

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

Permittee Name: Gerlach General Improvement District
P.O. Box 209
Gerlach, NV 89412

Permit Number: NEV20010

Location: Gerlach Wastewater Treatment Facility, Washoe County, Nevada
Latitude: 40° 38' 53" N, Longitude: 119° 21' 03" W
Township 32N, Range 23E, NW¹/₄NW¹/₄ Section 23

Bureau of Corrective Actions Sites: There is no remediation site managed by the NDEP Bureau of Corrective Actions located within a one-mile radius of the Gerlach Wastewater Treatment Facility (Gerlach WWTF).

Wellhead Protection Area: The Gerlach WWTF is located outside (further than) the 6,000 ft. Drinking Water Protection Area No. 4 for all community supply wells providing potable water to the Town of Gerlach. The nearest public supply well to this WWTF is located approximately eight miles northwest of the Town of Gerlach. The nearest domestic supply well to this WWTF is located approximately one mile northwest of the Town of Gerlach.

General: The applicant has submitted an application for a permit renewal and modification. The Gerlach General Improvement District provides domestic (sanitary) wastewater treatment for 185 residents in town. No industrial facilities are serviced by the Gerlach WWTF. Commercial connections in Gerlach include a café, bar and 50-unit motel.

Existing WWTF: The Gerlach WWTF, constructed in 1984, is located approximately ¹/₃ mile southeast of Main St. (Hwy 447). This pond facility includes a manually staffed flume and two, 1¹/₂-acre facultative treatment ponds (unlined), which are operated individually on a monthly rotational basis. Effluent from each pond is discharged into a 7¹/₂-acre percolation-evaporation basin (Pond #3). Pond #3 effluent terminates in a second, 1²/₃-acre percolation-evaporation basin (Pond #4). The collection system flow to the WWTF is by gravity. There is one lift station, which services five of the residences.

Upgraded WWTF: Over 26 years of operation, the two treatment ponds (Ponds #1-2) have lost storage and treatment capacity with sludge buildup. After cleaning, a 60-mil High Density Polyethylene (HDPE) liner will be installed in each treatment pond to minimize seepage loss. The pond flow pattern will change from individual, parallel flow to series flow to improve effluent quality and meet secondary treatment standards for CBOD. Other facility upgrades will include a solar-operated flow meter and recorder at the flume and replacement of the residential lift station with a newer unit providing pumping redundancy over the existing single-pump lift station. A down-gradient monitoring well will be installed outside the southwest berm of Pond #3. Normally, effluent flow terminates in this basin and does not discharge into the last pond.

Flow: The new treatment facility is rated for 23,000 gals/day (0.023 MGD) capacity, based on 100 gals/day-capita residential demand. This figure allows 20% additional residential connections. Peak demand occurs in August with the annual Burning Man Event (14,000 GPD).

Receiving Water Characteristics: This facility does not presently monitor the groundwater at this treatment facility. For the proposed upgrade, a groundwater monitoring well will be installed and completed at this site if the groundwater table is found to occur within 200 ft. of the surface. No well log data exists in this section (Sec. 23). Well log data for a domestic supply well located one section (one mile) to the northwest (Sec. 15) of Gerlach indicated a static depth to groundwater of 20 ft. below ground surface. The literature notes geothermal activity in the immediate Gerlach vicinity including two springs, Great Boiling and Mud.

DMR Analysis: Over the past four reporting periods, pond effluent averaged: CBOD (41 mg/l) and TSS (66 mg/l). Influent monitoring is not required but considered to be below normal-strength domestic wastewater. Last year, NDEP staff sampled the outlet of Pond #2 and determined: CBOD (70 mg/l) and TSS (322 mg/l). The NDEP effluent sample was noted to include solids carryover (sludge) from the treatment pond likely due to sludge buildup and reduced storage and settling capacity. When clean, the treatment ponds provide 6 ft. operating depth. To provide the required capacity in the existing basin footprint, the Division has reduced the freeboard requirement from 3 to 2 ft. at the Gerlach WWTF for each of the two treatment ponds. With a two foot freeboard requirement, wave activity in these small ponds is not expected to be an issue including any overtopping or berm erosion.

Rational for Permit Requirements: The existing pond system requirements are listed in Table 1. The upgraded pond system requirements are listed in Table 2 and are consistent with the Division's secondary treatment standards for ponds including CBOD, TSS and pH. The minimum freeboard requirement of 3.0 ft. for ponds greater than one acre of surface area is waived (reduced) to 2 ft. at this facility and is to be reported quarterly for Ponds #1-2. The facility's treatment capacity is in excess of 10,000 gals/day requiring operation by a Nevada certified Grade I (or higher) wastewater operator.

Proposed Effluent Limitations and Special Conditions:

Table 1: Existing Pond System

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, gals/day (Influent)	14,000	26,000	Weekly	Staff Measurement (Head Gauge)
CBOD, mg/L (Effluent)	40	60	Quarterly	Discrete
TSS, mg/L (Effluent)	90		Quarterly	Discrete

Table 2: Upgraded Pond System

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, gals/day (Influent)	23,000		Continuous	Flow Meter
CBOD, mg/L (Effluent)	45		Quarterly	Discrete
TSS, mg/L (Effluent)	90		Quarterly	Discrete
pH, Std. Units (Effluent)	6.0 to 9.0		Quarterly	Discrete
Pond Freeboard, ft. (Ponds #1-2, each)	≥ 2.0		Quarterly	Field Measurement

Table 3: Groundwater Monitoring (MW-1)¹

PARAMETER	GROUNDWATER LIMITATIONS	MONITORING REQUIREMENTS	
		Measurement Frequency	Sample Type
TDS, mg/L	Monitor & Report	Quarterly	Discrete
Chlorides, mg/L	Monitor & Report	Quarterly	Discrete
Nitrate as N, mg/L	Monitor & Report	Quarterly	Discrete
Total Nitrogen as N, mg/L	10.0	Quarterly	Discrete
Depth to Groundwater, ft	Monitor & Report	Quarterly	Field Measurement
Groundwater Elevation, ft	Monitor & Report	Quarterly	Field Measurement

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

Schedule of Compliance: (all compliance deliverables shall be addressed to the attention of the Compliance Coordinator, Bureau of Water Pollution Control):

- The Permittee shall notify the Division in writing not more than fourteen (14) calendar days upon construction and startup of the upgraded pond system.
- Within thirty (30) days of construction and startup of the upgraded pond system, the Permittee shall submit a copy of the engineer's Construction Quality Assurance (CQA) letter

indicating that the facility was constructed in accordance with the approved design plans.

- Within ninety (90) days of construction and startup of the upgraded pond system, the Permittee shall submit a copy of an Operations & Maintenance (O&M) Manual that was prepared in accordance with NDEP Water Technical Sheet No. WTS-2: *Minimum Information Required for an Operation and Maintenance Manual*.
- Within ninety (90) days of construction and startup of the upgraded pond system, the Permittee shall submit a copy of a driller's well log for a down-gradient monitoring well installed in accordance with NDEP Water Technical Sheet No. WTS-4: *Guidance Document for Design of Monitoring Wells*.

Procedures for Public Comment: The Notice of the Division's intent to renew and modify discharge permit # NEV20010, subject to the conditions contained within the permit is being sent to the **Reno Gazette-Journal** newspaper for publication. The notice is also being electronically mailed to all interested persons requesting listing on our public notification mailing list. Anyone wishing to comment on the proposed permit can do so in writing within a period of thirty (30) calendar days of 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, May 14, 2010, by 5:00 P.M. PST**.

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 water pollution control discharge permit for a period of five (5) years.

Prepared by: Mark A. Kaminski, P.E., Staff Engineer III
Bureau of Water Pollution Control

Date: April 13, 2010