

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

F A C T S H E E T  
(pursuant to NAC 445A.236)

**Permittee Name:** Pahrump Utilities Company, Inc.  
3121 South Highway 160, #1  
Pahrump, Nye County, Nevada 89048

**Permit Number:** NEV91004

**Description of Discharge**

**Location:** Pahrump Utilities Co., Inc. Artesia at Hafen Water Reclamation Facility  
Jane Avenue and Susquehana Street  
Pahrump, Nye County, Nevada 89048

Latitude 36° 07' 30"N; Longitude 115° 55' 46"W  
Section 17, T. 21S., R. 54E., MDB&M

**General:** The Permittee has applied for renewal/modification of a permit to discharge treated wastewater to groundwaters of the state via infiltration in five rapid infiltration basins (RIBs). Phase I will increase facility flows from 0.200 MGD to 0.600 MGD with disposal to the five (5) RIBs. Phase II of the plant expansion will increase flows up to 2.0 MGD with discharges directed to approved future reuse sites for irrigation, and to additional RIBs for disposal via infiltration if needed. The Phase I facility is an enlargement of the existing activated sludge package treatment plant (Marwood), and is designed to treat up to 0.600 MGD of wastewater to meet 30 mg/l BOD<sub>5</sub>, 45 mg/l TSS, and 10 mg/l Total Nitrogen as N. The Phase I plant will continue to produce effluent meeting secondary treatment standards that is denitrified and disinfected. The Phase II expansion will include treatment which will reduce BOD to 10 mg/L and TSS to 10 mg/L, and will add disc filtration producing tertiary effluent which will be disinfected further to meet 2.2 CFU/MPN/100 ml Total Coliform, Class A Category NAC. 445A.276 (suitable for all NDEP approved future reuse irrigation sites). The WRF will continue to be operated in accordance with an approved Operations and Maintenance Manual (O & M) for the facility.

The plant consists of a covered headworks with an automatically cleaned, fine screen with solids removal, and a covered flow equalization basin to handle peak wet weather influent flow conditions. Following treatment via an extended aeration process in multiple basins, clarification and settling, the effluent will be disposed in five RIBs Phase I. Phase II treatment will occur in a new larger facility located near the

existing facility, and will have a similar treatment train, with the addition of filtration using disc filters. Effluent will then be disinfected prior to disposal/reuse. In both plants the waste sludge will be pumped to a covered aerobic digester basin for holding prior to dewatering and disposal in the landfill.

Currently under agreement, Pahrump Utility Co., Inc., treats the Mountain Falls development's effluent up to a flow of approximately 100,000 gpd until the new Mountain Falls plant of Utilities Inc. of Central Nevada (UICN) is online in the Spring of 2006.

The Pahrump Utilities Co. Inc., Artesia at Hafen Ranch WRF serves the rapidly growing area south of Pahrump, including new subdivisions planned with up to a predicted 10,000 new homes in the area, including the Artesia at Hafen Ranch master planned community. Other customers currently served include Terrible's Casino and RV Park, the Pahrump Elementary School and the Cottonwoods at Hafen Ranch development.

**Flow:** The plant facility has a flow limit for Phase I of 0.600 MGD (million gallons a day), and Phase II of 2.00 MGD.

**Effluent Limitations:**

**The discharges shall be limited and monitored by the Permittee as specified below:**

<u>PARAMETERS</u>	<u>DISCHARGE LIMITATIONS</u>		<u>MONITORING REQUIREMENTS</u>	
	<u>30-day Ave.</u>	<u>Daily Max</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Phase I INFLUENT FLOW:	0.600 MGD	0.600 MGD	Continuous	Meter
Phase II INFLUENT FLOW:	2.00 MGD	2.00 MGD	Continuous	Meter
EFFLUENT FLOW: RIBs (001)	M & R MGD	M & R MGD	Continuous	Meter
Reuse (002)	M & R MGD	M & R MGD	Continuous	Meter
Phase I Effluent BOD <sub>5</sub> :	30 mg/L	45 mg/L	Monthly	Composite
TSS :	30 mg/L	45 mg/L	Monthly	Composite
Phase II EFFLUENT BOD <sub>5</sub> :	10 mg/L	15 mg/L	Monthly	Composite
TSS : EFFLUENT:	10 mg/L	15 mg/L	Monthly	Composite

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	<u>30-day Ave.</u>	<u>Daily Max</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
TOTAL NITROGEN as N:		10 mg/L	Monthly	Composite
NITRATE AS N:		M & R mg/L	Monthly	Composite
pH:	Between 6.0 and 9.0 SU		Monthly	Discrete
Phase I Fecal Coliform: MPN or CFU	2.2/100 mL	23/100 mL	Monthly	Discrete
Phase II TOTAL COLIFORM: MPN or CFU	2.2/100 mL	23/100 mL	Monthly	Discrete

Note: M & R = Monitor and Report      CFU = colony forming units      MPN = Most Probable Number  
 mL = milliliter      MGD = million gallons per day  
 SU = standard units      mg/L = milligrams per liter

**Receiving Water Characteristics:** The receiving water is the groundwater of the State of Nevada. Based on historic data, the shallow groundwater in the immediate area contains areas of elevated concentrations of nitrate, 40 to 100 to 300 mg/L which have resulted from past land uses. This concentration is the rationale for denitrifying the effluent <10 Total Nitrogen as N. Elevated concentrations of Chlorides (50 to 70 mg/L), and Total Dissolved Solids of 1000 to 2400 mg/L are documented. Groundwater flow is predominantly west-southwest. Drinking water sources in the area are derived from deep artesian wells. Depth to groundwater is about 70 feet below ground surface.

Previous land application of biosolids on agricultural fields in the area ceased in July of 2004, and effluent irrigation of agricultural crops has been mostly phased out, with disposal to the RIBs being the preferred method of disposal.

**Groundwater Monitoring:** Groundwater monitoring of M-1, M-2, M-3 and any future monitoring wells installed shall be as follows:

<u>PARAMETERS</u>	<u>Frequency</u>
TOTAL DISSOLVED SOLIDS:	Quarterly
NITRATE as N:	Quarterly
TOTAL NITROGEN as N:	Quarterly
CHLORIDE:	Quarterly
GROUNDWATER ELEVATION:	Quarterly
DEPTH TO GROUNDWATER:	Quarterly

**Procedures for Public Comment:**

The notice of the Division's intent to re-issue a permit authorizing the facility to discharge to groundwaters of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Pahrump Valley Times and the Las Vegas Review-Journal** for publication. The notice is 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 the newspaper publication of the public notice. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator of U.S. EPA Region IX 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 scheduled by the Administrator 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.

**Proposed Determination**

The Division has made the tentative determination to renew and modify the proposed permit for a five (5) year period.

**Schedule of Compliance and Special Conditions**

- a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit.
- b. A revised Operations and Maintenance Manual (O & M) shall be submitted to the Division for review and approval by September 30, 2007 for the Phase I facility. Interim wastewater handling shall be noted in the document describing any differences between Phase I operations and the current operations; Phase II operations will require another O & M Manual revision when Phase II operations are underway. A Sludge Management Plan shall also be included in the O & M Manual. If sludge is disposed to locations other than approved landfill sites, said plan must also address Part 40 CFR Section 503 of the federal regulations.

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Pahrump Utilities Co., Inc

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- c. A letter of Certification wet-stamped by a Nevada Registered Professional Engineer stating that all plant elements have been constructed in accordance with Division approved plans for the facility shall be submitted to the Division within 15 days of completion of plant construction. A copy of the as-builts for the new plant facility and its related infrastructure shall also be included with the Certification.

**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 groundwaters are not degraded.

Prepared by: Icyl C. Mulligan  
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