	2975
			14	Steel	2955
			Open hole		From 2975 to 3400

*Feet Below Land Surface

Monitoring Wells System

<i>Well Name</i>	<i>WACS Monitoring Well Testsite ID</i>	<i>Monitoring Zone</i>	<i>Casing Diameter (OD)</i>	<i>Casing Type</i>	<i>Casing Depth*</i>	<i>Monitoring Depth*</i>
MW-1			24	Steel	251	
			16	Steel	1660	
	19424A	Upper Zone				From 1660 to 1710
			6.625	Steel	1900	
	19424B	Lower Zone				From 1900 to 1950

*Feet Below Land Surface

SUBJECT TO: Specific Conditions I-VI and General Conditions 1-24.

Specific Conditions

I. OPERATING REQUIREMENTS

A. General

1. Only non-hazardous injectate as described in this permit and purge water from the on-site monitoring wells (associated with the injection well system) may be discharged into the injection wells. [62-528.400(1)]
2. The injection pressure at the wellhead shall be monitored and controlled at all times to ensure the maximum pressure at the wellhead does not exceed two-thirds of the most recent tested pressure on the final casing, final cemented tubing, or casing/tubing annular space, as applicable. The following table outlines the wellhead pressures applicable at the time of permit issuance:

Well	Maximum Permitted Wellhead Pressure (psi)	Most Recent tested wellhead pressure at the time of issuance of this permit (psi)
IW-1	105	157

At such time as the next pressure test is performed and a report for that test is submitted to and accepted by the Department, the maximum wellhead pressure allowable will become two-thirds of the tested pressure from the successive test.

[62-528.300(6)(e)]

3. The flow to the injection wells at each wellhead shall be monitored and controlled at all times to ensure the maximum fluid velocity down the well during operation does not exceed the respective flow rate indicated below, and shall not exceed 10 feet per second except during planned testing, maintenance, or emergency conditions in which case the flow rate shall not exceed 12 feet per second [62-528.415(1)(f)]:

Well	Peak Flow Rate	
	GPM	MGD
IW-1	4132	5.95

4. No underground injection is allowed that causes or allows movement of fluid into an underground source of drinking water if such fluid movement may cause a violation of any Primary Drinking Water Standard or may otherwise affect the health of persons. [62-528.440(2)(c)]
5. All equipment of this facility shall be operated and maintained so as to function consistently as designed in removing pollutants. The wastewater stream shall remain non-hazardous at all times. [62-528.307(3)(b) and 62-528.400(1)]
6. In the event a well must be plugged or abandoned, the permittee shall obtain a permit from the Department as required by Chapter 62-528, Florida Administrative Code

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(F.A.C.). When no longer used for their intended purpose, these wells shall be properly plugged and abandoned. Within 180 days of well abandonment, the permittee shall submit to the Department the proposed plugging method, pursuant to Rule 62-528.460, F.A.C. [62-528.460(1) and 62-528.435(6)]

7. In accordance with rules 62-4.090 and 62-528.455(3)(a), F.A.C., the permittee shall submit an application for permit renewal at least 60 days prior to expiration of this permit. [62-528.307(3)(a)]
8. Hurricane Preparedness: Preparations to be made by permittee upon issuance of a "Hurricane Watch" by the National Weather Service include, but are not limited to:
 - a. Secure all onsite salt and other stockpiled additive materials to prevent surface and/or ground water contamination.
 - b. Properly secure equipment to prevent damage to well(s) and onsite treatment process equipment.

[62-528.307(1)(f)]

B. Mechanical Integrity and Mechanical Integrity Testing (MIT)

1. Mechanical Integrity.
 - a. The permittee shall maintain the mechanical integrity of the well at all times.
 - b. If the Department determines that the injection well lacks mechanical integrity, written notice shall be given to the permittee.
 - c. Within 48 hours of receiving written notice that the well lacks mechanical integrity, unless the Department requires immediate cessation of injection, the permittee shall cease injection into the well unless the Department allows continued injection pursuant to subparagraph d. below.
 - d. The Department shall allow the permittee to continue operation of a well that lacks mechanical integrity if the permittee has made a satisfactory demonstration that fluid movement into or between underground sources of drinking water is not occurring.

[62-528.307(3)(e)]

2. The permittee shall demonstrate mechanical integrity at least once every five years during the life of each injection well. In the event operational or other data indicate a possible loss of integrity in an injection well, the mechanical integrity and other testing may be required at less than a five-year interval. For each injection well, the mechanical integrity testing program shall include: TV survey, pressure test, radioactive tracer survey (RTS), and temperature log. Mechanical integrity testing shall be run and completed prior to the following dates:

Five-Year MIT	
Well Name	Required Completion Date
IW-1	June 30, 2016

[62-528.300(6)(b)2, 62-528.300(6)(c), and 62-528.425(1)(d)]

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3. A plan describing the mechanical integrity procedures shall be submitted to the Department's Tallahassee and Southeast District offices for approval at least 90 days prior to the required completion date noted above. *[62-528.307(1)(m)4]*
4. The Department's Southeast District office must be notified a minimum of seventy-two (72) hours prior to all testing for mechanical integrity on the injection wells. The testing procedure must be approved by the Department before testing begins. All testing must be initiated during daylight hours, Monday through Friday. An evaluation of all test results must be submitted with all test data. *[62-528.300(6)(f)]*
5. Pursuant to Rule 62-528.430(2)(b)2.a., F.A.C., the final MIT report for the demonstration of mechanical integrity for the injection wells shall be submitted to the Department's Tallahassee office for review and approval within three months of the completion date for mechanical integrity testing. In addition, a copy of the cover letter for the MIT results shall be sent to the U.S. Environmental Protection Agency, Region 4, UIC program, 61 Forsyth St. SW, Atlanta, GA 30303-8909. The final MIT report shall be prepared by a registered/certified Professional Engineer and/or Professional Geologist (as appropriate), and it shall address all tests noted in condition B.2 (including procedures followed, interpretations and results), and shall include a tabular presentation/graphical evaluation of monitoring well data over the previous 5-year period. If the well has failed any of the specified tests, the MIT report shall include a plan for corrective action for all discovered deficiencies. *[62-528.440(5)(b)]*

C. Surface Equipment

1. The integrity of the monitoring zone sampling systems shall be maintained at all times. Sampling lines shall be clearly and unambiguously identified by monitoring zone at the point at which samples are drawn. All reasonable and prudent precautions shall be taken to ensure that samples are properly identified by monitoring zone and that samples obtained are representative of those zones. Sampling lines and equipment shall be kept free of contamination with independent discharges and no interconnections with any other lines. *[62-528.307(1)(f) and 62-528.307(3)(b)]*
2. The surface equipment for the each injection well disposing of domestic (municipal) effluent shall maintain compliance with Chapter 62-600.540(4), F.A.C., for water hammer control, screening, access for logging and testing, and reliability and flexibility in the event of damage to the well and effluent piping. *[62-600.540(4), 62-528.307(1)(f), and 62-528.307(3)(b)]*
3. Injection wells not disposing of domestic (municipal) effluent shall maintain compliance with Chapter 62-528.450(2)(j), F.A.C., for water hammer control, as well as access for logging and testing, and reliability and flexibility in the event of damage to the well and effluent piping. *[62-528.450(2)(j), 62-528.307(1)(f), and 62-528.307(3)(b)]*

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4. The surface equipment and piping for the injection and monitoring wells shall be kept free of corrosion at all times. [62-528.307(1)(f) and 62-528.307(3)(b)]
5. Spillage onto the injection well pad(s) during construction activities, and any waters spilled during mechanical integrity testing, other maintenance, testing or repairs to the system(s) shall be contained on the pad(s) and directed to a sump which in turn discharges to the pumping station, wet well, or via other approved means to the injection well system(s). [62-528.307(1)(f) and 62-528.307(3)(b)]
6. The injection well pads shall be maintained and retained in service for the life of the injection wells. The injection well pads are not, unless specific approval is obtained from the Department, to be used for storage of any material or equipment at any time. [62-528.307(1)(f) and 62-528.307(3)(b)]
7. The surficial aquifer monitoring wells adjacent to the injection and monitoring wells shall be secured, maintained, and retained in service for subsequent sampling that may be needed (i.e., should there be an accidental discharge to the surficial aquifer); alternatively, the facility may submit a request to the Department for cessation of sampling followed by capping, or plugging and abandonment of these wells. [62-528.307(3)(b) and 62-520.600(6)(k)]

II. QUALITY ASSURANCE/QUALITY CONTROL

1. The permittee shall ensure that the operation of this injection well system shall be as described in the application and supporting documents. Any proposed modifications to the permit shall be submitted in writing to the Tallahassee office of the Aquifer Protection Program for review and clearance prior to implementation. Changes of negligible impact to the environment and staff time will be reviewed by the program manager, cleared when appropriate and incorporated into this permit. Changes or modifications other than those described above will require submission of a completed application and appropriate processing fee as per Rule 62-4.050, F.A.C. [62-528.100 and 62-4.050]
2. Proper operation and maintenance include effective performance and appropriate quality assurance procedures; adequate operator staffing and training; and adequate laboratory and process controls. [62-528.307(3)(b)]
3. All water quality samples required by this permit shall be collected in accordance with the appropriate Department Standard Operation Procedures (SOP), pursuant to Chapter 62-160, Field Procedures. A certified laboratory shall conduct the analytical work, as provided by Chapter 62-160, F.A.C., Laboratory Certification. Department approved test methods shall be utilized, unless otherwise stated in this permit. All calibration procedures for field testing and laboratory equipment shall follow manufacturer's instrumentation manuals and satisfy the requirements of the Department SOPs. A listing of the SOPs pertaining to field and laboratory activities is available at the FDEP website at: <http://www.dep.state.fl.us/water/sas/sop/sops.htm>. [62-4.246 and 62-160]

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4. All indicating, recording and totalizing devices associated with the injection well system shall be maintained in good operating condition and calibrated annually at a minimum. The pressure gauges, flow meter, and chart records shall be calibrated using standard engineering methods. *[62-528.307(1)(f) and 62-528.307(3)(b)]*
5. All reports submitted to satisfy the requirements of this permit shall be signed by a person authorized under Rule 62-528.340(1), F.A.C., or a duly authorized representative of that person under Rule 62-528.340(2), F.A.C. All reports required by this permit which are submitted to the Department shall contain the following certification as required by Rule 62-528.340(4), F.A.C.:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

[62-528.340(1), (2), and (4)]

6. Analyses shall be conducted on unfiltered samples, unless filtered samples have been approved by the Southeast District as being more representative of ground water conditions. *[62-520.310(5)]*

III. TESTING AND REPORTING REQUIREMENTS

A. General

1. The permittee shall submit monthly to the Department the results of all injection well and monitoring well data required by this permit no later than the last day of the month immediately following the month of record. The report shall include:
 - a. A cover page summarizing the current status of all monthly activities, including, but not limited to, the certification and signature required in condition II.5.
 - b. Operational and water quality data in a tabular format. The following identifying information must be included on each data sheet:
 - i. Facility Name
 - ii. Well Name
 - iii. UIC Permit Number
 - iv. WACS Facility ID
 - v. WACS Testsite ID number (on appropriate data sheet) as provided on the Injection Well and Monitoring Well tables on page 2 of this permit.
 - c. Laboratory pages and supporting documentation*[62-528.307(3)(d)]*

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2. The report may be sent via electronic mail in Adobe™ (.pdf) format to the following Program e-mail addresses:

Southeast District	SED_UIC@dep.state.fl.us
Tallahassee - UIC Program	TAL_UIC@dep.state.fl.us

If a paper copy of the report is submitted, it should be sent to Department staff at the following addresses:

Southeast District	3301 Gun Club Road, MSC 7210-1 West Palm Beach, Florida 33406
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Tallahassee - UIC Program	2600 Blair Stone Road, MS 3530 Tallahassee, Florida, 32399-2400
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[62-528.307(3)(d)]

B. Monitoring

- The injection system shall be monitored in accordance with Rules 62-528.425(1)(g) and 62-528.430(2), F.A.C. The following injection well performance data and monitor zone data shall be recorded and reported in the Monthly Operating Report (MOR) as indicated below. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. [62-528.307(3)(d) and 528.430(2)]

PARAMETER	UNIT	RECORDING FREQUENCY	FREQUENCY OF ANALYSES	
			IW-1 9110	MW-1 19424A & 19424B
Injection Pressure, max.	psi	continuous	a	
Injection Pressure, min.	psi	continuous	a	
Injection Pressure, avg.	psi	continuous	a	
Flow Rate, max.	gpm	continuous	a	
Flow Rate, min.	gpm	continuous	a	
Flow Rate, avg.	gpm	continuous	a	
WTP Concentrate Injected	mg	daily/monthly	a	
WWTP Effluent Injected	mg	daily/monthly	a	
Total Volume (Injected)	mg	daily/monthly	a	
Annular Pressure, max.	psi	continuous	a	
Annular Pressure, min.	psi	continuous	a	
Annular Pressure, avg.	psi	continuous	a	
Fluid Added to or Removed From Annulus	gal	daily/monthly		
Pressure Added to or Removed From Annulus	psi	daily/monthly		
Water Level or Pressure max.	ft NAVD or psi	continuous		a
Water Level or Pressure min.	ft NAVD or psi	continuous		a
Water Level or Pressure avg.	ft NAVD or psi	continuous		a
pH ^b	std. units	grab	M ^{WTP}	M
Specific Conductance ^b	µmhos/cm	grab	M ^{WTP}	M
Temperature (field) ^b	°C	grab	M ^{WTP}	M
Ammonia	mg/L	grab	M ^{WWTP}	M
Calcium Hardness as CaCO ₃	mg/L	grab	M ^{WTP}	M
Chloride	mg/L	grab	M ^{WTP}	M
Magnesium Hardness as CaCO ₃	mg/L	grab	M ^{WTP}	M
Nitrate + Nitrite as N	mg/L	grab	M ^{WWTP}	M
Sulfate	mg/L	grab	M ^{WTP}	M
Total Dissolved Solids	mg/L	grab	M ^{WTP}	M
Total Hardness as CaCO ₃	mg/L	grab	M ^{WTP}	M
Total Kjeldahl Nitrogen	mg/L	grab	M ^{WWTP}	M
Gross Alpha	pCi/L	grab	Q ^{WTP}	Q*
Radium 226	pCi/L	grab	Q ^{WTP}	Q*
Radium 228	pCi/L	grab	Q ^{WTP}	Q*

See injection well and monitoring well tables at beginning of permit for more information.

M – monthly; Q – quarterly;

^a – Operational data reporting for flows, pressures and water levels: daily max, min and average from continuous reporting; monthly max, min and average (calculated from daily averages).

^b – Field samples

^c – Both the upper and lower monitor zone.

M^{WWTP} – Sample only from WWTP effluent during months WWTP effluent is injected

M^{WTP} – Sample only from WTP concentrate during months WTP concentrate is injected

* - Lower monitor zone only.

2. A specific injectivity test shall be performed quarterly on the injection well as required by Rule 62-528.430 (2) (b)l.b., F.A.C. Pursuant to Rule 62-528.430(2) (d), F.A.C, the specific injectivity test shall be performed with the pumping rate to the well set at a predetermined level and reported as the specific injectivity index (gallons per minute/specific pressure). The pumping rate to be used shall be based on the expected flow, the design of the pump types, and the type of pump control used. As part of this test, the well shall be shut-in for a period of time necessary to conduct a valid observation of pressure fall-off. The specific injectivity test data shall be submitted along with the monitoring results of the injection and monitoring well data. *[62-528.430(2) (b) and (d)]*
3. Pertaining to the evacuation (purging) of monitoring wells, which is required prior to the collection of samples for the Monthly Operating Reports (MORs), the facility may elect to follow either one of the following two purging protocols:
 - a. The protocol stated below:

A minimum of three well volumes of fluid shall be evacuated from the monitoring systems prior to sampling for the chemical parameters listed above. Sufficient purging shall have occurred when either of the following has occurred:

 - 1) pH, specific conductance and temperature when sampled, upon purging the third or subsequent well volume, each vary less than 5% from that sampled upon purging the previous well volume; or
 - 2) Upon purging the fifth well volume.
 - b. The following protocol taken from DEP-SOP-001/01(Field Procedures):
 - 1) Purge until the water level has stabilized (well recovery rate equals the purge rate), then purge a minimum of one well volume, and then collect the first set of stabilization parameters, namely pH, specific conductance and temperature;
 - 2) Thereafter, collect stabilization parameters \geq every $\frac{1}{4}$ well volume;
 - 3) Purging shall be complete when either of the following have occurred:
 - a) 3 consecutive readings of the parameters listed below are within the following ranges^[1]:
 - i. pH \pm 0.2 Standard Units
 - ii. Specific Conductance \pm 5.0% of reading
 - iii. Temperature \pm 0.2°C
 - b) Upon purging the fifth well volume.
4. The flow from the monitoring zones during well evacuation and sampling shall not be discharged to surface waters or aquifers containing an underground source of drinking water. Waters purged from monitoring wells in preparation for sampling shall be

^[1] Provided dissolved oxygen in the groundwater of the zone being monitored is \leq 20% of saturation for the measured temperature and turbidity is \leq 20 NTUs. This assumption holds true for groundwater in most zones of the Floridan aquifer.

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diverted to the injection well head via the pad drainage system, wet well, or treatment plant. [62-4.030, 62-620.320]

IV. ABNORMAL EVENTS

1. In the event the permittee is temporarily unable to comply with any of the conditions of a permit due to breakdown of equipment, power outages or destruction by hazard of fire, wind, or by other cause, the permittee of the facility shall notify the Southeast District office. [62-528.415(4)(a)]
2. Notification shall be made in person, by telephone, or by electronic mail (e-mail) within 24 hours of breakdown or malfunction to the Southeast District office. [62-528.307(1)(x)]
3. A written report of any noncompliance referenced in Specific Condition (1) above shall be submitted to the Southeast District office and the Tallahassee office within five days after its occurrence. The report shall describe the nature and cause of the breakdown or malfunction, the steps being taken or planned to be taken to correct the problem and prevent its reoccurrence, emergency procedures in use pending correction of the problem, and the time when the facility will again be operating in accordance with permit conditions. [62-528.415(4)(b)]

V. EMERGENCY DISPOSAL

1. All applicable federal, state and local permits must be in place to allow for any alternate discharges due to emergency or planned outage conditions. [62-528.415(4)(c)1]
2. Any proposed changes in emergency disposal methods shall be submitted to the Southeast District office and the Tallahassee office for review and approval prior to implementation. [62-528.415(4)(c)]
3. The emergency disposal method must be fully operational in the event of planned or emergency outages of the injection well system. [62-528.415(4)(c)2]

VI. FINANCIAL RESPONSIBILITY

1. The permittee shall maintain at all times the financial resources necessary to close, plug, and abandon the injection and associated monitoring wells. [62-528.435(9)]
2. The permittee shall annually review the cost estimate for plugging and abandonment. Upon the occurrence of the plugging and abandonment cost estimate exceeding, by 10 percent or more on an annual basis, the cost estimate upon which the current financial responsibility is based, the permittee shall submit to the Department certified financial documentation necessary to amend, renew, or otherwise replace the existing financial responsibility pursuant to Rule 62-528.435(9)(b), F.A.C. and the conditions of this permit. Documentation that the annual updates are being conducted shall be submitted thirty (30) months after the date of permit issuance. [62-528.435(9)(b)]

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3. In the event that the mechanism used to demonstrate financial responsibility should become insufficient or invalid for any reason, the permittee shall notify the Department's Tallahassee office in writing within 14 days of such insufficiency or invalidation. The permittee shall within 90 days of said notification submit to the Department's Tallahassee office for approval new financial documentation certifying either the remedy of current financial insufficiency or resolution of the financial instrument invalidation in order to comply with Rule 62-528.435(9)(b), F.A.C, and the conditions of this permit. *[62-528.435(9)(b)]*

General Conditions

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are "permit conditions" and are binding and enforceable pursuant to section 403.141, F.S. *[62-528.307(1)(a)]*
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action. *[62-528.307(1)(b)]*
3. As provided in subsection 403.087(7), F.S., the issuance of this permit does not convey any vested rights or exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit. *[62-528.307(1)(c)]*
4. This permit conveys no title to land, water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. *[62-528.307(1)(d)]*
5. This permit does not relieve the permittee from liability for harm to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties there from; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. *[62-528.307(1)(e)]*
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, or are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules. *[62-528.307(1)(f)]*

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7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - a. Have access to and copy any records that must be kept under conditions of this permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.
 - d. Reasonable time will depend on the nature of the concern being investigated.

[62-528.307(1)(g)]
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - a. A description of and cause of noncompliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent the recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

[62-528.307(1)(h)]
9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

[62-528.307(1)(i)]
10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. *[62-528.307(1)(j)]*
11. This permit is transferable only upon Department approval in accordance with rules 62-4.120 and 62-528.350, F.A.C. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

[62-528.307(1)(k)]
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

[62-528.307(1)(l)]

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13. The permittee shall comply with the following:
- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records shall be extended automatically unless the Department determines that the records are no longer required.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - c. Records of monitoring information shall include:
 - 1) the date, exact place, and time of sampling or measurements;
 - 2) the person responsible for performing the sampling or measurements;
 - 3) the dates analyses were performed;
 - 4) the person responsible for performing the analyses;
 - 5) the analytical techniques or methods used;
 - 6) the results of such analyses.
 - d. The permittee shall furnish to the Department, within the time requested in writing, any information which the Department requests to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.
 - e. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

[62-528.307(1)(m)]

14. All applications, reports, or information required by the Department shall be certified as being true, accurate, and complete. *[62-528.307(1)(n)]*

15. Reports of compliance or noncompliance with, or any progress reports on, requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each scheduled date. *[62-528.307(1)(o)]*

16. Any permit noncompliance constitutes a violation of the Safe Drinking Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *[62-528.307(1)(p)]*

17. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[62-528.307(1)(q)]*

18. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit. *[62-528.307(1)(r)]*

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19. This permit may be modified, revoked and reissued, or terminated for cause, as provided in 40 C.F.R. sections 144.39(a), 144.40(a), and 144.41 (1998). The filing of a request by the permittee for a permit modification, revocation or reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition. *[62-528.307(1)(s)]*
20. The permittee shall retain all records of all monitoring information concerning the nature and composition of injected fluid until five years after completion of any plugging and abandonment procedures specified under rule 62-528.435, F.A.C. The permittee shall deliver the records to the Department office that issued the permit at the conclusion of the retention period unless the permittee elects to continue retention of the records. *[62-528.307(1)(t)]*
21. All reports and other submittals required to comply with this permit shall be signed by a person authorized under rules 62-528.340(1) or (2), F.A.C. All reports shall contain the certification required in rule 62-528.340(4), F.A.C. *[62-528.307(1)(u)]*
22. The permittee shall notify the Department as soon as possible of any planned physical alterations or additions to the permitted facility. In addition, prior approval is required for activities described in rule 62-528.410(1)(h). *[62-528.307(1)(v)]*
23. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or injection activity which may result in noncompliance with permit requirements. *[62-528.307(1)(w)]*
24. The permittee shall report any noncompliance which may endanger health or the environment including:
 - a. Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water; or
 - b. Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. *[62-528.307(1)(x)]*

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Issued this _____ day of _____ 2015

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

Draft

Joseph Haberfeld, P.G.
Aquifer Protection Program Administrator
Division of Water Resource Management

FACT SHEET
Cooper City George A. Haughney, P.E., Utilities Complex
Permit Number 0153012-006-UO
WACS Facility ID 84230
April 1, 2015

Operation Permit for the Cooper City George A. Haughney, P.E., Utilities Complex (Cooper City) Membrane Softening Water Treatment Plant (WTP)/Wastewater Treatment Plant (WWTP) Injection Well IW-1 and Dual-Zone Monitor Well MW-1.

1. General Information

A. Statutory Basis For Requiring/Issuing Permit

The Department has permitting jurisdiction under Chapter 403, Florida Statutes (F.S.), and the rules adopted thereunder. The project is not exempt from permitting procedures. The Department has determined that an operation permit is required for the proposed project.

B. Name and Address of Applicant

Mr. Michael F. Bailey, P.E.
Director of Utilities
Cooper City Department of Utilities
11791 S.W. 49 Street
Cooper City, Florida 33330

Facility Address

George A. Haughney, P.E., Utilities Complex
11791 SW 49 Street
Cooper City, Florida

C. Description of Applicant's Proposed Operation

To operate one non-hazardous Class I injection well IW-1 and dual-zone monitor well MW-1, for the George A. Haughney, P.E., Utilities Complex, which is located at 11791 S.W. 49 Street, Cooper City (latitude 26°03'32"N and longitude 80°18'10"W), Broward County, Florida, 33330. The injection well site is located in Cooper City on Griffin Road, between Flamingo and Hiatus Roads. The injection well is used for the disposal of nanofiltration reject concentrate from the Cooper City WTP membrane treatment process and secondary treated domestic effluent from the WWTP. The source water for the WTP is the Biscayne Aquifer. The maximum permitted flow is 5.95 MGD (4132 gpm), which is based on a rate of 10.0 feet per second. See Document 1, Document 3, pages 2-2 and 2-3 Rules 62-528.360, 62-528.400, 62-528.415(1)(f), 62-528.455(2)(c), (e) and (f), 62-528.455(3), 62-600.420(1)(d)1., 62-600.540, 62-660.400, and 62-730, F.A.C.

D. Permitting History of this Facility

Construction permit 0153012-001-UC was the first underground injection control permit to be issued for this facility. Permit 0153012-001-UC was issued on March 14, 2000, and was to expire on March 13, 2005. Modification permit 0153012-002-UC was issued on January 12, 2001, to eliminate the drilling of a pilot hole through the

surficial sediments and Hawthorn Formation during the construction of the injection well. Modification permit 0153012-002-UC was to expire on March 13, 2005. Operation permit 0153012-004-UO was issued on December 21, 2004, and was to expire on December 20, 2009. Operation permit 0153012-004-UO was extended by the timely submittal (October 27, 2009) of an operation renewal application. Operation permit 0153012-005-UO was issued on July 29, 2010, and is to expire on July 28, 2015. Operation permit 0153012-005-UO was extended by the timely submittal (January 5, 2015) of an operation renewal application.

E. Documents Used in Permitting Decision

1. December 2014, application to operate an injection well facility (received January 5, 2015).
2. "Well Completion Report Injection Well No. 1 Construction Report Water/Wastewater Treatment Plant" dated November 2001.
3. "Concentrate Disposal Well Operations and Maintenance Manual City of Cooper City Water/Wastewater Treatment Plant", dated June 2002.
4. "City of Cooper City Mechanical Integrity and Well Rehabilitation of the Deep Injection Well System George A. Haughney, P.E. Utilities Complex" dated October 2011.
5. February 13, 2015, response to the Department's January 22, 2015, request for additional information concerning the operation application.

2. Reasons Permit Was Issued

A. Area of Review (Rule 62-528.300(4), F.A.C.)

Wells located within a two-mile radius from the injection facility were located on a map and the well information listed. There were no wells identified that were not properly completed or plugged within the two-mile area of review. See Documents 1 and 2, and Rules 62-528.300(4) and 62-528.455(3)(b)1. and 2., F.A.C.

B. Mechanical Integrity Demonstration (Rule 62-528.300(6), F.A.C.)

1. A pressure test of 152 psi, with no change in pressure by the end of one hour, was conducted on the 24-inch casing of the injection well on March 26, 2001. This pressure change is within the 5 percent limits allowed by the Department. See Document 1, page 1, Document 2, pages 4-1 and 4-3, Appendix M, Rules 62-528.300(6), 62-528.425(1)(d), 62-528.430(2)(b)2.a., 62-28.455(3)(b)5., and 62-528.455(3)(c), F.A.C.
2. An annular pressure test of 157.0 psi, with a 0.64 percent decrease to 156.0 psi by the end of one hour, was conducted on the injection well 14-inch tubing and packer and 24-inch casing on July 1, 2011. This pressure change is within the 5 percent limits allowed by the Department. See Document 4, Rules 62-528.300(6), 62-528.425(1)(d), 62-528.430(2)(b)2.a., 62-28.455(3)(b)5., and 62-528.455(3)(c), F.A.C.

3. A television survey of the injection well was conducted on June 24, 2011. The television survey did not reveal any defects in the cased portion of the well. See Document 4, Rules 62-528.300(6), 62-528.425(1)(d), 62-28.430(2)(b)2.a., 62-528.455(2)(b), 62-528.455(3)(b)5., and 62-528.455(3)(c), F.A.C.
4. The July 5, 2011, temperature log run on the injection well indicated no evidence of fluid movement behind the injection well casings. See Document 4, Rules 62-528.300(6)(c), 62-528.425(1)(d), 62-528.430(2)(b)2.a., 62-528.455(3)(b)5., and 62-528.455(3)(c), F.A.C.
5. The July 5, 2011, radioactive tracer survey indicated that there was no fluid movement behind the injection well's casings. See Document 4, Rules 62-528.300(6), 62-528.425(1)(d), 62-528.430(2)(b)2.a., 62-528.455(3)(b)5., and 62-528.455(3)(c), F.A.C.
6. The March 23, 2001, cement bond log run on the 24-inch casing of the injection well indicated that a satisfactory bond exists. See Document 1, page 1, Document 2, pages 2-8 and 4-3, and Appendix F, Rules 62-528.300(6), 62-528.410(5)(g)2., 62-528.420(6)(a), and 62-528.455(2)(b), F.A.C.
7. The April 23, 2001, cement bond log run on the 16-inch casing of the monitor well indicated that a satisfactory bond exists. See Document 1, page 1, Document 2, pages 2-8 and 4-3, and Appendix F, and Rules 62-528.300(6), 62-528.410(5)(g)2., 62-528.420(6)(a), and 62-528.455(2)(b), F.A.C.
8. The May 29, 2001, cement bond log run on the 6.625-inch casing of the monitor well indicated that a satisfactory bond exists. See Document 2, pages 2-8 and 4-3, and Appendix F, and Rules 62-528.300(6), 62-528.410(5)(g)2., 62-528.420(6)(a), and 62-528.455(2)(b), F.A.C.
9. A pressure test at 89.75 psi, with no change in pressure by the end of one hour, was conducted on the 16-inch casing of the monitor well on April 30, 2001. See Document 2, page 2-7 and Appendix M. This pressure change is within the 5 percent limits allowed by the Department.
10. A pressure test at 73.5 psi, with a 2.0 percent increase to 75.0 psi by the end of one hour, was conducted on the 6.625-inch casing of the monitor well on May 10, 2001. See Document 2, page 2-7 and Appendix M. This pressure change is within the 5 percent limits allowed by the Department.
11. The monitor well physical/chemical (pressure/water quality) data indicates no movement of fluids out of the injection zone. See Document 1, and Rules 62-528.425(1)(g), 62-528.430(2), and 62-528.455(3)(b)6., F.A.C.
12. The mechanical integrity testing of the injection well must be completed prior to May 16, 2011, as required by Rules 62-528.300(6), 62-528.425(1)(d), 62-528.430(2), 62-528.455(3)(b)5., and 62-528.455(3)(c), F.A.C.

C. Confinement (Rule 62-528.405(2), F.A.C.)

Demonstrated through water quality tests, formation sampling, coring, straddle packer testing, and geophysical logs (caliper, gamma ray, dual induction, borehole

compensated sonic with VDL, pumping and static flowmeter, pumping and static temperature, borehole televiewer, radial color TV survey, and pumping and static fluid resistivity). The hydraulic conductivity from the straddle packer tests ranged from 6.0×10^{-5} cm/sec to 1.4×10^{-4} cm/sec. The vertical hydraulic conductivity from the analysis of the cores ranged from 1.79×10^{-9} cm/sec to 7.8×10^{-4} cm/sec. The horizontal hydraulic conductivity from the analysis of the cores ranged from 3.9×10^{-10} cm/sec to 1.6×10^{-3} cm/sec. See Document 2, pages 3-3, 3-6 through 3-8, and Rules 62-528.405(1)(a), (2)(a), and (2)(c), 62-528.455(1)(c)1., and 62-528.455(2)(a), F.A.C.

Confinement is in the Avon Park Formation from approximately 1770 to 2975 feet bls with the primary confining intervals from 1770 to 2000 feet bls. See Document 2, pages 3-3, 3-6 through 3-8 and 5-1, and Rules 62-528.405(1)(a), (2)(a), and (2)(c), 62-528.455(1)(c)1., and 62-528.455(2)(a), F.A.C.

D. Injection Zone Testing (Rule 62-528.405(3), F.A.C.)

Performed through water quality testing, formation sampling, geophysical logs (caliper, gamma ray, dual induction, borehole compensated sonic with VDL, pumping and static flowmeter, borehole televiewer, radial color TV survey, pumping and static temperature, and pumping and static fluid resistivity), and short-term injection testing. A short-term injection test was conducted on the injection well at a rate of 4,300 gallons per minute (gpm) for 11 hours and at 5,150 gpm during the 12th hour. The injection zone is defined as occurring in the Oldsmar Formation below 3000 feet bls. See Document 1, page 2, Document 2, pages 4-4 and 5-5, and Appendix P, and Rules 62-528.405(1)(a) and (3), 62-528.430(2)(d), 62-528.455(1)(c)1., 62-528.455(2)(a),(d), and (f), and 62-528.455(3)(b)7., F.A.C.

E. Underground Source of Drinking Water (USDW) (Rule 62-528.405(1)(a), F.A.C.)

The base of the lowermost USDW (10,000 mg/l TDS interface) occurs in the Avon Park Formation at approximately 1770 feet bls. The depth was determined by the testing described in item 2.B. above. See Document 2, Rules 62-528.405(1)(a), 62-528.425(1)(e)1.a., 62-528.430(2)(e), 62-528.440, 62-528.455(1)(c), 62-528.455(2)(a) and (d), 62-528.455(3)(b)6., and 62-528.455(3)(c)1., F.A.C.

F. Well Construction

As-built casing program for injection well IW-1 (all casings and liner were new and unused steel, cemented to land surface, except for the 14-inch tubing which has fluid filled annulus along the outside to be used for annular pressure monitoring). See Document 2, pages 2-1 and 2-2, Figure 3 and Appendix K, and Document 3, page 2-2 and Figure 7.

60"OD (0.375"thick) pit casing set to 40 feet bls

50"OD (0.500"thick) casing set to 250 feet bls

42"OD (0.375"thick) casing set to 985 feet bls

34"OD (0.375"thick) casing set to 2000 feet bls

24"OD (0.500"thick) casing set to 2975 feet bls

14"OD (0.500"thick) tubing set to 2955 feet bls

Packer set 2950 feet bls, the open annulus between the 14" tubing and 24" casing is used for annular pressure monitoring

24" open hole from 2975 to 3400 feet bls

As-built casing program for dual-zone monitor well MW-1 (all casings were new and unused steel, cemented to land surface, except the 6.625-inch steel casing which is uncemented from approximately 1520 feet bls for monitoring). See Document 2, page 2-2 and Figure 4, and Document 3, Figure 8.

34"OD (0.500"thick) pit casing set to 50 feet bls

24"OD (0.500"thick) casing set to 251 feet bls

16"OD (0.500"thick) casing set to 1660 feet bls

Upper Monitor Zone 1660 to 1710 feet bls

6.625"OD (0.562"thick) casing set to 1900 feet bls

Lower Monitor Zone 16" open hole from 1900 to 1950 feet bls

G. Monitor Plan (Rule 62-528.425(1), F.A.C.)

Dual-zone monitor well MW-1 is located approximately 70 feet east of the injection well. The monitor intervals are from 1660 to 1710 feet bls (Avon Park Formation) and from 1900 to 1950 feet bls (Avon Park Formation). The upper monitor zone is for monitoring within the USDW and the lower monitor zone is for early warning monitoring below the base of the USDW. See Document 2, page 2-1, Document 3, page 2-3 and Figures 2 and 7, and Rules 62-528.425(1)(e) and 62-528.425(1)(g), F.A.C.

Ground water from the monitor zones is analyzed monthly for chemical parameters. See Rules 62-528.425(1)(e) and (g) and 62-528.430(2)(b)1.d., F.A.C.

The pressure of the monitor zones is monitored continuously. See Rules 62-528.425(1)(e) and (g) and 62-528.430(2)(b)1.d., F.A.C.

The pressure and flow is monitored continuously for the injection well. See Rules 62-528.425(1)(b) and 62-528.430(2)(b)1.b. and c., F.A.C.,

A controlled quarterly injectivity test to determine changes in the capacity of the well is conducted on the injection well. As part of the injectivity test a quarterly pressure fall-off test is required. See Rules 62-528.425(1)(c) and 62-528.430(2)(b) and (d), F.A.C.

The effluent is analyzed monthly for chemical parameters. See Rules 62-528.425(1)(a) and 62-528.430(2)(b)1.a. and 2.b., F.A.C.

The tubing-casing annulus of the injection well is to be monitored continuously for pressure. See Rules 62-528.425(1) and 62-528.430(2), F.A.C.

H. Financial Responsibility (Rules 62-528.435(9) and 62-528.455(3)(b)8. and (c)3., F.A.C.)

Demonstrated by Local Government Guarantee. See Document 1, Rules 62-528.435(9), 62-528.455(3)(b)8. and (c)3., F.A.C.

I. Emergency Disposal (Rule 62-528.455(1)(d), F.A.C.)

If the injection well is out-of-service the concentrate may be diverted to a lined pond that has been constructed for the retention of concentrate, and/or the concentrate may be pumped to the head of Cooper City WWTP, to be subsequently diverted via a sanitary sewer force main to the City of Hollywood Outfall/Reuse Facility. See Document 1, Document 3, pages 2-3 through 3-2, Rule 62-528.455(1)(d), F.A.C.

The secondary treated domestic wastewater may be diverted to a lined pond that has been constructed for the retention of effluent and/or the effluent may be diverted via a sanitary sewer force main to the City of Hollywood Outfall/Reuse Facility. See Document 1, Document 3, pages 2-3 through 3-2, Rule 62-528.455(1)(d), F.A.C.

3. Agency Action

A draft permit shall be issued as per rule 62-528.310, F.A.C.

4. Public Rights (Rules 62-528.315, .321, and .325, F.A.C.)

The Department will accept written comments on the draft permit and /or a request for a public meeting within 30 days following publication of the Notice of Draft Permit. [Public notice is pursuant to section 403.815, F.S., and Rule 62-110.106(12), F.A.C.] A request for a public meeting shall be submitted in writing and shall state the nature of the issues proposed to be raised in the meeting. If a public meeting is then accordingly scheduled, there will be another thirty –day public notice period for the meeting. Comments received within the 30 day period (s) and during the public meeting (if one is held) will be considered by the Department in formulating a final decision concerning this project. Please contact Douglas Thornton at (850)245-8666 for additional information concerning this project. Comments can be mailed to the Department of Environmental Protection, Mr. Douglas Thornton, MS 3530 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

After the conclusion of the public comment period and public meeting described above, the Department may revise the conditions of the permit based on such public comment. Then the applicant will publish Notice of the Proposed Agency Action. A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing). Accordingly, the Department's final action may be different from the position taken by it in the Notice of Proposed Agency Action. The petition must conform to the requirements specified in the Notice and be filed (received) within 14 days of publication of the Notice in the Department's Office of General Counsel, MS 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 of the Florida Statutes, or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will only be at the discretion of the presiding officer upon the filing of a motion in compliance with rule 28-106.205 of the Florida Administrative Code.

The application and draft permit are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Protection, Southeast District Office, 3301 Gun Club Road, MSC7201-1, West Palm Beach, Florida, 33406 or at the Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

5. Department of Environmental Protection Contact

Mr. Douglas Thornton, Engineering Specialist
Florida Department of Environmental Protection
MS 3530
2600 Blair Stone Road
Tallahassee, Florida, 32399-2400
Phone: (850)245-8666