



STATE OF NEVADA

Department of Conservation & Natural Resources

Jim Gibbons, Governor

Allen Biaggi, Director

DIVISION OF ENVIRONMENTAL PROTECTION

Leo M. Drozdoff, P.E., Administrator

FACT SHEET

(Pursuant to NAC 445A.236)

Permittee Name: Douglas County Sewer Improvement District #1
P. O. Box 578
Zephyr Cove, Douglas County, Nevada 89448

Permit Number: NEV80033

Location: Douglas County Sewer Improvement District #1
Wastewater Reclamation Facility
P. O. Box 578
Zephyr Cove, Douglas County, Nevada

On Sewer Plant Road off U.S. Highway 50 in Zephyr Cove near Round Hill, in Douglas County, Nevada.
Section 23, T13N, R18E, MDB&M
Latitude: 38°58'56"N, Longitude: 119°55'43"W

General: The applicant is requesting renewal of the existing permit NEV80033 for Douglas County Sewer Improvement District #1's (DCSID) wastewater reclamation facility (WRF). The WRF includes a collection system with two lift stations and a facility treatment process that consists of screening at the headworks, flow metering, primary clarification, grit removal, aeration, secondary clarification and chlorine disinfection. There are also six horizontal pressure filters to polish the effluent, which use a graduated media column comprised of four coarse gravel layers on the bottom layers, intermediate sand in the middle layer and fine anthracite coal on the top layer. The biosolids/sludge treatment process includes thickening of the primary and secondary clarifier sludge, chemical conditioning with polymer, then dewatering via a centrifuge. The dewatered sludge is transported for composting at the Bently Agrowdynamics Ranch near Minden in the Carson Valley. The treated effluent is pumped through an export pipeline to Bently Reservoir (Outfall 003) where it is stored until used to irrigate alfalfa in the Carson Valley by permitted reusers. Buckeye Creek treated effluent storage reservoir (Outfall 002) is currently off-line and prohibited from receiving any further treated effluent until the reservoir is relined. This reservoir may be put back on-line during the life of this permit which would require a minor permit modification. The design capacity of the WRF is 3.75 MGD.

The wastewater utility serves approximately 4,700 residential and commercial connections in the Douglas County portion of the Lake Tahoe basin, including the six major casino properties which contribute about 60-percent of the influent. DCSID has provided wastewater treatment to the service area since 1961, with plant upgrades added throughout the years. Two new secondary clarifiers were constructed and put into service in 2007. The facility is currently cleaning its

cleaning its previous treated effluent storage reservoir that is located above the WRF. The reservoir will be dewatered and then the accumulated sludge will be removed. DCSID has plans to line the reservoir and put it back in service during the life of this permit.

Corrective Actions Sites: There is no Bureau of Corrective Actions remediation site located within a one-mile radius of the permitted site.

Wellhead Protection Area: The WRF is not located within a 6,000-foot water supply well Drinking Water Protection Area.

Flow: 3.75 MGD 30-day Average and 4.20 MGD Daily Maximum

Receiving Water Characteristics: Depth to groundwater near the plant site ranges from approximately 10 feet to 200 below ground surface, depending on elevation and location. Groundwater meets drinking water standards and is monitored in 3 wells. Groundwater samples are also collected and analyzed quarterly from a total of 12 monitoring wells proximal to the Buckeye Creek Reservoir. Currently, three monitoring wells near the Buckeye Creek Reservoir have total nitrogen levels that have occasionally exceeded the maximum contaminant level (mcl) of 10.0 mg/L during the past 5 years.

Proposed Treated Effluent Discharge Limitations: Table 1 shows that the discharges from the DCSID WRF to groundwater of the State shall be limited as follows:

Table 1. DCSID Monitoring Requirements

PARAMETERS	EFFLUENT DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30 Day Ave.	Daily Max.	Measurement Frequency	Sample Type
Flow – Influent (MGD)	3.75	4.2	Continuous	Flow Meter
Flow- Outfall 001 (MGD)	M&R	M&R	Continuous	Flow Meter
Flow - Outfall 002 (MGD) ¹	M&R	M&R	Continuous	Flow Meter
Flow – Outfall 003 (MGD)	M&R	M&R	Continuous	Flow Meter
CBOD ₅ , mg/L	30	45	Weekly	Composite
TSS, mg/L	30	45	Weekly	Composite
Fecal Coliform, CFU/100 mL	200	400	Weekly	Discrete
Total Nitrogen, mg/L	M & R		Monthly	Composite
Nitrate as N, mg/L	M & R		Monthly	Discrete
Total Kjeldahl Nitrogen as N, mg/L	M & R		Monthly	Discrete
pH (Effluent), SU	Between 6.0 and 9.0		Monthly	Discrete

M&R: Monitor and Report Total Nitrogen = Total Kjeldahl Nitrogen + Nitrate + Nitrite

CFU: Colony Forming Units

Footnotes:

1) Buckeye Creek Reservoir may not receive effluent until such time as the reservoir has been relined according to specifications and plans approved by the Division of Environmental Protection, Bureau of Water Pollution Control.

Outfall 001 refers to the treated effluent line to DCSID’s on-site storage reservoir which does not currently receive any flows. When the storage reservoir is put back into operation during the life of this permit, then DCSID will abide by all monitoring conditions set forth in the permit. Outfall 002 refers to the Buckeye Creek treated effluent storage reservoir and Outfall 003 refers to the treated export line that flows from the WRF to the Bently Reservoir.

The following monitoring wells located at the Buckeye Creek Effluent Storage Reservoir will be monitored quarterly for depth to groundwater and groundwater elevation: MW-1, MW-3, MW-5, MW-8 and MW-9. The following monitoring wells located at the Buckeye Creek Effluent Storage Reservoir will be monitored according to the parameters listed in Table 2: MW-2, MW-10, MW-11, MW-12, MW-13, MW-14 and MW-15:

Table 2. Buckeye Creek Reservoir Monitoring Well Sampling Requirements

Parameter	Limitation	Monitoring Requirements	
		Frequency	Sample Type
Depth to Groundwater (feet)	monitor & report	Quarterly	field measurement
Groundwater Elevation (feet)	monitor & report	Quarterly	Calculate
Total-N as N (mg/L)	10	Quarterly	Discrete
Chlorides (mg/L)	monitor & report	Quarterly	Discrete
Total Dissolved Solids (mg/L)	monitor & report	Quarterly	Discrete

Schedule of Compliance: The Permittee shall implement and comply with the following Schedule of Compliance:

1. The Permittee shall implement and comply with the provisions of the schedule of modifications which the Administrator may make;
2. The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit;
3. A revised Operations & Maintenance (O&M) Manual that follows the requirements of NDEP Publication WTS-2 shall be submitted to NDEP by **Month Day, 2010**, that outlines any changes to the treatment process or operation of the facility. The revised O&M Manual shall be submitted to the Compliance Coordinator at:

Attn: Compliance Coordinator
 Bureau of Water Pollution Control

Nevada Division of Environmental Protection
901 S. Stewart St, Suite 4001
Carson City NV 89701;

4. When DCSID completes the on-site lined storage reservoir during the life of this permit, DCSID shall comply with the following conditions:
 - a. **Within fourteen (14) days** prior to the commencement of use of the new lined storage reservoir, the Permittee shall submit a notice of intent to NDEP to use the pond system;
 - b. **Within fourteen (14) days** of the actual construction completion date, NDEP shall be notified in writing;
 - c. **Within thirty (30) days of construction completion**, the Permittee shall submit certification, stamped by a Nevada registered professional engineer, that the project was constructed in accordance with the plans and specifications approved by the Division; and
 - d. **Within thirty (30) days of construction completion**, the O&M Manual shall be updated and submitted to the Compliance Coordinator.

5. When DCSID completes the relining of the Buckeye Creek treated effluent storage reservoir (Outfall 002) during the life of this permit, DCSID shall comply with the following conditions:
 - a. The plans must be approved by the Division prior to the start of pond relining. All changes to the approved plans must be approved by the Division;
 - b. **Within fourteen (14) days** prior to the commencement of use of the new lined Buckeye Creek storage reservoir, the Permittee shall submit a notice of intent to NDEP to use the pond system;
 - c. **Within fourteen (14) days** of the actual construction completion date, NDEP shall be notified in writing;
 - d. **Within thirty (30) days of construction completion**, the Permittee shall submit certification, stamped by a Nevada registered professional engineer, that the project was constructed in accordance with the plans and specifications approved by the Division; and
 - e. **Within sixty (60) days of construction completion**, the Permittee shall submit any revision to the Operations and Maintenance (O&M) Manual, prepared in accordance with the Division's WTS-2 guidance document: *Minimum Information Required for an Operations and Maintenance Manual*, that reflect the changes made to the wastewater treatment system during construction.

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

Rationale for Permit Requirements: The flow is measured to verify the flow to the treatment plant is consistent with permit limitations, and to determine when design capacity is being approached. Influent and effluent BOD₅ and TSS, and effluent nitrogen are monitored to assess the level of treatment being provided and to verify compliance with permit limitations.

Procedures for Public Comment: The notice of the Division's intent to issue a permit authorizing the facility to discharge to the groundwater of the State of Nevada, subject to the conditions contained within the permit, is being sent to the **Reno Gazette-Journal** and the **North Lake Tahoe Bonanza** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit may do so in writing for a period of 30 days following the date of the public notice. All comments regarding this permit must be received or postmarked by **5:00 PM on Monday, April 12, 2010**. 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 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 determined to be appropriate. All public hearings must be conducted to accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Prepared by: Steve McGoff, P.E.
Staff Engineer III
March 8, 2010