

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET
(pursuant to NAC 445A.236)

Permittee Name: West Wendover Recreation District
PO Box 2290
Wendover, Nevada 89883

Location: Toana Vista Golf Course
2319 Pueblo Blvd.
Wendover, Elko County, Nevada 89883

Sec. 17: SE-NW, NE-SW, NW-SW	Township 33 North	Range 70 East	Mt Diablo Base & Meridian	
Sec. 18: NE-SW, all SE				
FEATURE	LAT (d m s)	LON (d m s)	LAT (decimal °)	LON (decimal °)
Toana Vista GC Club House	40° 44' 12.50" N	114° 05' 10.62" W	40.7368056°	-114.0862833°

Permit Number: NEV2006510

Flow: 1.0 million gallons per day as the 30-day average
460 Acre-Feet per year (150 million gallons per year)

General:

Toana Vista is a 115 acre, 18 hole golf course located within the City of Wendover, Nevada at 2319 Pueblo Blvd. The course receives secondary-treated, disinfected wastewater from the West Wendover Wastewater Treatment Plant (WWWTP, Permit #NEV10019) for spray irrigation of the golf course roughs, fairways and greens. The WWWWTP reclaim bacteriological water quality supplied to the Toana Vista Golf Course meet NAC 445A.276 reuse Category B requirements for human contact with effluent. Reclaimed water provides 90% of the golf course’s irrigation requirements during a typical year, with the irrigation season being from March to November of each year. Reclaimed wastewater is pumped from the WWWWTP to four storage tanks that are located adjacent to the golf course maintenance shops. From the tanks, the water gravity flows through a man-made creek into the upper irrigation pond (pond #1). The level of this pond is controlled by a manual weir by adjusting boards at the weir which sets the maximum level of the pond allowing excess water to gravity flow via an underground 10 inch PVC pipeline to the lower irrigation pond (pond #2). The golf course is irrigated using water from pond #1 and pond #2 only, using booster pumps located in pump houses adjacent to each pond. Additionally there are four (4) ponds which are for decorative purposes only. These ponds are manually filled as needed by golf course staff using the irrigation system. Historically, the Toana Vista discharges to groundwaters of the State via percolation operated as part of the WWWWTP permit. Upon issuance of this permit, Toana Vista will operate as a separate entity being responsible for the permit conditions and limitations provided therein.

Discharge Characteristics:

At a minimum, effluent used for irrigation is treated to meet secondary standards and disinfected with hypochlorite solution. The WWWWTP reports effluent characteristics as follows in Table 1 below (treated effluent water quality data is supplied by the WWWWTP to the Toana Vista GC). Reports from WWWWTP have shown consistent achievement of effluent discharge limits since January 2005 to December 2008.

Table 1

Parameter	Permit Limits
CBOD ₅	30 mg/L
TSS	30 mg/L
pH	6.0-9.0 S.U.
Total Nitrogen as N	Monitor & Report
Fecal Coliform	2.2 MPN/100ml

Proposed Limitations:

The reclaim water supply made available to the golf course for reuse from the WWTP averages about 11.5 mg/l total nitrogen concentration and is disinfected by chlorine processes. The Fecal Coliform limitation is set at the NAC 445A.276 bacteriological water quality requirement for reuse Category B of 2.2 CFU or MPN/100 ml, 30-day average. Therefore, in accordance with NAC 445A.2764, control of public access to the area of use is required; and, to the fullest extent possible, use is to be conducted in a manner so that human contact with spray irrigation cannot reasonably be expected to occur.

Proposed limitations are set to verify the constituent composition of effluent discharges and control application and operational parameters to protect groundwater conditions.

During the period beginning on the effective date of this permit and lasting until the permit expires, the Permittee is authorized to discharge treated wastewater effluent for irrigation of the Toana Vista Golf Course.

Effluent flow as irrigation use for Table 2 below shall be calculated as the sum of pumping from Pond 1 and Pond 2 flow meter readings. The discharge shall be limited and monitored by the Permittee as specified in Table 2 below:

Table 2 – Discharge Limitations

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS ¹	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Concentration units are mg/L unless otherwise indicated.				
Outfall 001: Sum Pond 1+2 as Irrigation Flow ² (MGD):	1.0	1.1 ²	Continuous	Flow meter
Outfall 002: Sum Pond 1+2 as Non-irrigation Flow ² (MGD):	Monitor & Report		Each delivery	Pump calculation
BOD ₅ ³	30	45	Monthly	Composite
TSS ³	30	45	Monthly	Composite
Fecal Coliform ³ (cfu or mpn/100ml)	2.2	23	Twice/Month	Discrete
Total Nitrogen as N ³	Monitor and Report		Monthly	Discrete
Annual Application Volume (AF per Year)	460		Cumulative Year to Date in Qtrly DMRs	Flow meter
Nitrogen Application Rate (lb/ac/year) ⁴	220, 245 ⁴ (See permit Part I.B.4)		4th Quarter	Calculate

mg/L: Milligrams per Liter: ppm MGD: Million Gallons per Day M & R: Monitor and Report	BOD ₅ : Biochemical Oxygen Demand [5-day, 20° C] TSS: Total Suspended Solids	cfu: Colony Forming Unit mpn: Most Probable Number ml: milliliter	lbs/ac/year: Pounds per acre per year AF: Acre Feet [volume]
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1. See Part I.D. of permit for additional information on sampling, testing, reporting, monitoring and definitions related to requirements.
2. Report the total flow use from Pond #1 and Pond #2 for irrigation as Outfall 001 and for non-irrigation (e.g. decorative ponds) as Outfall 002.

The Daily Maximum limit represents the effluent irrigation water applied during the highest usage month and is limited to the anticipated maximum available daily effluent use plus a nominal 10% allowance (1.0 MGD + 10%).

3. Sample results to be obtained from NEV10019 and reported by Permittee. Bacteriological quality (Coliform) limitation is set to meet NAC 445A.276 reuse Category B requirement for human contact with effluent reclaim water. Twice monthly sampling during effluent application periods.
4. Submit with 4th Quarter DMR along with results required by permit Part I.B.4, if needed. The available Total nitrogen rate applied as effluent and nitrogen fertilizer is not to exceed the course vegetation/agronomic water-nitrogen balance calculated as defined in the approved EMP. (220 is approved upon permit issue. See Part I.B.1 for any planned nitrogen rate increase or change of the approved EMP.)

Monitoring requirements may be satisfied by data collected by the West Wendover Wastewater Treatment Plant [NEV10019]. Discharge Monitoring Reports are to be submitted by the Permittee. Copies of backup data or water quality calculation summaries are to be maintained at the golf course reuse site.

Schedule of Compliance

The Permittee shall implement and comply with the provisions of the following 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.
- b. The Permittee shall submit first time use cross-connection control inspection documentation as required by permit Part I.B.13 within 14 days of acceptance by local water purveyor. Effluent use is not authorized without Division approval of first time use cross-control documentation. The Permittee shall submit current cross-connection control inspection documentation as required by permit Part I.B.13 annually with the fourth quarter DMR.
- c. Prior to initiating any change to an approved EMP or approved system plans, in accordance with permit Part I.B.1 or Part I.B.7, a revision requesting such change must be prepared by a qualified professional and submitted to the Compliance Coordinator. The Permittee, or designated representative, shall adequately address all comments and concerns relating to the Division's review of a revised EMP or system plan. **The Permittee shall not initiate any change to an approved EMP or approved system plan without Division review and approval.**
- d. **All compliance deliverables shall be submitted to the compliance coordinator identified in Part I.D.2.b of the permit.**

Rationale for Permit Requirements:

Flow: Flow is limited by the volume of treated effluent requested for application, and as long as the nitrogen budgets presented in the approved EMP are observed and annually balanced, the flow rate or volume of water requested can be authorized.

BOD₅: This parameter is monitored to protect waters from excessive organic loading.

TSS: This parameter is monitored to ensure that the groundwater of the State is not degraded.

Fecal Coliform: The concentration of fecal coliform in treated wastewater discharged for irrigation is restricted in accordance with NAC 445A.276 for a zero-distance buffer zone. The limit of 2.2 cfu/100 ml is met by WWTP for the protection of human health.

Total Nitrogen: A nitrogen budget will be conducted each year as part of the effluent management plan (EMP). This budget will help to control the amount of nitrogen entering the soil profile and groundwater.

Determination: The Division has made the determination to issue the proposed permit for a five-year (5) period.

Procedures for Public Comment:

The Notice of the Division's intent to issue the 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 **Elko Daily Free Press** for publication. The notice is being mailed to interested persons on the NDEP-BWPC mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of the publication of the public notice. All comments must be received by 5:00 pm local time on May 18, 2009. 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: E. Samuel Stegeman, P.E.
March 2009

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