

Wildcat Hill Water Reclamation Plant
Aquifer Protection Permit No. P-100760
Place ID 1092, LTF No. 74830
Significant Amendment

I. Introduction:

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an 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. 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 (AWQS) at the Point of Compliance (POC); and 2) demonstrate Best Available Demonstrated Control Technology (BADCT). BADCT's purpose 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.

II. Permittee & Facility Location:

2800 North El Paso Flagstaff Road
Flagstaff, Arizona 86004

III. Facility Description:

The permittee is authorized to operate the Wildcat Hill Water Reclamation Plant (WRP) with the capacity to collect and treat a maximum average monthly flow of 6.0 million gallons per day (mgd). The facility treats residential, commercial, and pre-treated industrial wastewater. The facility also accepts and treats biosolids from the City of Flagstaff Rio de Flag WRP. The treatment consists of an influent pump station, headworks with three automated mechanical bar screens with one manual backup bar screen and two grit removal chambers, four primary clarifiers, an Integrated Fixed-Film Activated Sludge (IFAS) treatment basin with an aeration and anoxic zone, five secondary clarifiers, two disc filters and/or three gravity sand filters, chlorination, dechlorination, and an effluent pump station. The plant also maintains separate grease and septage receiving stations. Sludge from the Wildcat Hill WRP and the Rio de Flag WRP is pumped to disc thickener followed by two (2) anaerobic sludge digesters. Sludge is dewatered in geotextile tubes or two (2) clay-lined sludge stabilization basins. After dewatering, biosolids may be disposed at an adjacent, separately permitted surface disposal site or sludge may be hauled off-site for management or disposal in accordance with state and federal regulations.

Tertiary treated reclaimed water from the Wildcat Hill WRP is pumped to a reclaimed water system for beneficial use under a valid Type 3 Recycled Water Permit, or discharged to the Rio de Flag wash, Frances Short Pond, the Pine Canyon Golf Course Lakes, or to the Continental Golf Club Lakes under a valid AZPDES permits. The City of Flagstaff Rio de Flag WRP also contributes reclaimed water to the reclaimed water distribution system, and to Frances Short Pond and the Pine Canyon Golf Course Lakes (see APP No. P -102421).

The Wildcat Hill WRP produces reclaimed water meeting Class A+ Reclaimed Water Standards (A.A.C. R18-11, Article 3) which may be delivered for beneficial use under a valid reclaimed water permit (A.A.C. R18-9 Article 7). Chemical feed facilities are available to add coagulants or polymers to ensure that the filtered reclaimed water complies with the 24-hour turbidity requirements.

IV. Amendment Description:

ADEQ reviewed and approved this permit amendment as follows:

1. Changed the monitoring frequency for Volatile Organic Compounds (VOCs) from semi-annually to annually in Table 1A
2. Changed the AL and DL for Total Nitrogen to 8 mg/l and 10 mg/l from 'Reserved'.
3. In Table II for POC #1 (Sampling Point 6):
 - a) Changed monitoring frequency for Total Nitrogen, Nitrite-Nitrate, Nitrite as N, Total Kjeldahl Nitrogen (TKN), total coliform, and Groundwater Level from monthly to quarterly.
 - b) Changed monitoring frequency for metals and VOCs from semi-annually to annually.
 - c) Replaced Total Coliform with *E coli* as a quarterly monitoring parameter.
4. Removed Piezometer PZ-1 as a monitoring well and list it as a conceptual well.
5. Removed Sampling Point 7 from the Permit and include Groundwater Level Monitoring to Sampling Point 6 in Table II.
6. Changed Total Coliform and *E coli* units from CFU to MPN for Tables IA and IB.
7. Updated the closure and post closure cost.
8. Changed the Reclaimed Water Classification from Class A to Class A+
9. Approved the compliance schedule items #1 and #2 as required by previous permit

The permit category for this amendment was determined to be an "Significant Amendment" as per A.A.C. R18-9-A211(B)(4)(7).

V. Regulatory Status

The latest inspection dated November 7, 2016 indicates that the facility was found to be in compliance with the APP and Arizona rules and statutes.

VI. Best Available Demonstrated Control Technology (BADCT):

The WRP is designed, constructed, operated, and maintained to meet the treatment performance criteria for existing facilities as specified in A.A.C. R18-9-B205. The facility shall meet the requirements for industrial pre-treatment as per A.A.C. R18-9-B204(B)(6)(b).

VII. Compliance with Aquifer Water Quality Standards (AWQS):

To ensure that site operations do not result in violation of Aquifer Water Quality Standards at the point of compliance, representative samples of the effluent will be collected at the sampling point for final effluent and reclaimed water (see Section 4.2, Table IA, in the permit).

Groundwater monitoring is required under this permit per Section 4.2, Table II for *E. Coli*, nitrogen species, metals and organic compounds.

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