

Town of Florence Water Reclamation Facility
Aquifer Protection Permit #100370
Place ID #854, LTF #65685
Significant Amendment

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an amendment to the Aquifer Protection Permit (APP) for the subject facility that covers the life of the facility, including operational, closure, and post closure periods unless suspended or revoked pursuant to Arizona Administrative Code (A.A.C.) R18-9-A213. This document gives pertinent information concerning the issuance of the permit. The requirements contained in this permit will allow the permittee to comply with the two key requirements of the Aquifer Protection Program: 1) meet Aquifer Water Quality Standards at the Point of Compliance (POC); and 2) demonstrate Best Available Demonstrated Control Technology (BADCT). The purpose of BADCT is to employ engineering controls, processes, operating methods or other alternatives, including site-specific characteristics (i.e., the local subsurface geology); to reduce discharge of pollutants to the greatest degree achievable before they reach the aquifer; or to prevent pollutants from reaching the aquifer.

I. FACILITY INFORMATION

Name and Location

Name of Permittee:	Town of Florence Water Reclamation Facility
Mailing Address:	100 South Plant Road Florence, Arizona
Facility Name and Location:	Town of Florence 425 E. Ruggles Florence, Arizona 85232

Regulatory Status

This Significant Amendment was received on January 31, 2018.

Type of license	License identifier	Effective date
Notice of Disposal (NOD)	n/a	11/27/1985
Aquifer Protection Permit:	P-100370	1/17/20113
Aquifer Protection Permit "Significant Amendment":	P-100370	7/19/2004
Aquifer Protection Permit "Significant Amendment":	P-100370	7/7/2006

Aquifer Protection Permit “Other Amendment”:	P-100370	9/22/2011
Aquifer Protection Permit “Minor Amendment”:	P-100370	6/14/2014
Aquifer Protection Permit “Other” Amendment:	P-100370	7/13/2015
Aquifer Protection Permit “Other” Amendment:	P-100370	4/22/2016

The latest ADEQ inspection was on March 7, 2017, a Notice of Correction (NOC) was issued on March 20, 2017 and closed in April 4, 2017.

Facility Description

The permittee is authorized to operate the Town of Florence Water Reclamation Facility (WRF) with an average daily flow of 2.5 million gallons per day (mgd). The facility treats residential and industrial discharges. The process consists of an influent pump station, screens, grit removal, sequencing batch reactors (SBRs) with nitrification/denitrification, a post-equalization tank, disk filters, ultraviolet (UV) disinfection, an aerobic sludge digester, a belt press for sludge dewatering, and an effluent pump station. Chlorination/dechlorination will be used as a back-up to UV disinfection. Effluent may be discharged to the three new recharge basins, or disposed to the Gila River under a valid AZPDES (AZ0025208) permit or utilized for beneficial purposes under a valid reclaimed water permit. Sludge, including screenings, grit, and scum shall be hauled off-site to a state-approved facility.

The WRF is rated as producing Class B+ reclaimed water (A.A.C. R18-11, Article 3) and may be utilized for beneficial purposes under a valid reclaimed water permit (A.A.C. R18-9, Article 7).

All industrial hookups and other non-residential hookups to the treatment system shall be authorized according to the applicable federal, state or local regulations.

Amendment Description

ADEQ has reviewed and approved this significant permit amendment to:

- Closure of the two emergency holding ponds (North Pond (#1) and South Pond (#2)).
- Change the Alert Levels for water level in POC-1 and POC-2A to correspond to the height of the filter pack in order to account for future recharge-induced water level rise.
- The construction of three new recharge basins in the footprint of eastern half of the Emergency Holding Pond #1(North Pond).

The permit language has been updated to conform to the most current permit format.

II. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY

The WRF shall be designed, constructed, operated, and maintained to meet the treatment performance criteria for new facilities as specified in A.A.C. R18-9-B204. The facility shall meet the requirements for industrial pre-treatment by conducting monitoring as per A.A.C.

R18-9-B204(B)(6)(b). The treatment facility shall not exceed a maximum seepage rate of 550 gallons per day per acre for all containment structures within the treatment works.

III. COMPLIANCE WITH AQUIFER WATER QUALITY STANDARDS

Monitoring and Reporting Requirements

To ensure that site operations do not violate Aquifer Water Quality Standards at the point of compliance, representative samples of the effluent shall be collected at the effluent pump station. The permittee shall monitor the effluent daily for *E. coli*, monthly for total nitrogen, quarterly for metals, and semi-annually for VOCs and SVOCs (see Section 4.2, Table IA in the permit). Effluent flows will be measured at the flow meters on the lines to the recharge basins, reuse and the AZPDES.

The WRF is rated as producing reclaimed water meeting the Class B+ Reclaimed Water Quality Standards (A.A.C. R18-11, Article 3) which may be used for any allowable Class B, or C use under a valid reclaimed water permit (A.A.C. R18-9, Article 7). To ensure that site operations do not violate the Reclaimed Water Quality Standards for the beneficial use of Class B+ reclaimed water, the permittee shall monitor the reclaimed water downstream of the reclaimed water pump station. The permittee shall monitor the reclaimed water daily for *E. coli* and monthly for total nitrogen (see Section 4.2, Table IB in the permit).

To ensure that site operations do not result in violation of Aquifer Water Quality Standards at the point of compliance, the permittee will monitor the groundwater at the POC wells monthly for nitrogen species and Total Coliform, and semi-annually for metals, VOCs and SVOCs. Groundwater monitoring will be conducted as per Section 4.2, Table II, in the permit.

Facility inspections and operational monitoring shall be performed on a routine basis (see Section 4.2, Table III in the permit).

IV. HYDROGEOLOGIC SETTING

Point of Compliance

The Points of Compliance are established by the following monitoring locations:

POC #	POC Locations	Latitude North	Longitude West
1	SE Well, located near the southeast corner of the WRF site, adjacent to Plant Road Screened interval 170-220' below ground surface - POC-1 (ADWR 55-584201)	33° 01' 39" N	111° 24' 17" W
2A	Located at the northwest corner of the WRF Screened interval 185-225' below ground surface - POC-2A (ADWR 55-916170)	33° 01' 52.16" N	111° 24' 33.63" W
3 Conceptual	Downstream of the AZPDES discharge into the Gila River	33° 02' 26" N	111° 24' 22" W

Groundwater monitoring is required at POC #1 and POC #2A. POC #3 have been designated as Conceptual POC, to be considered in the future if groundwater conditions change at the facility.

The Director may amend this permit to designate additional POCs, if information on groundwater gradients or groundwater usage indicates the need.

V. STORM WATER AND SURFACE WATER CONSIDERATIONS

There are no storm/surface water considerations for this facility. The facility is outside the 100-year flood plain.

VI. COMPLIANCE SCHEDULE

Compliance schedule items are located on page 16 in the permit.

VII. OTHER REQUIREMENTS FOR ISSUING THIS PERMIT

Technical Capability

The Town of Florence has demonstrated the technical competence necessary to carry out the terms and conditions of the permit in accordance with A.R.S. § 49-243(N) and A.A.C. R18-9-A202 (B).

The permit requires that appropriate documents be sealed by an Arizona registered geologist or professional engineer. This requirement is a part of an on-going demonstration of technical capability. The permittee is expected to maintain technical capability throughout the life of the facility.

Financial Capability

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The permittee will be required to maintain financial capability throughout the life of the facility. The estimated dollar amount demonstrated for financial capability is \$852,305.00. The financial capability has been demonstrated through R18-9-A203 (B) (1) and (2).

The financial capability demonstration was met through A.A.C. R18-9 a 203 (B) that applies to applicants that are a local government.

Zoning Requirements

The Town of Florence WRF has been properly zoned for the permitted use and the permittee has complied with all Maricopa County zoning ordinances in accordance with A.R.S. § 49-243(O) and A.A.C. R18-9-A201(A)(2)(c).

VIII. ADMINISTRATIVE INFORMATION

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft permit or other significant action with respect to a permit or application. The aquifer protection program rules require that permits be public noticed in a newspaper of general circulation within the area affected by the facility or activity and provide a minimum of 30 calendar days for interested parties to respond in writing to ADEQ. The basic intent of this requirement is to ensure that all interested parties have an opportunity to comment on significant actions of the permitting agency with respect to a permit application or permit.

Public Comment Period (A.A.C. R18-9-109(A))

The Department shall accept written comments from the public before a significant permit amendment is made. The written public comment period begins on the publication date of the public notice and extends for 30 calendar days. After the closing of the public comment period, ADEQ is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

Public Hearing (A.A.C R18-9-109(B))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if the Director determines there is a significant amount of interest expressed during the 30-day public comment period, or if significant new issues arise that were not considered during the permitting process.

IX. ADDITIONAL INFORMATION

Additional information relating to this permit may be obtained from:

Arizona Department of Environmental Quality
Water Quality Division – APP and Reuse Unit 1
Attn: Monica Phillips
1110 W. Washington Street, Mail Code 5415B-3
Phoenix, Arizona 85007
Phone: (602) 771-2253