

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

Permittee Name: The City of West Wendover
 P.O. Box 2825
 West Wendover, NV 89883

Permit Number: NEV10019

Location: West Wendover Wastewater Treatment Plant
 101 South Alt. Highway 93A
 West Wendover, Nevada 89883
 (lies approximately 1 mile southeast of city)

Sec. 21: NW-NE, SW-NE	Township 33 North	Range 70 East	Mt Diablo Base & Meridian	
FEATURE	LAT (d m s)	LON (d m s)	LAT (decimal °)	LON (decimal °)
Wastewater Treatment Plant Headworks	40° 43' 34.20" N	114° 03' 39.30" W	40.7261667°	-114.0609167°

General: West Wendover Wastewater Treatment Plant (WWWTP) operates a 1.0 million gallon per day (MGD) (30-day average) wastewater treatment plant, which services a customer base of approximately 5,000 residents, several casinos, and light-commercial businesses (e.g., restaurants, motels, convenience stores), located in West Wendover, Nevada. During warmer months, a portion of the domestic wastewater influent from adjoining Wendover, Utah (approximately 1,500 residents) is discharged via lift station to the West Wendover, Nevada treatment plant. The volume of wastewater influent received from Utah residences in the summer months is approximately 0.2 to 0.4 MGD. After screening and grit removal in the headworks, wastewater undergoes biological treatment (e.g., activated sludge process) in two Marwood-brand aeration basins, rated at 0.5 MGD per basin. Activated sludge is periodically wasted to the aerobic sludge digester tank, prior to final dewatering in two sludge drying beds. The City of West Wendover incorporates the dewatered sludge biosolids in a municipal composting operation. The treatment currently (March 2009) does not include a denitrification process; however the City of West Wendover in coordination with the Nevada Division of Environmental Protection (Division) has committed to a timeline for incorporating this treatment activity in the future (see Schedule of Compliance section).

During cooler weather periods (e.g., October through mid-March), clarified effluent from the aeration basins is stored in four storage lagoons, each holding 70 acre-feet (22.81 MG per lagoon). In the recent past the WWWTP removed the dike between Pond #3 and Pond #4, to create one large pond, effectively removing the former lining for these ponds. In warmer months, typically March through November, the treated plant effluent stream is reused at the Toana Vista Municipal Golf Course, operated by the West Wendover Recreation District (NEV2006510). During reuse periods, prior to delivering to the golf course for daily irrigation use, plant stream effluent or pond storage water is further treated by sand filtration (suspended solids removal) and chlorination (disinfection).

In the arid climate of West Wendover, irrigation requirements at the 115 acre 18-hole golf course can at times exceed 1.0 MGD; therefore, to reduce impacts to and conserve the public water supply, additional pumping of wastewater received for treatment from Wendover, Utah is required. Since the West Wendover portion of inflow for treatment may only provide 80% or less of the daily irrigation reuse demand, depending on day/weekend contribution flow from the West Wendover residences and businesses, accepting the additional Wendover flow allows the plant to meet the total irrigation demand and provide improved treatment capabilities and reuse for Wendover, Utah community discharge flow.

Receiving Water Characteristics: The receiving water body for treated effluent is groundwater of the State of Nevada. Groundwater depth and quality has not been satisfactorily determined at this time for permit development (March 2009). Available information suggests that this groundwater is shallow and of poor quality due to high Total Dissolved Solids (TDS). West Wendover is located on alkali/mud flats (e.g., moderate to high soil salt content), which were created by evaporation of Ancient Lake Bonneville (i.e., now Bonneville Salt Flats). Municipal water for West Wendover is pumped from approximately 25 miles away from several municipal wells and a developed spring.

Flow: The permit limits 30-day average and daily maximum flow to 1.0 MGD. Presently (March 2009), the 30-day average flow is approximately 0.65 MGD, which will fluctuate according to weekend casino traffic and receipt of influent from Wendover, Utah. The 30-day average limit has not been exceeded in the review period from January 2005 to November 2008; although, the 30-day average has reached 85% of the permit level during four monthly periods: 11/05, 12/05, 1/06 and 2/06. The 1.0 MGD daily maximum has been exceeded on three occasions: 7/06 @ 1.025 MGD, 1/07 @ 1.020 MGD and 8/08 @ 1.4 MGD. The Permittee is planning a plant expansion to address flow capacity and incorporate an effluent denitrification treatment process. All plans must be submitted to and approved by the Division prior to start of any construction.

Proposed Effluent Limitations and Special 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 percolation/infiltration to groundwater by storage ponds at the facility and delivery to authorized reuse water sites. The WWTWTP will be providing a high quality disinfected reclaim water for reuse to the Toana Vista Golf Course and other possible authorized sites in the future. The reclaim water supply made available for reuse from the WWTWTP 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.

The discharge shall be limited and monitored by the Permittee as specified in the table below:

Discharge Limitations

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS ¹	
Concentration units are mg/L unless otherwise indicated.	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Outfall 001: Influent Flow (MGD)	1.0	1.0	Continuous	Flow meter
Outfall 002: Plant Effluent ² Flow (MGD):	Monitor and Report		Continuous	Flow meter
Outfall 003: Reuse Effluent ³ Flow (MGD):	Monitor and Report		Continuous	Flow meter
BOD ₅ : Influent	Monitor and Report		Monthly	Composite
BOD ₅ : Effluent ²	30	45	Monthly	Composite
TSS: Influent	Monitor and Report		Monthly	Composite
TSS: Effluent ²	30	45	Monthly	Composite
pH (SU): Effluent ²	Between 6.0 to 9.0		Monthly	Discrete
Total Nitrogen as N: Effluent ²	Monitor and Report		Monthly	Composite
Fecal Coliform: Reuse Effluent ³ (cfu or mpn/100ml)	2.2	23	Twice/Month	Discrete

mg/L: Milligrams per Liter; ppm MGD: Million Gallons per Day	BOD ₅ : Biochemical Oxygen Demand [5-day, 20° C]	cfu: Colony Forming Unit mpn: Most Probable Number	SU: Standard Unit
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PARAMETER	DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS ¹
M & R: Monitor and Report	TSS: Total Suspended Solids	ml: milliliter

1. See Part I.B. of permit for additional information on sampling, testing, reporting, monitoring and definitions related to requirements.
2. Plant Effluent² samples shall be collected at the wastewater treatment plant prior to delivery to the three storage lagoons (Outfall 002) or to any reuse site (Outfall 3).
3. Reuse Effluent³ (Outfall 3) samples shall be tested for Fecal coliform twice per month during effluent reuse application periods. Effluent^{2, 3} sample results shall be made available to entities receiving WWTW treated effluent for reuse. Bacteriological quality (Coliform) limitation is set to meet NAC 445A.276 reuse Category B requirement for human contact with effluent reclaim water.

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.
- b. Prior to initiating any change to an approved system plan or an approved O&M Manual, in accordance with permit Part I.A.7 or Part I.A.9, 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 system plan or O&M Manual. **The Permittee shall not initiate any change to an approved O&M Manual or approved system plan without Division review and approval**
- c. Within ninety (90) days of permit issuance **Month XX, 2009**, the Permittee shall submit a current WWTW Operations and Maintenance (O&M) Manual for review and approval by the Division. The submitted O&M Manual shall include any change made to the WTP O&M Manual and material in accordance with permit Part I.A.13., since the last Division approved edition.
- d. When the 30-day average daily influent flow rate first equals or exceeds 85% of the design treatment capacity of the Permittee's facility given in the Discharge Limitation Table above, the Permittee shall fulfill the requirements related to this capacity trigger as directed by permit Part III.A.4 – Flow Rate Notification.
- e. The Permittee shall submit to the Division design plans for the WWTW to integrate a nitrogen removal treatment process for plant effluent discharge. Submitted design plans for review and approval must be wet stamped and signed by a State of Nevada registered Professional Engineer. The Permittee, or designated representative, shall adequately address all comments and concerns relating to the Division's review of submitted design plans and accomplish Division approval by June 30, 2012.
- f. The Permittee will begin construction of Division approved design plans for the WWTW to integrate a nitrogen treatment process for plant discharge effluent by June 30, 2014.
- g. The Permittee must have Division plan approval **prior** to commencing any WTP expansion or other construction activity.
- h. The Permittee shall notify the Division in writing not more than fourteen (14) calendar days following construction completion of the facility expansion or other construction activity.
- i. Within sixty (60) days of completing any facility construction activity, the Permittee shall submit a copy of the engineer's Construction Quality Assurance (CQA) letter indicating that the activity was constructed in accordance with the Division approved design plans. The CQA letter shall be wet stamped and signed by a Nevada Professional Engineer (P.E).
- j. Within ninety (90) days of completing any facility construction activity, the Permittee shall

submit a copy of the as-built construction plans wet stamped and signed by a Nevada Professional Engineer (P.E.)

- k. **All compliance deliverables shall be submitted to the compliance coordinator identified in Part I.B.2. of the permit.**

Rationale for Permit Requirements: The Division's rationale for the proposed monitoring conditions is as follows:

- *Total Nitrogen-N Monitoring:* This parameter shall be tracked to ensure that groundwater of the State is not degraded due to effluent nitrogen concentration.
- *BOD₅ & TSS:* The Division's BOD₅ and TSS requirements for secondary-treated effluent discharge are 30/45 mg/L for the 30-day average/daily maximum values.
- *Fecal Coliform:* NAC 445A.276 reuse Category B effluent has no buffer zone requirements for irrigation application (i.e., zero (0) feet) and, with control of public access, is suitable for use on golf courses and other publicly accessible areas (NAC 445A.2764). 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.
- *pH:* The Division requires the effluent to meet a pH limitation of between 6.0 to 9.0 standard units.

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

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.
Bureau of Water Pollution Control
March 2009

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