

Nevada Division of Environmental Protection
Fact Sheet (pursuant to NAC 445A.236)

Permittee: Canyon GID
800 Peri Ranch Road, Suite 103
Sparks, Nevada 89434

Permit No.: NEV50028

Facility: Sewage Treatment Plant
East end of Avenue de Couleurs
Rainbow Bend, Storey County
(Lockwood exit on Interstate 80)
Latitude 39° 30' 44" N
Longitude 119° 38' 14" W
T19N R21E S16

General: This location is near Interstate 80 adjacent to the Truckee River, approximately 15 miles east of Sparks. The river is immediately adjacent to the Rainbow Bend community and STP property. The service area consists of the Rainbow Bend Mobile Home Park and includes 400 residences, (7) commercial facilities, and one industrial facility, and a municipal water treatment plant. Existing facilities include: pump station, bar screen, aeration compartments, aerobic digester, sludge storage tanks, clarifier, chlorine contact basin (not used), dual sand filters (not used), and unlined (and therefore unusable) influent and effluent storage basins. The existing disposal fields consist of two areas with three leachlines each. The fields are alternately dosed, with only one line per field being used at a time.

A new 140,000 gpd package treatment plant was constructed this fall and has just begun start-up. This plant will denitrify the wastewater to a permit standard of 10 mg/l total nitrogen and will provide disinfection to meet Category B standards for reuse. The new plant will allow for expansion of the service area to include the adjacent Lockwood Mobile Home Park. The existing facilities will be removed following completion of the new plant.

The new plant incorporates an anoxic chamber at the front end for nitrate conversion to achieve 10 mg/l TN. The major process components are: agitator/mechanical screen, anoxic chamber, aeration chamber, post anoxic chamber, clarifier, effluent dosing tank, sludge holding tank/digester, and a sludge press.

Nevada Division of Environmental Protection

Fact Sheet

Canyon GID

NEV50028

Page 2 of 5

The two existing leachfields will be abandoned and replaced by four rapid infiltration basins that will be operated one at a time, on a one week rotational basis. Additionally, effluent pumps will be added and a force main constructed to deliver the effluent to the Lockwood Regional Landfill for dust control uses. Thirdly, the effluent may be used at the future at the Lockwood Regional Park for irrigation.

Receiving Water Characteristics The existing and proposed sewage treatment plants, as well as the existing and proposed disposal facilities, are within 6000 ft of five public supply wells, including one the GID installed adjacent to the unused effluent storage basin in 2003. Data from the monitor wells is compared to the effluent in the table below.

Average Chloride, TDS, and Nitrate Concentrations

January 2006 - June 2008

All values mg/l

Location	Chloride	TDS	NO ₃ - N
Effluent	108	844	5.9
MW5	103	799	4.1
MW6	101	797	6.6
MW2	33	498	0.05 ¹
MW1	23	292	1.19
MW3	20	181	0.7

¹ Nitrate was detected once in (10) MW2 samples, with detection limits of 0.05 mg/l.

The records are arranged in accordance with decreasing chloride concentration, showing that wells 5 and 6 are essentially the same as the effluent; those wells are near the existing disposal fields and adjacent to two of the proposed RIBs and will be moved.

Basis for Permit Requirements The monitoring requirements, discharge limits, and a summary of the monitoring conducted under the previous permit are presented in the two tables below and form the basis for the discussion that follows.

Nevada Division of Environmental Protection

Fact Sheet
 Canyon GID
 NEV50028
 Page 3 of 5

Discharge Limitations

Parameter mg/l, except as noted	Discharge Limitations		Monitoring Requirements		
	Monthly Average	Daily Maximum	Sample Locations	Measurement Frequency	Sample Type
flow ¹ , gpd		100,000	effluent	monthly	meter
flow ² , gpd	140,000	350,000	effluent	monthly	meter
BOD		m&r	influent	monthly	discrete
	30	45	effluent	monthly	discrete
TSS		m&r	influent	monthly	discrete
	30	45	effluent	monthly	discrete
Fecal Coliform (003, 004) mpn/100 ml	2.2	23	effluent	monthly	discrete
TN		10	effluent	monthly	discrete
TKN		m&r	effluent	monthly	discrete
Ammonia - N		m&r	effluent	monthly	discrete
NO ₂ + NO ₃ - N		m&r	effluent	monthly	discrete
pH, su		6.5 - 9	effluent	monthly	discrete

1 Existing plant

2 New plant

Nevada Division of Environmental Protection

Fact Sheet
Canyon GID
NEV50028
Page 4 of 5

Discharge Monitoring Data

January 2006 - June 2008

mg/l except as noted

Parameter	Monitoring Results				Permit Limits	
	Count ¹	Min	Avg	Max	Avg	Max
flow, gpd	30	63,000	74,000	100,000	100,000	
NO3 - N	60	0.9	5.9	16		
NH3 - N	49	0.1	0.6	2		
TKN	13	1.2	4.3	8.9		
TN	13	1.5	8.4	14	10	
chloride	11	94	108	130		
TDS	11	780	844	920		
BOD	60	3	15	30	30	45
TSS	60	1	25	93	30	45
pH, su	60	6.5	7.41	7.91		6 - 9

¹ Number of analyses or measurements

SAMPLING LOCATION AND FREQUENCY The sampling frequency has been set at weekly as a minimum for obtaining meaningful data for a mechanical plant. Influent BOD and TSS provide a basis for evaluating plant performance.

FLOW The limits correspond to the existing and proposed design capacities. The existing capacity has actually been reduced to approximately 85,000 gpd by the switch to an on off aeration mode mentioned previously.

BOD & TSS These are the secondary treatment standards established by the U.S. EPA. The reported TSS excursions are due to insufficient settling time resulting from "at capacity" operation.

NITROGEN SPECIES The TN limit is a conservative application of the drinking water standard for nitrate. As the other species are determined as part of the total, and as they are of interest, they are to be reported as well.

pH This is a standard wastewater parameter.

Nevada Division of Environmental Protection

Fact Sheet

Canyon GID

NEV50028

Page 5 of 5

Compliance Issues There have been a number of non-compliance incidents due to the inadequacy of the existing facilities that should be corrected by the planned improvements.

Schedule of Compliance A new Operations and Maintenance Manual is required to document operation of the new facilities.

Procedures for Public Comment Notice of the Division's intent to renew discharge permit NEV50028 as described here is being sent to the Reno Gazette Journal for publication and mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit must submit written comments to the Division within (30) days of the publication date. The comment period can be extended at the discretion of the Administrator. The deadline for comments is 5:00 pm Monday December 28, 2009, although letters postmarked on that date will also be accepted. A public hearing on the proposed determination can be requested by the applicant, any affected state or interstate agency, the Regional Administrator, or any interested agency, person, or group of persons. The request must be filed within the comment period and indicate the interest of the person filing the request and the reasons why a hearing is warranted. Public hearings granted by the Division are conducted in accordance with NAC 445A.238. The final determination of the Division 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 five year term.

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December 31, 2009

Modified by Joseph Maez on October 23, 2009.