ADEQ Arizona Department of Environmental Quality

DRAFT FACT SHEET

Picacho Peak State Park Wastewater Treatment Facility
Aquifer Protection Permit 102933
Place ID #2601, LTF #64604

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an Aquifer Protection Permit for the subject facility that covers the life of the facility, including operational, closure, and post-closure periods unless suspended or revoked pursuant to 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; 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., local subsurface geology) to reduce discharge of pollutants to the greatest degree achievable before they reach the aquifer, or to keep pollutants from reaching the aquifer.

I. FACILITY INFORMATION

Name and Location

Name of Permittee:	Arizona State Parks
Mailing Address:	1330 W. Washington Street Phoenix, Arizona 85007
Facility Name and Location:	Picacho Peak State Park Wastewater Treatment Facility P.O. Box 907 Eloy, Arizona 85131 Pinal County

Regulatory Status

The Picacho Peak State Park Wastewater Treatment Facility is an existing 17,260 gallon per day (gpd) facility operated by the Arizona State Parks under a General Permit since 1996. An application for this Aquifer Protection Permit was received on November 23, 2016.

Facility Description

The Picacho Peak State Park Wastewater Treatment Facility is an existing 17,260 gallon per day (gpd) facility operated by the Arizona State Parks under a General Permit since 1996. The facility consists of a Wastewater Treatment Plant (WWTP) and six separate on-site Wastewater Treatment (septic) Systems (WWTS) through which the effluent is discharged to leach lines for sub-surface disposal. None of the wastewater is generated from industrial, mining or hazardous generators of effluent, and no pretreatment is required or performed before it reaches the treatment facility.

The WWTP was constructed in 1996. The WWTP is designed to accommodate 12,500 gallons per day of domestic sewage. The WWTP receives domestic septage from 79 campsite located at Campground Loops A and B, restroom facilities and the dump station. The facility consists of a lift

station, headworks with bar screen, equalization tank, two aeration tanks, a clarifier, a chlorine contact basin, a sludge holding tank and a 1,000 gallon effluent holding tank. The effluent is discharged to a 2 acre disposal area for land application. The WWTP is designed to produce Reclaimed Water Reuse Class B effluent.

The WWTS's "1" through "6" septic systems, receives domestic sewage from the three Ranger residences, Barrett Loop, Harrington Loop, and the Visitor Center located at the Park. The Septic Systems were installed between 1968 and 2008.

- The Ranger Residence Septic Systems receives flows from Ranger Residence #1, #2, and #3.
  - Residence #1 septic system consists of a 1,000 gallon septic system and 50 linear feet (LF) of leach lines.
  - Residence #2 septic system consists of a 1,000 gallon septic system and 80 LF of leach lines.
  - Residence #3 septic system consists of a 1,000 gallon septic system and 80 LF of leach lines.

- The Barrett Loop Septic System receives flows from the restrooms for 60 parking spaces and consists of a 6,000 gallon septic system with 400 LF of leach lines.

- The Harrington Loop Campsite Septic System receives the flows from the restrooms for 80 parking spaces and consists of a 4,000 gallon septic tank with 160 LF of leach lines.

- The Visitor Center Septic System (constructed in 2008) receives the flows from visitor center restrooms and consists of a 2,000 gallon septic tank with 140 LF of leach lines.

The septic tank solids shall be pumped periodically and disposed to a Municipal Treatment Plant. All industrial hookups and other non-residential hookups to the treatment system shall be authorized according to the applicable federal, state or local regulations.

Groundwater flow direction at the site is toward the southeast at a depth of approximately 300 to 350 feet below ground surface (bgs).

The site includes the following permitted discharging facilities:

Facility		**Latitude**	**Longitude**
Wastewater Treatment Plant		32° 39' 26" N	111° 25' 16" W
Effluent Disposal Area		32º 39' 26" N	111° 25' 15" W
Septic System No.			
1	Barrett Loop Septic Tank and Leach Field	32º 38' 43" N	111° 24' 20" W
2	Harrington Loop Septic Tank and Leach Field	32º 38' 43" N	111° 24' 09" W
3	Ranger Resident 1 Septic Tank and Leach Field	32º 38' 45" N	111º 23' 57" W
4	Ranger Resident 2 Septic Tank and Leach Field	32º 38' 44" N	111º 23' 55" W
5	Ranger Resident 3 Septic Tank and Leach Field	32º 38' 45" N	111º 23' 53" W
6	Visitor Center Septic Tank and Leach Field	32º 38' 46" N	111º 24' 07" W

II. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT)

The Picacho Peak State Park WWTF is an existing 17,260 gpd facility defined in A.R.S. § 49-201(16). The facility meets the BADCT requirements for existing facility as per A.A.C.R18-9-B205.

This is an existing treatment system constructed in 1996. The WWTP was designed by Thomas Bayles, P.E. as per the design report dated July 1996. The effluent from the WWTP is discharged for land disposal to a 2 acre area bermed one foot high. The existing septic tanks design drawings are stamped, dated, and signed (sealed) by Eric Gardener, P.E. (Professional Engineer), Nicklaus Engineering, Inc. dated June 2014. The WWTS's (septic tanks) were installed between 1968 and 2008. The effluent from each septic tank is discharged to its adjoining leach field.

Septic System	Design Flow (gpd)	Tank Capacity (gallons)	Disposal Area in Linear Feet (ft)	Status
Barrett Loop Septic System	1,200	6,000	400	Operational
Harrington Loop Septic System	1,600	4,000	160	Operational
Ranger Residence #1	300	1,000	50	Operational
Ranger Residence #2	450	1,000	80	Operational
Ranger Residence #3	450	1,000	80	Operational
Visitor Center	760	2,000	140	Operational
Total	4,760 gpd			

III. HYDROGEOLOGIC SETTING

Picacho Peak State Park encompasses the predominant portion of a northwest-oriented, 3-mile long ridge (Picacho Peak Ridge). Picacho Peak Ridge is, reportedly, a concordant stack of extrusive volcanic rocks estimated to be early Miocene in age. The Picacho Peak Ridge occurs on a generally north-south trending regional structural high that separates the Avra Basin to the east from the Picacho Basin to the west. The Avra and Picacho basins flanking Picacho Peak Ridge contain accumulations up to 9,000 ft thick of Late Tertiary to Holocene alluvial sediments that are water saturated at depth. Groundwater in those sediments tends to be unconfined to depths of 1,000 ft or more. Aquifers within the two basins are underlain and surrounded by older rocks, such as the local volcanic rocks at Picacho Peak Ridge, that are relatively impermeable except where fracture zones yield small to moderate amounts of water.

Based on driller logs from the two PPSP wells, groundwater is encountered at a depth between 300 and 350 feet below ground surface (bgs). From 5 ft bgs to a depth of 810 ft bgs, the drillers encountered rock of varying consistencies. Based on the overall geologic background and the limited information provided from the boring logs, it is assumed that the geologic units underlying PPSP have low permeability.

The Pinal Active Management Area (AMA) provides groundwater flow information for the southwest side of Picacho Peak. Based on the similar surface grade changes on the southwest and the northwest sides of Picacho Peak, it can be reasonably ascertained that groundwater within the

valley to the northwest of Picacho Peak also flows generally northwest. Groundwater within PPSP will experience a higher level of influence from the slope of bedrock from Picacho Peak so it is assumed that groundwater flows to the north in the vicinity of the leach fields and land application area and turns to the northwest as it proceeds down the valley.

POLLUTANT MANAGEMENT AREA (PMA) / DISCHARGE IMPACT AREA (DIA)

The extent of the PMA and DIA is divided into two areas. The Reuse area and WWTP PMA/DIA is an oval approximately 900 ft long and approximately 400 ft wide that encompasses the "Reuse area" and the WWTP. The Ranger Residences/Harrington Loop area PMA/DIA is an oval approximately 0.5 miles long and about 500 ft wide that encompasses the Ranger Residences, septic tanks and leach lines, ranger station and restrooms from Harrington and Barrett Loops.

IV. STORM WATER/SURFACE WATER CONSIDERATIONS

The facility is not located within the 100-year floodplain as defined by FEMA.

There are several ephemeral washes throughout the PPSP property. Two ephemeral washes run to the northwest on the south side of the reuse area within its PMA/DIA, and two ephemeral washes run to the north through the PMA/DIA of the Ranger Residences/Harrington Loop area. One of the ephemeral washes is adjacent to the Ranger Residences on the west side.

V. COMPLIANCE WITH AQUIFER WATER QUALITY STANDARDS

Monitoring and Reporting Requirements

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

Point of Compliance (POC)

The Point of Compliance (POC) is designated at the following locations:

POC #	POC Location	Latitude	Longitude
1 (Conceptual Location)	Approximately 150 feet northwest of the Ranger Station	34° 38' 48" N	111˚ 24" 7.5' W
2 (Conceptual Location)	Approximately 200 feet north of Rangers Residence 2	32˚ 38" 47.4' N	111˚ 23" 56.1' W
3 (Conceptual Location)	Directly north of the Reuse Area	32˚ 39" 27.9' N	111˚ 25" 15.8' W

No groundwater monitoring is required, unless as part of a contingency action.

The Director may amend this permit to require installation of the well(s) and initiation of groundwater monitoring at the POC or to designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

VI. COMPLIANCE SCHEDULE

Within 180 days of permit issuance the permittee shall perform a water-tightness/integrity test for the existing septic tanks at Harrington Loop, Barrett Loop, and the three Ranger Residence. The test shall be conducted as per the procedure provided in the application. The permittee shall submit a report for the integrity test to demonstrate that the existing septic tanks are structurally sound and in good working condition.

VII. OTHER REQUIREMENTS FOR ISSUING THIS PERMIT

Technical Capability

The Picacho Peak State Park 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 Picacho Peak State Park has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The estimated dollar amount for facility closure/post closure cost is $108,675.00. The financial capability was demonstrated through A.A.C. R18-9-A203(B)(1) and (2).

Zoning Requirements

The Picacho Peak State Park WWTF has been properly zoned for the permitted use, and the permittee has complied with applicable zoning ordinances in accordance with A.R.S. § 49-243(O) and A.A.C. R18-9-A201 (B)(3).

VIII. ADMINISTRATIVE INFORMATION

Public Notice (A.A.C. R18-9-108(A))

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 – Groundwater Section – APP Unit 1
Attn: Monica Phillips
1110 West Washington Street
Phoenix, Arizona 85007
Phone: (602) 771-2253