

## FACT SHEET

City of Punta Gorda Class I Injection Well  
Permit ID Number: 0325551-001-UO/1M  
WACS ID Number: 93576  
July 31, 2014

### 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 project.

#### B. Name and Address of Applicant

Mr. Tom Jackson, Utility Director  
City of Punta Gorda  
326 West Marion Avenue  
Punta Gorda, FL 33950

#### C. Facility Location

City of Punta Gorda Wastewater Treatment Plant (WWTP)  
30999 Bermont Road  
Punta Gorda, Charlotte County, Florida 33982

#### D. Description of Applicant's Operation

The facility will operate one non-hazardous Class I injection well and monitoring system for the disposal of high level disinfection treated domestic wastewater from the City of Punta Gorda WWTP. The injection well system consists of one nominal 20-inch diameter (19-inch ID) injection well (IW-1) with an injection interval of 2500 to 2850 feet below land surface (bls) and a total maximum allowable injection rate of 12.0 million gallons per day. The location of the well is at latitude 26° 55.72' North and longitude 81° 56.80' West.

High level disinfection was added to the WWTP treatment system under the Administrative Order issued June 23, 2009 in order to come into compliance with Rule 62-528.440(2)(c) and (d), F.A.C., and the federal regulations these state rules are based on.

The ground water monitor well system consists of one on-site dual zone monitor well DZMW-1. The upper zone is cased with 14 inch OD steel casing to 1650 feet bls and monitored interval from 1650 to 1872 feet bls. The lower zone is cased with a 6.625 inch OD steel casing to 2,110 feet bls and monitors the interval 2110 to 2190 feet bls. Because of water quality and monitor well integrity construction concerns the lower zone will be plugged and abandoned as part of the operating permit.

E. Permitting History of this Facility

Exploratory Well Construction Permit EW-1, File No. 104020-001-UC-issued November 24, 1999 by FDEP to test the feasibility of deep injection.

Test/Injection Construction Permit IW-1 104020-002-UC – Issued August 9, 2000, by FDEP to construct and test one injection well and one dual zone monitor well (DZMW-1).

Operation Permit 104020-010-UO – Issued November 24, 2003.

Operation Permit 104020-015-UO/1M- Issued June 23, 2009.

Administrative Order AO-047-SD/UIC08 issued June 23, 2009.

F. Documents Used in Permitting Decision

1. City of Punta Gorda Exploration Well Permit Application, Boyle Engineering, March 1999.
2. Responses to incompleteness items; May 10, 1999, May 19, 1999, May 25, 1999, and June 7, 1999.
3. City of Punta Gorda Injection Well Construction Permit (revised), Boyle Engineering, August 20, 1999.
4. Responses to incompleteness items; January 26, 2000, March 9, 2000, and March 15, 2000.
5. Engineering Well Completion Report, Water Resource Solutions, March 2001.
6. City of Punta Gorda Application for Operation Permit for the City of Punta Gorda's Utilities WWTF Injection Well IW-1, Boyle Engineering December 2002.
7. Response to incompleteness items: February 19, 2003 and March 21, 2003.
8. Response to incompleteness items September 27, 2005.
9. City of Punta Gorda's application to renew operation permit, ENTRIX Water Solutions, May 22, 2008.
10. Financial Responsibility documentation received June 28, 2008.
11. Response to incompleteness items, ENTRIX Water Solutions, June 28, 2008.
12. City of Punta Gorda IW-1 2010 Mechanical Integrity Test, Cardio ENTRIX, October 2010.
13. City of Punta Gorda IW-1 Operating Repermit Application, Cardio ENTRIX, April 3, 2014.
14. Response to incompleteness Items, Cardio ENTRIX, July 9, 2014.

## 2. Reasons Permit was Issued

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

Wells located within a 2.0 mile (10,560 ft.) 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 2.0 mile area of review. See Document 13, 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.)

Mechanical Integrity testing (MIT) on well IW-1 was successfully conducted from September 13, 2010 to September 17, 2010. Pressure testing was conducted on September 14, 2010. At the end of the 60 minute test pressure had decreased from 210 to 206.5 psi, or a 1.67 % decrease, which indicates successful testing by not exceeding a 5 % change in pressure after one hour pursuant to F.A.C. Rule 62-528.300(6)(a)2(e). See Document 12 for details. A radioactive tracer test was conducted on September 17, 2010. The test indicated no upward migration of tracer, indicating a successful test. Testing of the IW-1 also included a downhole video survey, and temperature survey. See Document 12 for details.

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

The Underground Source of Drinking Water (USDW), where water quality consists of a total dissolved solids (TDS) value less than 10,000 mg/L, extends to a depth of approximately 1650 feet bls at this site. Confinement exist from the base of the USDW to the top of the injection zone at 2,500 feet bls. The confining interval is part of the Avon Park Formation and upper Oldsmar Formation of Eocene Age. The lithology is mostly limestone with minor amounts of dolostone. See Documents 5, Section 2.5 for details.

### D. Injection Zone Characteristics (Rule 62-528.405(2), F.A.C.)

Based on lithology, aquifer packer testing, water quality sampling and geophysical logs the injection zone is between 2,500 feet bls and 2,850 feet bls. These data indicate that the injection zone is sufficiently permeable and saline for injection. This interval is within the Oldsmar Formation of Eocene Age where the lithology consist of well indurated, variable vuggy and fractured dolostones and poorly indurated limestones. See Document 5, Section 2.5 for details.

### E. Well Construction

48" OD steel casing set to 42 feet bls, thickness is 0.5 inches  
38" OD steel casing set to 500 feet bls, thickness is 0.375 inches  
30" OD steel casing set to 1,710 feet bls, thickness is 0.375 inches  
20" OD steel casing set to 2,500 feet bls, thickness is 0.5 inches

The open-hole portion of the well extends from 2,500 to 2,850 feet bls.  
See Document 5 Section 3 for details.

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

The monitoring system currently consists of a dual zone monitor well (DZMW-1) constructed with intervals in the Avon Park Formation from 1,650-1,872 feet bls and from 2,110-2,190 feet bls. Under an administrative order, additional monitoring was conducted to address the issue of possible migration of waters from underlying zones into overlying aquifers.

Analysis of the groundwater quality data collected since injection began at this facility (IW-1) in 2001 included sampling of water quality parameters of IW-1 and both zones of DZMW-1. Based on the water quality data and monitor well construction integrity concerns, it was determined that changes in water quality of the overlying monitored zones has substantially changed since 2001, with both zones showing the influence of the injection operations as well as a potential connection between the two monitor zones. The City has agreed to plug and abandon the lower monitor zone to modify the existing DZMW to a single zone monitor well. See Documents 5, 13 and 14 for details.

Required injection and monitor well monitoring parameters include daily injection volume, flow rate and pressure, and monthly monitoring of the effluent stream for the WWTP for the parameters listed in the specific conditions of the permit, including high level disinfection parameters. Monitor well water quality sampling parameters listed in the permit are collected monthly. See documents 13 for details.

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

Responsibility was demonstrated by a Local Government Guarantee Certificate of Financial Responsibility. The demonstration was approved on June 25, 2008. A revised cost estimate for plugging and abandoning the entire injection well system for this facility was based on an updated cost analysis conducted in January 2014. See Documents 10 and 13 for details.

H. Emergency Discharge (Rule 62-528.450(2)(k), F.A.C.)

Emergency disposal is to existing effluent disposal ponds. See Document 6, Section 9 for details.

3. Agency Action

A draft permit will be issued as per Rule 62-528.325, F.A.C.

4. Public Rights (Rules 62-528.310, 62-528.315, 62-528.325, F.A.C.)

Any interested person may submit written comments on the draft permit, and may request a public meeting, within 30 days of the public notice. A request for a public meeting shall be in writing and shall state the nature of the issues proposed to be raised at 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 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 in formulation of the Department's final decision regarding permit issuance.

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, South District Office, 2295 Victoria Ave., Fort Myers, Florida 33901 or at the Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Please contact Mr. Neil Campbell at 850.245.8612 for additional information concerning this project.

#### 5. Agency Contact

Mr. [Neil I. Campbell](#), Eng. Specialist, Aquifer Protection Program  
Florida Department of Environmental Protection  
2600 Blair Stone Road, MS 3530  
Tallahassee, Florida 32399-2400  
Phone: 850.245.8612