

**NEVADA DIVISION OF ENVIRONMENTAL PROTECTION**

**FACT SHEET**  
(pursuant to NAC 445A.236)

**Permittee:** Washoe County School District  
7495 South Virginia Street  
Reno, Nevada 89511

**Permit:** NEV2003513

**Location:** Sparks, NV and Spanish Springs, NV in Washoe County

Reuse location	Outfall 001: Reuse Site 1		Outfall 002: Reuse Site 2		Outfall 003: Reuse Site 3	
		Reed High School 1350 Baring Blvd. Sparks, NV 89434		Spanish Springs High School 1065 Eagle Canyon Drive Sparks, NV 89436		Shaw Middle School 600 Eagle Canyon Drive Sparks, NV 89436
<b>LAT</b>	39° 33' 28.50" N	39.5579167°	39° 39' 04.70" N	39.6513056°	39° 38' 55.00" N	39.6486111°
<b>LON</b>	119° 43' 21.85" W	-119.7227361°	119° 44' 00.00" W	-119.7333333°	119° 43' 25.60" W	-119.7237778°
<b>S, T, R</b>	W2-NE4 S34, T 20 N, R 20 E, MDBM		SW4-SW4 S27, T 21 N, R 20 E, MDBM NW4-NW4 S34, T 21 N, R 20 E, MDBM		NE4-NE4 S34, T 21 N, R 20 E, MDBM	

**General:** The applicant intends to reuse tertiary treated, denitrified, and disinfected reuse waste provided by the Truckee Meadows Water Reclamation Facility (TMWRF, Permit #NEV2003506) on three school sites. The Permittee has been irrigating the subject locations with treated effluent under conditions of the permit issued November 2003 and approved Effluent Management Plan (EMP). This 2009 proposed permit removes the Alice Taylor Elementary School as a permitted outfall location per Permittee’s application request. The discharge sites are located in northeast Sparks and Spanish Springs and receive tertiary treated, denitrified, and disinfected reuse water from the City of Sparks supplied by the Truckee Meadows Water Reclamation Facility (TMWRF, Permit #NEV2003506) for dust control, soil conditioning, spray irrigation of turf grasses, trees and other landscape plant materials as well as drip and hand irrigation. The reclaim water supply made available to the Permittee for reuse from the TMWRF averages less than 3 mg/l total nitrogen concentration and is disinfected by chlorination 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. All reuse irrigation operations shall be conducted and operated in accordance with the approved Effluent Management Plan (EMP) and permit conditions.

**Flow:** The applicant requested permit discharge flow limits at 1.51 MGD 30-Day Average Flow to serve the three school sites receiving reuse water. The permit requires the reuse water quantity to be monitored and reported. All effluent applied shall be done in accordance with the approved EMP for each individual site. The monthly maximum is limited to highest usage month determined from consumptive use balance plus 10% allowance for agronomic factors beyond permittee’s control and in accordance with the EMP. The annual application volume is limited to a maximum of 151.71 Acre-Feet per year (49.43 million gallons per year) in the permit based on all the sites combined EMP agronomic demand. The City of Sparks conveys the TMWRF reuse water by agreement to the permittee with a delivery cap of 151.71 Acre-Feet per year (49.43 million gallons per year). Permittee shall notify the Division in writing if the issued permit flow limits are renegotiated with and changed by the supplier. Permittee is the responsible party for any necessary modification to this permit to address any changes and/or, if necessary, obtaining a temporary permit issued by the Division to address the change.

**Discharge Characteristics:** The TMWRF provides tertiary treated, denitrified, and disinfected effluent for reuse irrigation at Reed High School located in Sparks and Spanish Springs High School and Shaw Middle School located in Spanish Springs. Reuse will be via spray irrigation of turf grasses and/or drip irrigation of trees or other plant materials. The TMWRF reclaim bacteriological water quality supplied to each site meet NAC 445A.276 reuse Category B requirements for human contact with effluent and is denitrified below 10 mg/l Total Nitrogen. TMWRF

reports effluent characteristics as follows in Table 1 below. This treated effluent water quality data is supplied by TMWRF to individual users who hold active permits to reuse and discharge the TMWRF reclaim water. Reports from TMWRF have shown consistent achievement of effluent discharge limits. All reuse irrigation operations shall be conducted and operated in accordance with the approved Effluent Management Plan (EMP) and permit conditions.

**Table 1: TMWRF Effluent Limits and Performance**

Parameter	Permit Limit (30-day Avg)	2008 annual average
Biochemical Oxygen Demand - 5 Day, Uninhibited, mg/L	20	2.5
Total Suspended Solids, mg/L	20	1.3
Total Dissolved Solids, mg/L	Monitor & Report	392
pH, standard unit	6.5 ≤ pH ≤ 8.5	7.5
Total Nitrogen as N, mg/L	10	1.6
Fecal Coliform, cfu or MPN per 100 ml	< 2.2	< 2.2

**Well Head and Drinking Water Supply Protection:**

Outfalls for this permit associated with Public Water System (PWS) Well Head Protection Areas (WHPA) and Drinking Water Protection Areas (DWPA) are summarized in the following table:

Out fall	PWS No.	Public Water System	Well ID	Within WHPA	Within DWPA well radius		
					1,000 ft	3,000 ft	6,000 ft
001	NV0000190	Truckee Meadows Water Authority	32	No	--	--	X
002	NV0001085	Desert Springs Utility Co.	4	NA	--	--	X
003	NV0001085	Desert Springs Utility Co.	2	NA	--	--	X
	NV0001086	Sky Ranch Water Service Corp.	2	NA	--	--	X
	NV0004082	Spring Creek Water Co.	3, 4	NA	--	--	X

Depth to groundwater in the vicinity varies. Treated effluent provided for reuse is denitrified with averages less than 3 mg/l total nitrogen concentration and when applied in accordance with the approved Effluent Management Plan (EMP), no adverse affects to groundwater due to flows is expected. Groundwater monitoring wells are not required for any site in this permit.

**Proposed Effluent Limitations:**

Discharge shall be monitored and reported by Permittee in accordance with limitations specified in Table 2.

**TABLE 2 – DISCHARGE LIMITATIONS**

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS <sup>1</sup>		
	30-Day Average	Daily Maximum	Site Location	Measurement Frequency	Sample Type
001-003: Total reclaim flow MGD	1.51	Monitor & Report	1, 2, 3	Continuous	Flow meter
MGM <sup>2</sup>	Monitor & Report <sup>2</sup>	--	1, 2, 3	Continuous	Flow meter
Outfall 001: Site 1 [Reed HS] MGD	Monitor & Report	Monitor & Report	1	Continuous	Flow meter
MGM <sup>2</sup>	Monitor & Report <sup>2</sup>	--	1	Continuous	Flow meter
Outfall 002: Site 2 [Spanish Sp HS] MGD	Monitor & Report	Monitor & Report	2	Continuous	Flow meter
MGM <sup>2</sup>	Monitor & Report <sup>2</sup>	--	2	Continuous	Flow meter
Outfall 003: Site 3 [Shaw MS] MGD	Monitor & Report	Monitor & Report	3	Continuous	Flow meter
MGM <sup>2</sup>	Monitor & Report <sup>2</sup>	--	3	Continuous	Flow meter
001-003: Annual Application Volume <sup>3</sup>	151.71		1, 2, 3	Cumulative to	Flow meter

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS <sup>1</sup>		
	30-Day Average	Daily Maximum	Site Location	Measurement Frequency	Sample Type
AF/year	(See permit Part I.B.5)			date	
Fecal Coliform <sup>4</sup> cfu, mpn per 100 ml	2.2	23	Supply <sup>4</sup>	Weekly	Discrete
MGD: Million Gallons per Day MGM: Million Gallons per Month	cfu: Colony Forming Unit mpn: Most Probable Number	ml: milliliter AF: Acre Feet [volume]			

1. See Part I.D. of permit for additional information on sampling, testing, reporting, monitoring and definitions related to requirements.
2. Report the total usage per each calendar month. Monthly maximum limited to highest usage month determined from consumptive use balance + 10% allowance for agronomic factors beyond permittee's control and in accordance with permit Part I.B.5 requirements.
3. Submit with 4th Quarter Discharge Monitoring Report (DMR) along with results required by permit Part I.B.5, if needed. 151.71 AF/yr = 49.43 MG/yr. City of Sparks authorized delivery cap is 151.71 AF per year (49.43 MG/y).
4. During application periods, sample results are to be obtained weekly from NEV2003506 and reported in Permittee DMR. Bacteriological quality (Coliform) limitation is set to meet NAC 445A.276 reuse Category B requirement for human contact with effluent reclaim water.

Monitoring requirements may be satisfied by data collected by the TMWRF [NEV2003506]. 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 reuse site.

**Receiving Water Characteristics:** Groundwater in the area is potable and the depth to groundwater in the area varies with elevation. The Permittee, in the approved Effluent Management Plan (EMP), will need to ensure that the treated denitrified effluent is applied at the consumptive rate. No adverse effects to groundwater are expected to occur as a result of this effluent reuse.

**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. TMWRF denitrifies effluent provided for reuse with averages less than 3 mg/l total nitrogen concentration and when applied in accordance with the approved EMP, no adverse affects to groundwater due to flows is expected.

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

**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 maintain and revise, as necessary, the Effluent Management Plan (EMP) sections for each site keeping all information required by I.B of the permit current. Within one hundred twenty (120) days of permit effective date, **Month XX, 2009**, the Permittee shall submit the current EMP for the TMWRF reclaimed water use site(s) for review and approval by the Division. The submitted EMP sections shall include any change made to the EMP needed to comply with this permit issued and material in accordance with permit Part I.B.3., since the last Division approved edition.
- c. 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 and local water purveyor acceptance documentation as required by permit Part I.B.13 annually with the fourth quarter DMR.
- d. 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.2, 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.**

- e. If permittee re-negotiates the authorized daily delivery and/or annual effluent supply with the permittee's supplier or conveyor, permittee shall inform the Division of the newly negotiated supply limit in writing within 14 days of adopting the agreement/contract between the parties. If such agreement/contract exceeds this permit's authorized daily or annual effluent application limit, the permittee shall request a permit modification and update the approved EMP. Permittee, as the individual permit end user of TMWRF reuse water shall be responsible for any necessary modification to said individual permit and/or, if necessary, obtaining a temporary permit issued by the Division to address the change.
- f. **All compliance deliverables shall be submitted to the compliance coordinator identified in permit Part I.D.2.d.**

**Proposed Determination:** The Division has made the tentative determination to issue (renew) the proposed permit, under the provisions prescribed, for a 5-year period.

**Procedures for Public Comment:** Notice of the Division's intent to issue a permit authorizing the facility to discharge to waters of the State of Nevada, subject to the conditions contained within the permit, is being sent to the **Reno Gazette Journal** for publication. Notice is also mailed to interested persons in the NDEP-BWPC mailing list database. Anyone wishing to comment on the proposed permit can do so in writing up through the noticed comment period date, as designated herein, which must be through a period of at least 30 days following the date of the public notice. All materials being submitted must be hand-delivered, e-mailed, faxed or postmarked no later than 5:00 P.M. PST, or PDT if in effect, on **Friday July 31, 2009**, the close of noticed comment period. 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 reason(s) why a hearing is warranted.

Any public hearing held by the Administrator will be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings will 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.

Prepared by: E. Samuel Stegeman, P.E.  
December 2008

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