

**NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACT SHEET**

(Pursuant to Nevada Administrative Code 445A.236)

Permittee: Truckee Meadows Water Authority
P. O. Box 30013
Reno, NV 89520

Permit Number: NV0020834

Facility Location: Glendale Water Treatment Plant
1205 S. 21st Street
Sparks, Nevada

Facility Location:

Latitude: 31° 31' 26.18"

Longitude: 119° 46' 26.65"

Discharge Location:

Latitude: 31° 31' 32.09"

Longitude: 119° 46' 32.92"

Township 19N, Range 20E, Sections 7 & 8
Washoe County, Nevada

General:

The Glendale Water Treatment Plant was formerly owned and operated by Sierra Pacific Power Company, and was transferred to the Truckee Meadows Water Authority (TMWA) in June, 2001. Permit NV0020834 continues for the facility. Raw water is diverted from the Truckee River to the Glendale Plant, which produces potable municipal water for the Reno/Sparks area. Processes used include screening, pH control, coagulation, filtration, and chlorine disinfection

In previous permits, excess water diverted from the Truckee River and routed back to the river was designated Outfall 001. Because this water reflects ambient river water quality and receives no treatment or contact with any treated water or treatment chemicals, redirection of the water back to the Truckee River will not impact water quality. Monitoring of Outfall 001 is discontinued in the permit in 2007.

Emergency situations, including system repair might require discharge of in-process water. Outfall 002 denotes discharge to the Truckee River from the Glendale Plant pre-treatment sedimentation pond, and, as stated, can occur during emergency situations or other scheduled maintenance activities. Water in the pre-treatment pond may contain small amounts of poly-aluminum chloride and cationic polymer flocculant (coagulant and coagulant aid), and chlorine (disinfectant). In previous treatment procedures, the Permittee had also used alum (alkali sulfate used as coagulant), but use of this treatment chemical has been discontinued. Prior to discharge at Outfall 002, TMWA is required to dechlorinate discharge to levels protective of aquatic life. Discharge must comply with beneficial use standards established for the Truckee River, and

where applicable, Requirements to Maintain Existing Higher Quality. Constituent levels of waters released are also required to meet load capacity flow rates established by TMDLs when applicable.

Because the Truckee River is being evaluated and assessed in the efforts to re-establish the river as part of the Lahontan Cutthroat Trout range, the Permittee will give notice of impending noncomplying discharges to the Truckee-Carson Irrigation District, the U.S. Fish and Wildlife Service, and the Pyramid Paiute Tribe.

Discharge Flow and Characteristics:

The Permittee has requested inclusion under the discharge category *Discharge from a Treatment Plant for Drinking Water, Intermittent discharge of 1,000,000 gallons or more daily*, pursuant to Nevada Administrative Code (NAC) 445A.232.

During the term of the former permit, the Glendale facility discharged from Outfall 001 one time, in November 2001. This discharge event returned five (5) cubic feet per second (cfs), and was monitored for Total Suspended Solids (TSS). Discharge and intake water both had measured TSS of less than 15 mg/l.

During the term of the former permit, discharge from Outfall 002 occurred three (3) times. Characteristics of the discharge events are shown in the following table.

DATE	PARAMETER				
	Volume Discharged (Total Gallons)	Total Dissolved Solids (mg/l)	Sulfate (mg/l)	Residual Chlorine (mg/l)	pH (Standard Units)
December, 2003	800,000	101	10.5	Non-Detect	7.79
November, 2004	900,000	108	22	Non-Detect	8.13
March, 2005	970	104	12.1	Non-Detect	7.97

Receiving Water Characteristics:

The potential discharges would be to the Truckee River, between the NAC identified control points East McCarran (downstream) and Idlewild (upstream). Beneficial uses for the Truckee River, for its entire length, are the following: Irrigation; Watering of livestock; Recreation involving contact with the water; Recreation not involving contact with water; Industrial supply; Municipal or domestic supply, or both; Propagation of wildlife; and Propagation of aquatic life. The aquatic life of major concern in the reach of the river into which the Glendale Plant would discharge are all life stages of mountain whitefish, rainbow trout and brown trout.

The RMHQ and Beneficial Use water quality standards listed in Nevada Administrative Code (NAC) 445A.186 for the Truckee River above the East McCarran control point apply. Those parameters for which the river meets requirements to maintain existing higher quality (RMHQ) standards shall apply to Outfalls 002.

United States Geological Survey (USGS) maintains stream-flow data for the McCarran Bridge control point. The data indicate that the minimum daily flow (average) for the period from October 1, 1976 through September 30, 2006 is 200 cubic feet per second (cfs). The maximum daily flow (average) for this period was 1,740 cfs; the average of the reported daily flows was 697 cfs.

Proposed Effluent Limitations and Monitoring Requirements:

Treated or partially treated water must meet the requirements to maintain existing higher water quality of the Truckee River where applicable. Otherwise, discharge must meet beneficial use standards.

Each discharge event at Outfall 002 shall be measured for the following:

PARAMETER		DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
		Annual Average	Daily Maximum	Measurement Frequency	Sample Type
Flow (gallons)		Monitor & Report		Each Event	Estimate
<i>Temperature (° C)</i>		<i>Monitor & Report</i>		<i>Each Event</i>	<i>Discrete</i>
pH (Standard Units)		6.5 to 9.0		Each Event	Discrete
Chlorides (mg/l)		---	250	Each Event	Discrete
TDS ²	<i>Concentration (mg/l)</i>	<i>90.0</i>	<i>120.0</i>	<i>Each Event</i>	<i>Discrete</i>
	<i>Mass Loading (lbs/day)</i>	<i>Monitor & Report</i>		<i>Each Event</i>	<i>Calculate</i>
<i>Turbidity (NTU)</i>		<i>6</i>	<i>---</i>	<i>Each Event</i>	<i>Discrete</i>
Alkalinity as CaCO ₃ (mg/l)		<25% change from natural conditions		Each Event	Discrete
Total Chlorine Residual (mg/l)		---	0.10	Each Event	Discrete
TSS ¹	<i>Concentration (mg/l)</i>	<i>15</i>	<i>---</i>	<i>Each Event</i>	<i>Discrete</i>
	<i>Mass Loading (lbs/day)</i>	<i>Monitor & Report</i>		<i>Each Event</i>	<i>Calculate</i>

1. Total Suspended Solids.
2. Total Dissolved Solids.

“Requirements to Maintain Existing Higher Quality” limits denoted by italics.

For direct bypass or discharge of excess intake river water, Outfall 001 shall not be monitored. However, if the discharge from Outfall 001 into the Truckee River is backflow from the pre-settling pond, the discharge limitations prescribed for Outfall 002 in the above Table shall also apply to Outfall 001.

Rationale for Permit Requirements:

Monitoring per the above permit requirements will assess the quality of any water discharged, and will ensure that the water quality of the Truckee River is not degraded. Water quality standards listed in NAC 445A.186 for maintenance of existing higher quality waters (RMHQ) have been applied to Outfall 002 for those constituents that might be affected by treatment procedures at the facility. There are no listed discharge parameters or limits that apply to this type of discharge in Chapter 40 of the Code of Federal Regulation effluent limitation guidelines.

Residual Chlorine: The chlorine residual limit of 0.10 mg/l is generally adhered to for all discharges to the Truckee River that are applicable. Information submitted by the Permittee on all discharges from the facility during the period from 4th Quarter 2003 through 4th Quarter 2006 (below) indicates that the maximum flow amounted to only 6.5% of the minimum reported daily stream flow (200 cfs). This discharge lasted for two hours. At the permit limit of 0.1 mg/L Total Residual Chlorine (TRC) this discharge would result in an estimated 0.0061 mg/L Total Residual Chlorine level in the river. This estimated value at the minimum recorded daily stream-flow is well below the chronic exposure criteria for aquatic organisms, listed in the National Recommended Water Quality Criteria published by USEPA in 2004. Further, it is expected that residual chlorine discharged into the river will be rapidly chemically-consumed by organic material within the river, thereby further lowering the estimated chlorine level and further reducing the likelihood of impact to aquatic organisms.

Discharge Event	Flow (gallons per hour)	Total Volume (Million Gallons)	Duration (hrs)	Discharge Volume (cubic feet per second)	% of min stream flow (200 cfs)	Estimated River Total Residual Chlorine Level (Discharge at 0.1 mg/l Total Residual Chlorine, min stream flow)
4th Quarter 2003	33,333	0.8	24	1.24	0.62	0.0006
4th Quarter 2004	42,857	0.9	21	1.59	0.80	0.0008
1st Quarter 2005	350,087	0.7	2	13.00	6.50	0.0061
4th Quarter 2005	312,500	2.5	8	11.60	5.80	0.0055
4th Quarter 2006	30,000	0.36	12	1.11	0.56	0.0006

In summary, it is anticipated that any discharges of de-chlorinated water at permit limits will be small in comparison to the flow of the Truckee River and of minimal duration, and generally pose no threat to aquatic life.

Temperature: Water treated at the Glendale Treatment Works is not heated or cooled during treatment. Any incidental change in temperature from the time water is withdrawn from the Truckee River until it might be discharged to the river under terms of this permit are strictly due to ambient weather conditions. Truckee River RMHQ water quality standards listed in NAC 445A.186 for temperature state that change of temperature within the river be zero degrees Celsius ($\Delta T = 0^{\circ}\text{C}$). Based on the previous discharge events listed above and because discharges will be small in comparison to the flow of the Truckee River and of minimal duration, NDEP believes that discharges from the Glendale Treatment Works will have a negligible effect on temperature within the river. For this reason, the water quality standard for temperature will not be considered as a permit limitation.

Schedule of Compliance:

1. The Permittee shall achieve compliance with the NPDES permit on issuance.
2. Within 60 days of permit issuance, the Permittee shall submit an updated Water Management Plan (WMP), describing the management of the potential raw water and treated water discharges.

Procedures for Public Comment:

The Notice of the Division's intent to issue an NPDES permit authorizing this facility to discharge into the Truckee River for a five-year period, subject to the conditions contained within the permit, is being sent to the **Reno Gazette Journal** 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 for a period of thirty (30) days following the date of publication of the public notice in the newspaper. 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 **August 23, 2007 by 5:00 P.M.**

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 the proposed NPDES discharge permit for a period of five (5) years

Prepared by: Janine O. Hartley,
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March 2006
July, 2007