

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Applicant: The Club at Clear Creek Tahoe, Inc.
990 Ironwood Drive
Minden, NV 89423

Facility: Clear Creek Tahoe Golf Course
Old Clear Creek Road
Minden, Nevada 89423

Permit Number: NEV2010509

Location: The Clear Creek Golf Course is located off Old Clear Creek Road, in Douglas County, Nevada.

Latitude: 39° 06' 38" N; Longitude: 119° 50' 39" W
Section 3, T14N R19E MDB&M

General: The Club at Clear Creek Tahoe, Inc. (CCCT) operates the Clear Creek Golf Course, a private 18-hole golf course, surrounded by a planned community of 384 residential lots (undeveloped as of April 2010). The course includes a rest station, several port-a-potties, maintenance and practice facilities and a temporary clubhouse. The golf course requires irrigation 4-6 months/year, via reclaimed water; the reclaimed water may also be used for fire suppression and construction uses. The reclaimed water is provided by Incline Village General Improvement District (IVGID) Wastewater Treatment Facility (WWTF), Permit # NEV30009, via a 12" export line that runs 21 miles from Incline Village near Lake Tahoe to a Wetlands Enhancement Facility in the Carson Valley, crossing the Clear Creek development and golf course. The effluent is treated to a level of 30 mg/L BOD and 30 mg/L TSS, and 240 MPN/100ml fecal coliform, the Category C reuse standard (NAC 445A.276). Once the effluent is diverted to a transfer pond near the 18th hole tees it will be pumped to an approximately 2-acre, 15-ac-ft storage pond near the 11th hole green. The storage pond, lined with 30-mil PVC, has been constructed to contain the run-off of a 100-year storm using only 1 inch of the 3 feet of freeboard. The effluent is drawn from the storage pond to the irrigation pump house. The pump station distributes the effluent to the course through a series of buried mains, laterals and pop-up sprinkler heads that are designed for effluent usage. The irrigation system will be programmed to irrigate specific areas at specified times to minimize the possibility of human contact. The irrigation system is inspected by maintenance personnel daily. During precipitation events maintenance personnel deactivate the irrigation distribution system to prevent over-irrigation and run-off. Subsurface soils are primarily decomposed granite with high permeability; bedrock is encountered approximately 15 feet bgs. No hydrodynamic connection exists between the ponds or

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exists between the ponds or irrigated areas and Clear Creek or other surface water bodies. No discharge to any surface water bodies is permitted. A 100-foot buffer is required around all effluent application areas and future residences with Category C effluent; effluent including aerosol drift must be kept within this buffer to prevent accidental contact. A continuous fence was erected around the entire development, and the nearest public road is more than ¼ mile from the golf course. In the future the CCCT will construct an effluent treatment facility, prior to any homes being constructed, that will produce Class A effluent for reuse.

The CCCT holds a temporary discharge permit, TNEV2010374, issued November 20, 2009, which allows for effluent usage during turf growing season for irrigation, construction and fire suppression. The permit being applied for will allow for continued and long-term use of the effluent for irrigation, minor construction uses and fire suppression. No homes will be constructed until the Indian Hills GID sewer service is connected to the Club at Clear Creek Tahoe development.

Flow: Current irrigation effluent usage is 200 acre-feet/year, based on the current irrigation acreage of 50 acres. Under IVGID’s NEV30009 requirements, the effluent usage from the supplier to CCCT is set at a maximum of 350 acre-feet/year.

Corrective Actions Sites: There are no Bureau of Corrective Actions remediation sites within a one-mile radius of the facility.

Wellhead and Drinking Water Supply Protection: The facility and discharge location are not within a 6,000 foot buffer of the current public water supply system. A Wellhead Protection Area has not been established for this site.

Receiving Water Characteristics: Depth to groundwater is very shallow; bedrock is encountered at approximately 15 feet below ground surface (bgs). Water quality is generally good. Eight groundwater monitoring wells have been constructed, one up-gradient of the site, and 7 down-gradient of the irrigated turf areas, to represent background conditions and potential groundwater impacts. Water quality data is currently reported under the temporary permit. Only 3 of the 8 monitoring wells currently contain water.

Proposed Discharge Limitations, Sampling and Monitoring Requirements: During the period beginning on the effective date of this permit and lasting until the permit expires, the Permittee is authorized to discharge Category C (NAC 445A.276) reclaimed water supplied by the IVGID WWTF, Permit # NEV30009, to the CCCT for irrigation of the 18-hole golf course, construction uses and fire suppression, as presented to the Division in the permit application. Discharge effluent limits and groundwater quality limitations, sampling and monitoring requirements are summarized in Tables 1 and 2 below.

Table 1. Effluent Limitations and Monitoring Requirements

PARAMETERS & UNITS	EFFLUENT LIMITS	MONITORING REQUIREMENTS
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	30-Day Avg	Monthly Maximum	Location	Measurement Frequency	Sample Type
Irrigation Flow ¹ (MGD)	0.6	0.8	001	Continuous	Flow Meter
Total Suspended Solids (mg/L) ³	30	45	IVGID*	Monthly	Discrete
BOD ₅ (mg/L) ³	30	45	IVGID*	Monthly	Discrete
Fecal Coliform (MPN/100ml) ³	23	240	IVGID*	Monthly	Discrete
Total Nitrogen – as N (mg/L) ³	Monitor & Report		IVGID*	Monthly	Discrete
pH (Standard Units) ³	6.0 to 9.0		IVGID*	Monthly	Discrete
Irrigation Volume ²	350 acre feet/year ²			Continuous	Calculated
Annual Nitrogen Loading ²	Monitor & Report			Annual	Calculated
Annual Nitrogen Use ⁴	Monitor & Report			Annual	Calculated

001 = Outfall 001, pump station discharge outlet prior to discharge to irrigation system.

* Monitoring may be conducted by IVGID and reported by Permittee or monitored by Permittee at diversion.

1. As effluent is diverted from the IVGID export line, record flow as average MGD; application rates in the EMP should be used as a guide.
2. As effluent is used for irrigation, record annual volume as acre-feet per year, and annual nitrogen loading as lbs/acre-yr. This is limited via the EMP, and based on IVGID's maximum supply rate and effluent limitations.
3. Monitoring may be done by IVGID; results may be reported by the Permittee in accordance with Part I.A.3. The fecal coliform count must meet standards specified in NAC 445A.276.
4. The total nitrogen applied (lbs/acre) shall not be greater than the total nitrogen uptake (lbs/acre); report with 4th quarter DMR.

MGD: million gallons per day

mg/L: milligrams per liter

MPN: most probable number

BOD₅: 5-day biochemical oxygen demand

ml: milliliters

SU: standard pH units

Table 2. Groundwater Monitoring Protocol for the 8 Monitoring Wells

Parameters	Limitations	Monitoring Frequency	Sample Type
Depth to Groundwater (feet)	M&R	Annually ¹	Discrete
Groundwater Elevation (feet AMSL)	M&R	Annually ¹	Discrete
Total Dissolved Solids (mg/L)	M&R	Quarterly ²	Discrete
pH (Standard Units)	6.0 to 9.0	Quarterly ²	Discrete
Total Nitrogen as N (mg/L)	10.0	Quarterly ²	Discrete
Chloride (mg/L)	M&R	Quarterly ²	Discrete

1. Measuring results shall be reported in the 4th quarter as part of the annual report.

2. Report quarterly in April, July, October and January.

M&R = Monitor & Report

mg/L = milligrams per liter

AMSL = above mean sea level

Nitrogen Level Action Plans: The detection of concentrations of total nitrogen (N) in groundwater samples trigger the following limitations and response requirements:

- a. If total nitrogen levels measured in the groundwater in the monitoring wells increases to **7.0 mg/l**, as a result of reclaimed water irrigation, the Effluent Management Plan shall be revised, and the revised EMP shall be stamped by a Licensed Professional Engineer. The

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- revised EMP shall provide management practices to decrease the nitrogen upward trend.
- b. Monitoring wells which have total nitrogen levels higher than **7.0 mg/l** shall be monitored at least quarterly unless otherwise specified by the Division.
 - c. If total nitrogen levels increase to **9.0 mg/l** as the result of reclaimed water irrigation, the Permittee shall submit a corrective action plan which shall ensure that there is no further degradation of groundwater.
 - d. If total nitrogen levels increase to **10.0 mg/l** as the result of reclaimed water usage, the reuse site will be in violation of the permit and formal enforcement actions may be initiated. Effluent reuse for irrigation shall cease immediately unless otherwise directed by the Division.
 - e. Additional changes to the current operation and/or testing protocol may be required by the Division if the current nitrate levels in these monitoring wells continue with an upward trend.

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications which the Administrator may make in approving the schedule of compliance.

- a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit; and
- b. **Within thirty (30) days of permit issuance (MM DD, 2010)**, the Permittee shall submit to NDEP an updated Operations & Maintenance manual (O & M).
- c. **Within ninety (90) days of permit issuance (MM DD, 2010)**, the Permittee shall submit to NDEP cross-connection control documentation.
- d. Once cross-connection controls are built and implemented, cross-connection control documentation must be submitted annually with the fourth (4th) quarter DMRs.
- e. All compliance deliverables shall be submitted to the address listed below:

**Compliance Coordinator
Nevada Division of Environmental Protection
Bureau of Water Pollution Control
901 S. Stewart St., Ste. 3003
Carson City, NV 89701**

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- a. Use of Category C effluent requires that a 100-ft buffer zone be maintained around the effluent application sites. Spray irrigation shall be conducted in accordance with management practices to prevent all effluent, including aerosol drift, from escaping this buffer zone. The EMP shall contain the details of all management practices which address the minimization of overspray and drift.
- b. Drinking water fountains shall be covered and places of food preparation shall be shielded during effluent spray irrigation. To the fullest extent possible, effluent irrigation practices shall be conducted in a manner so that human contact with the treated effluent does not occur (NAC 445A.2766).
- c. Irrigation with reclaimed water shall occur primarily after the course is closed to play, and shall cease before the course opens for play in the morning. The irrigation shall be staggered and timed so that the areas to be first accessed in the morning are first to be irrigated. These and other management practices shall be contained in the EMP.
- d. The Permittee shall provide appropriate identification for spray irrigation systems or hand lines dedicated for reuse water. All components shall be properly marked (purple color, signage, tags, etc.) and have no potential for cross-connection with any potable sources.
- e. The Permittee shall calculate the limiting effluent application rate for the site using “WTS-1: Guidance Document for Effluent Reuse” (WTS-1B), or other approved calculations. The evaluation of the rates shall be included in the EMP. If the Permittee determines that the calculated application rate has been exceeded during a calendar year, the Permittee shall prepare a report which includes an evaluation of the application rates in the EMP, an explanation of conditions which lead to the exceedance, and any planned changes the Permittee deems necessary. The evaluation shall be submitted in the Annual Report, with the fourth quarter DMR (See I.B.2.b.).
- f. The Permittee shall provide documentation to the Division that notification has been made to the local health agency and local water purveyor of the Permittee’s intent to use treated effluent at this facility and documentation that a cross-connection control inspection conducted by a certified cross-connection control specialist and/or authorized local water purveyor representative has been completed. The Permittee shall also provide to the Division the local water purveyor’s documented final acceptance of and approval to use the facility’s in place cross-connection assemblies and controls to accept effluent at the facility. After the Division approves the submitted cross-connection documentation, the Permittee may accept effluent for reuse at the facility. Thereafter, an annual inspection with the local water purveyor representative and/or a certified cross connection control specialist shall be conducted and shall include appropriate testing of backflow prevention assemblies by the Permittee.

the facility during usual operation or inspection testing shall be addressed in the EMP and provide for appropriate management response. Effluent reuse at the facility is prohibited when approved cross-connection controls are not in place and/or not functioning properly.

Rationale for Permit Requirements: Effluent discharge and groundwater monitoring is required by this permit. Regular and routine inspections and maintenance are also required by the permit.

Flow: The flow limits have been set at the applicant's request, and are based on the effluent supplier's maximum usage rate for CCCT. Storage and distribution systems were designed based upon maximum allowed usage rates.

TSS: Set at the effluent discharge limits of the effluent supplier, per permit, NEV30009.

BOD₅: Set at the effluent discharge limits of the effluent supplier, per permit, NEV30009.

Fecal Coliform: Set at the effluent discharge limits of the effluent supplier, per NEV30009 and NAC 445A.2766.

Nitrogen: Monitor & Report. Report basis, whether effluent discharge limits and recent data of the effluent supplier, per permit, NEV30009, or actual plant requirements and actual water usage.

Procedures for Public Comment: The notice of the Division's intent to issue a permit authorizing the facility to discharge to the infiltration basins subject to the conditions contained within the permit, is being sent to the **Reno Gazette Journal** and the **Record Courier** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing or by phone/FAX for a period of 30 days following the date of the public notice, by **May 16, 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, 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 scheduled by the Administrator 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 CCCT –Clear Creek Tahoe Golf Course Reuse

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permit for a 5-year period.

Prepared by: Jeryl Gardner
(April 2010)

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