

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACT SHEET
(Pursuant to NAC 445A.236)

Permittee Name: Eureka County
P.O. Box 714
Eureka, NV 89316

Permit Number: NEV00042

Location: Eureka Wastewater Treatment Facility (WWTF)
2½ miles north of Eureka on County Road M-101
Latitude: 39° 33' 13"N, Longitude: 115° 57' 59"W
Township 20N, Range 53E, SE¼ of NE¼ in Section 35

Wellhead Protection Area: Eureka's WWTF is neither located within a Drinking Water Protection Area nor a wellhead capture zone for a public supply well. There are no wells located within a one-mile radius of the WWTF.

General: Eureka's 0.1 MGD capacity WWTF serves a population of 431. The existing two clay-lined facultative treatment ponds were constructed in 1996. Effluent disposal is via evaporation, and upon discharge, effluent directed into two rapid infiltration basins (RIBs). Existing method of effluent sampling is in French drain vaults down gradient of the RIBs where a soil-filtered sample would be collected upon RIB saturation. Currently, the groundwater is not sampled. Based on an approved Facility Design Report and set of engineering plans/drawings, Eureka County has proposed a facility expansion doubling treatment capacity to 0.2 MGD (200,000 GPD). Expansion is projected to accommodate residential growth associated with a molybdenum mine (Idaho General Mines) opening 23 miles northwest of Eureka. Construction and staffing of this molybdenum mine is projected to increase Eureka's population to 1,000 residents. The proposed design adds head works upgrade (bar screen and grit settling tank), two HDPE-lined facultative treatment ponds and two (rapid infiltration basins) RIBs. The four treatment ponds are arranged to run in series or parallel flow. The French drain vaults will be abandoned and unfiltered effluent samples collected at the point of secondary pond discharge into the RIBs. One down gradient monitoring well will be installed 250 ft north of the RIBs. Expected completion date of this expansion is 2009-2010 ahead of a planned residential housing development in Eureka to accommodate the mine employees and their families.

Flow: Average flow during the past five-year permit term was 0.051 MGD or 118 GPD/capita.

Receiving Water Characteristics: Groundwater quality at this facility is presently not evaluated. The State Engineer's database indicates that no well logs have been completed in Section 35 where the WWTF is located. Presumed groundwater flow gradient is northward from the RIBs. The new monitoring well is required to be cased up to a maximum groundwater level occurrence of 200 ft below ground surface.

DMR Analysis:

- *Flow (influent):* Averaged 0.051 MGD or 118 GPCD.
- *BOD₅ (influent):* Averaged 139.2 mg/l indicative of a moderately weak strength domestic wastewater.
- *BOD₅ (effluent):* In the past five-year period, the facility reported 100% evaporation in the lined treatment ponds with no discharge into the RIBs. On 10/09/07, the secondary pond’s contents were sampled near the discharge. The BOD₅ level was 23 mg/l indicating an adequate level of biological treatment if discharge were to occur.
- *TSS (influent):* Averaged 138.8 mg/l indicative of a moderately weak strength domestic wastewater.
- *TSS (effluent):* No discharge occurred. The 10/09/07 TSS sample was 43 mg/l indicating sufficient settling if discharge were to occur.
- *pH:* No data (no discharge occurred). When discharge occurs, the allowable pH range is 6.0 - 9.0 SU.
- *Septage:* Receipt of septage is not presently limited in the permit but self-limited by the operator to 1,000 gallons/week (maximum) to control pond odor and septicity. Estimated BOD₅ of septage is 6,000 mg/l. For the proposed expansion, the design has considered a weekly maximum of 1,500 gallons (6,000 gallons/month) to control pond odor and maintain discharge standards. Septage unloading occurs at the primary pond downstream of the flow meter. Septage volume unloaded is tracked by the licensed hauler and then reported to the operator for billing purposes.

Proposed Effluent Limitations and Special Conditions:

Table 1: Plant Discharge Limitations

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, GPD (Influent)	100,00 (1)		Continuous	Flow Meter
	200,000 (1)			
Flow, gals (Septage)	6,000	1,500	Each Load	Volumetric Determination
CBOD, mg/L (Influent)	-	M&R	Quarterly	Discrete
CBOD, mg/L (Effluent)	-	45	Quarterly	Discrete
TSS, mg/L (Influent)	-	M&R	Quarterly	Discrete

TSS, mg/L (Effluent)	-	90	Quarterly	Discrete
pH, Std. Units (Effluent)	-	6.0 – 9.0	Quarterly	Discrete

- Existing facility capacity is 100,000 GPD. Capacity increases to 200,000 GPD upon completion of facility expansion.
- The effluent sample (unfiltered) is to be collected prior to discharge into the rapid infiltration (disposal) basins.

Table 2: Groundwater Monitoring (MW-1)

PARAMETER	GROUNDWATER LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Daily Maximum	Sample Type
TDS, mg/L	-	M&R	Quarterly	Discrete
Chlorides, mg/L	-	M&R	Quarterly	Discrete
Nitrate as N, mg/L	-	M&R	Quarterly	Discrete
Total Nitrogen as N, mg/L	-	10.0	Quarterly	Discrete
Depth to Groundwater, ft	-	M&R	Quarterly	Field Measurement

- Groundwater samples shall be taken after purging three (3) well volumes of groundwater from the monitoring well.

Schedule of Compliance (SOC): The Permittee shall submit the following SOC items to the Compliance Coordinator, Bureau of Water Pollution Control):

- The Permittee shall notify NDEP in writing not more than fourteen (14) calendar days following construction completion of the facility expansion.
- Within thirty (30) days of the construction completion of the facility expansion, the Permittee shall submit a copy of the engineer's Construction Quality Assurance (CQA) letter indicating that the facility expansion was constructed in accordance with the approved design plans. The CQA letter shall be wet stamped and signed by a Nevada Professional Engineer (P.E.).
- Within thirty (30) days of the construction completion of the facility expansion, the Permittee shall submit a copy of the as-built design plans wet stamped and signed by a Nevada Professional Engineer (P.E.).

- Within thirty (30) days of the construction completion of the facility expansion, the Permittee shall have installed a down gradient monitoring well and submitted a copy of the driller's well log report.
- Within ninety (90) days of the startup of the facility expansion, the Permittee shall submit an updated copy of an Operations & Maintenance (O&M) Manual, prepared in accordance with the Division's WTS-2 guidance: *Minimum Information Required for an Operations and Maintenance Manual*. The revised O&M Manual shall be wet stamped and signed by a Nevada Professional Engineer (P.E.).

Procedures for Public Comment: The Notice of the Division's intent to issue this discharge permit, subject to the conditions contained within is being sent to the **Eureka Sentinel** and **Reno Gazette-Journal** newspapers for publication. The notice is also being posted on the Division's website for public notices and e-mailed to interested parties on the Division's Public Notice receipt notification list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the 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 **Friday, January 9, 2009, 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.

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

Prepared by: Mark A. Kaminski, P.E., Technical Services Branch
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Bureau of Water Pollution Control

Date: December 2, 2008