

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

**Permittee Name:** Orovada General Improvement District  
P.O. Box 134  
Orovada, NV 89425

**Permit Number:** NEV90006

**Location:** Orovada Wastewater Treatment Facility  
Orovada, Humboldt County, Nevada  
End of Kunkel Lane - ½ mi. W of U.S. 95  
Township 43N, Range 37E, NE¼ of SW¼ of Section 34  
Latitude: 41° 33' 44"N, Longitude: 117° 48' 03"W

**General:** The Orovada General Improvement District (GID) was formed in 1991 in a community with a current population of 154. The GID provides water and sewer connections to approximately 50 homes and several small businesses. The wastewater treatment facility includes a flow meter, one soil/clay-lined facultative treatment pond, one infiltration basin, and a monitoring well.

Since the spring of 2009, the GID has bypassed wastewater influent from the treatment pond and discharged it directly into the infiltration basin for groundwater disposal. The purpose of the bypass was to dry the treatment pond so that it can be lined with High Density Polyethylene (HDPE). Long-term, the Division does not recommend this mode of bypass operation as it does not provide adequate wastewater treatment or groundwater protection since the wastewater solids are neither removed nor any biological treatment is made prior to groundwater infiltration. In January 2011, the GID submitted a preliminary engineering report to the Division to begin the process of funding an upgrade project.

**Bureau of Corrective Actions Sites:** There is no Bureau of Corrective Action (BCA) remediation site located within a one-mile radius of the wastewater treatment facility.

**Wellhead Protection Area:** The wastewater treatment facility is located within the 6,000 ft. proximity (Drinking Water Protection Area No. 4) of two Orovada GID community supply wells. The treatment facility is located outside the 10-yr wellhead capture zones. However, with the bypass mode of wastewater discharge, excess groundwater nitrate loading may result from long-term disposal of inadequately treated wastewater.

**Receiving Water Characteristics:** A monitoring well was installed southwest, down-gradient of the infiltration basin. Depth to groundwater was last reported 140 ft. The monitoring well is not presently sampled due to an inoperable well pump and a broken depth gauge (air-line). When last reported several years earlier, the groundwater nitrogen (TN) level was 6.5 mg/l prior to the treatment pond being bypassed. This nitrogen level was already within 0.5 mg/l of the 7.0 mg/l nitrogen action level, at which point, a plan for an alternative method of treatment or disposal would be required, e.g., denitrification (nitrogen reduction).

**Flow:** The existing facility is rated 20,000 GPD, and the renewal application requested such capacity limit upon permit renewal. Recent flow data indicated 6,000 GPD or 40 GPD/resident. This flow average is well below typical Nevada rural communities (e.g., 75-100 GPD/resident) but is likely due from reduced wastewater demand in the colder months due to seasonal occupancy. In addition, some of the commercial connections may be vacant.

**Wastewater Analysis:** Since the pond has been bypassed, influent/effluent CBOD and TSS levels averaged 233 and 353 mg/l, respectively. Prior to this and when the treatment pond was operational, effluent CBOD and TSS levels averaged 70 and 164 mg/l, respectively, over several reporting periods. The Division notes that that one treatment pond alone may be insufficient for adequate secondary (biological) treatment. The Division's pond design guidance (WTS-5) recommends a minimum two-cell pond arrangement for adequate treatment and operational flexibility (e.g., sludge removal) when a treatment pond is to be taken offline. In addition, Division guidance on infiltration basin construction (WTS-3) recommends a minimum of two infiltration basins to allow for adequate basin rotation and servicing including weed removal.

**Rational for Permit Requirements:** For the permit renewal, the Division requires secondary treatment standards for the Orovada GID effluent discharge, which is consistent with other state-wide permitted rural pond treatment systems. Such treatment standards, to be demonstrated on a quarterly basis, include effluent standards of 45 mg/l (CBOD), 90 mg/l (TSS), and 6.0 to 9.0 Standard Units (pH), on a daily maximum averaging basis.

**TABLE 1: DISCHARGE LIMITATIONS<sup>1</sup>**

PARAMETERS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	30-Day Average	Daily Maximum	Sample Location	Measurement Frequency	Sample Type
Flow, Gallons per Day	20,000	20,000	Flume	Continuous	Flow Meter
CBOD, mg/l	-	45	Effluent	Quarterly	Discrete
TSS, mg/l	-	90	Effluent	Quarterly	Discrete
pH, Std. Units	-	6 to 9	Effluent	Quarterly	Discrete
Freeboard, ft. (See Permit Part I.A.13)	-	2.0 ( $\leq$ 1.0 ac) 3.0 ( $>$ 1.0 ac)	Each Pond	Quarterly	Field Measurement

1. The effluent sample shall be obtained at the location of the discharge into the operating infiltration basin.

**TABLE 2: GROUNDWATER MONITORING (MW-1)<sup>1</sup>**

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 <sup>2</sup>	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 only after purging (3) well volumes of groundwater from the monitoring well.
2. See Permit Part I.A.17 for groundwater total nitrogen (TN) action levels.

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

- Within ninety (90) days of the permit renewal date (by **XX/XX/XXXX**); the Permittee shall submit plans and specifications for upgrade of the Orovada GID facility.
- Within ninety (90) days of the permit renewal date (by **XX/XX/XXXX**), the Permittee shall provide notification of completion of repairs to the monitoring well sampling pump and the depth measurement gauge.
- The Permittee shall notify the Division in writing not more than fourteen (14) calendar days following the completion of the facility upgrades.
- Within thirty (30) days of the completion of facility upgrades, the Permittee shall submit a copy of the engineer's Construction Quality Assurance (CQA) letter.
- Within thirty (30) days of the completion of facility upgrades, the Permittee shall submit a plan for the proper disposal of all biosolids removed from the treatment pond.
- Within ninety (90) days after the startup of facility upgrades, the Permittee shall submit a copy of an updated Operations & Maintenance (O&M) Manual, prepared in accordance with NDEP Water Technical Sheet No. WTS-2: *Minimum Information Required for an Operation and Maintenance Manual*.

**Procedures for Public Comment:** The Notice of the Division's intent to renew discharge permit NEV90006, subject to the conditions contained within the permit is being sent to the **Humboldt Sun** and **Reno Gazette-Journal** newspapers 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 newspapers. 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 **Monday, March 28, 2011, 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 renew discharge permit NEV90006 for a five-year permit term.

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Bureau of Water Pollution Control

Date: February 22, 2011