

# NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

## FACT SHEET

(pursuant to NAC 445A.236)

**Permittee Name:** Pahrump Utility Company, Inc.  
5250 S. Hafen Ranch Road  
Pahrump, NV 89061

**Permit Number:** NEV91004

**Location:** Artesia at Hafen Ranch Wastewater Reclamation Facility 1 (WWRF1)  
6591 Jane Avenue  
Pahrump, NV 89061

Latitude: 36° 07' 38.6" N, Longitude: 115° 55' 49.1" W  
T21S, R54E, Section 17, MDB&M

**General:** The applicant, Pahrump Utility Company, Inc. (PUCI), has applied for renewal of groundwater discharge Permit #NEV91004. PUCI proposes to continue discharging treated, denitrified, and disinfected wastewater effluent to groundwater of the State via infiltration in ten (10) onsite rapid infiltration basins (RIBs).

PUCI owns and operates a MAR-WOOD activated sludge, package wastewater treatment plant consisting of: a manually cleaned bar screen, one (1) anoxic mixing basin, three (3) extended aeration basins, three (3) clarifiers, a chlorine contact chamber, and an aerobic digester.

Currently the facility has capacity (Phase I) to treat up to 0.6 million gallons per day (MGD) of wastewater. The plant is designed to meet 30-day average effluent limits of 30 mg/L BOD<sub>5</sub>, 30 mg/L TSS, and 10 mg/L total nitrogen. Future plant expansion (Phase II) will increase the design influent capacity from 0.6 MGD to 2.6 MGD; and reduce 30-day average effluent concentrations of BOD<sub>5</sub> and TSS to <10 mg/L by the addition of two (2) disc filters, one in service, and one on standby. The disc filtration system will remove additional suspended solids from the effluent prior to disinfection. Other Phase II improvements will include the addition of a new 628,000 gallon dual-flow equalization chamber, and the installation of a new odor controlled headworks. Phase II effluent will be discharged to NDEP approved reuse sites and/or up to 16 additional RIBs (26 total). WWRF1 will be operated in accordance with an Operations and Maintenance (O&M) Manual submitted to, and approved by, the Division.

Generated sludge is transported to Nevada Site Services (permit #NEV2000508) for dewatering. Dewatered solids are transported to a permitted landfill, plant effluent is returned to WWRF1 for further treatment.

In addition to Nevada Site Services, WWRF1 provides wastewater treatment for areas south of Pahrump including; the Artesia and Cottonwoods developments, Terrible's Casino and RV Park, and Pahrump Elementary School.

**Discharge Flow and Characteristics:** During the previous permit period, April 6, 2006 through April 6, 2011, the following discharge flow volumes and characteristics were reported:

Parameter	30-Day Average Permit Limit	Reported 30-day Average
Flow (mg/L)	0.600	0.110
BOD <sub>5</sub> (mg/L)	30	6.8
TSS (mg/L)	30	14.1
Total Nitrogen as N (mg/L)	10	4.0
Nitrate as N (mg/L)	M&R	2.1
pH (mg/L)	6.0 - 9.0	7.6

**Receiving Water Characteristics:** Discharge is to groundwater of the state via percolation. Depth to groundwater in the area is approximately 70 feet below ground surface. Groundwater flow direction is to the west southwest.

Historic groundwater monitoring results, from up-gradient monitoring wells, reveal high concentrations of TDS (4020 mg/L), total nitrogen (70.1 mg/L) and chlorides (320 mg/L). These elevated levels have previously been attributed to prior land uses and/or existing geologic organic deposits. Monitoring results from a down-gradient monitoring well, MW-2, exhibit lower concentrations of the same constituents; TDS (1780 mg/L), total nitrogen (9.4 mg/L), and chlorides (250 mg/L), indicating that discharges from the RIBs to groundwater may be diluting and improving the groundwater quality.

**Well Head and Drinking Water Supply Protection:** The facility is not located within a Drinking Water Protection Area. The facility is not located within an established Wellhead Protection Area for any well sources.

**Corrective Action Sites:** There are no Bureau of Corrective Actions remediation sites within a one-mile radius of the facility.

**Groundwater Monitoring:** Due to the quality of the denitrified plant effluent, and the poor quality of area groundwater, no further groundwater monitoring is required.

**Proposed Discharge Limitations, Sampling and Monitoring Requirements:** Measurements and samples taken in compliance with the monitoring requirements specified below shall be collected at the following locations.

- i. Influent sampling point
- ii. Effluent sampling point

**Table I.A1.a: Phase I Operation (0.6 MGD Design Capacity)**

Parameters		Discharge Limitations		Monitoring Requirements		
		30-Day Average	Daily Maximum	Sampling Locations	Monitoring Frequency	Sample Type
Influent	Flow, Phase I (MGD)	0.60	0.60	i	Continuous	Meter
	CBOD (mg/L)	M&R	M&R	i	Monthly	Composite
	TSS (mg/L)	M&R	M&R	i	Monthly	Composite
Effluent	CBOD (mg/L)	30	45	ii	Monthly	Composite
	TSS (mg/L)	30	45	ii	Monthly	Composite
	Total Nitrogen as N (mg/L)	10	10	ii	Monthly	Composite
	Total Nitrate as N (mg/L)	M&R	M&R	ii	Monthly	Composite
	pH (SU)	6.0 – 9.0		ii	Monthly	Discrete
	Fecal Coliform cfu or mpn/100 ml	2.2	23	ii	Monthly	Discrete

**Table I.A.1.b: Phase II Operation – Reuse (2.6 MGD Design Capacity)**

Parameters		Discharge Limitations		Monitoring Requirements		
		30-Day Average	Daily Maximum	Sampling Locations	Monitoring Frequency	Sample Type
Influent	Flow, Phase II (MGD)	2.60	2.60	i	Continuous	Meter
	CBOD (mg/L)	M&R	M&R	i	Weekly	Composite
	TSS (mg/L)	M&R	M&R	i	Weekly	Composite
Effluent	CBOD (mg/L)	10	15	ii	Weekly	Composite
	TSS (mg/L)	10	15	ii	Weekly	Composite
	Total Nitrogen as N (mg/L)	10	10	ii	Weekly	Composite
	Total Nitrate as N (mg/L)	M&R	M&R	ii	Weekly	Composite
	pH (SU)	6.0 – 9.0		ii	Weekly	Discrete
	Total Coliform cfu or mpn/100 ml	2.2	23	ii	Weekly	Discrete

MGD: Million Gallons per Day  
 M&R: Monitor & Report  
 mg/L: Milligrams per Liter  
 cfu: Colony Forming Units

BOD<sub>5</sub>: 5-day Biochemical Oxygen Demand  
 TSS: Total Suspended Solids  
 SU: Standard Units  
 mpn: Most Probable Number

N: Nitrogen

**Rationale for Permit Requirements:** Monitoring is required to assess the level of treatment being provided, to determine when design capacity is being approached, and to ensure that surface and groundwater are not degraded.

**Schedule of Compliance:** The Permittee shall implement and comply with the provisions of the following schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications which the Administrator may make in approving the schedule of compliance:

- a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit.
- b. By **MMMM DD, 2011** (Within 60 days of the permit effective date), the Permittee shall submit for review and approval, a revised and updated Operations and Maintenance (O&M) Manual, addressing Phase I operation.
- c. Within **30 days** of Phase II completion the Permittee shall submit documentation, stamped by a Professional Engineer registered in the State of Nevada, stating that all plant elements were constructed in accordance with Division approved plans.
- d. Within **60 days** of Phase II completion the Permittee shall submit, for review and approval, an O&M Manual addressing Phase II operation. The O&M Manual shall be stamped by a Professional Engineer registered in the State of Nevada. Before implementing changes to an approved O&M Manual the Permittee shall submit proposed changes to the Division for review and approval.

All schedule of compliance submittals and evidence of compliance documents shall be submitted to the Bureau of Water Pollution Control Compliance Coordinator at the address listed below:

**Division of Environmental Protection  
Bureau of Water Pollution Control  
ATTN: Compliance Coordinator  
901 S. Stewart Street, Suite 4001  
Carson City, Nevada 89701-5249**

**Proposed Determination:** The Division has made the tentative determination to renew the proposed permit for a period of five (5) years.

**Procedures for Public Comment:** The Notice of the Division's intent to renew groundwater discharge permit #NEV91004, authorizing this facility to discharge to rapid infiltration basins and NDEP approved reuse sites for a five-year period, subject to the conditions contained within the permit, is being sent to the **Las Vegas Review Journal** and the **Pahrump Valley Times** for publication. The Notice is also being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted

(via postmarked mail or time-stamped faxes, e-mails, or hand-delivered items) to the Division is **November 07, 2011 by 5:00 P.M.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Prepared by: Arthur Marr, P.E.  
Date: September, 2011