



# STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor

Leo M. Drozdoff, P.E., Director

Colleen Cripps, Ph.D., Administrator

## FACTSHEET (pursuant to NAC 445A.236)

**Permittee Name:** ELKO COUNTY FAIR BOARD  
PO BOX 2067  
ELKO, NV - 89803

**Permit Number:** NS2007509

**Location:** ELKO COUNTY FAIRGROUNDS, ELKO  
1090 13TH STREET, ELKO, NV - 89801  
LATITUDE: 40.844444, LONGITUDE: -115.761111  
TOWNSHIP: 34N, RANGE: 55E, SECTION: 10

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Outfall City	Outfall State	Outfall Zip	Outfall County	Latitude	Longitude	Receiving Water
001	IRRIGATION	Land Application Site		ELKO	NV	89801	ELKO	40.844444	-115.761111	GROUNDWATER
002	DUST CONTROL	Land Application Site		ELKO	NV	89801	ELKO	40.844444	-115.761111	GROUNDWATER
003	SUM OF OUTFALLS 001 & 002	Sum		ELKO	NV	89801	ELKO	40.844444	-115.761111	GROUNDWATER

### General:

This permit renewal allows for the continued discharge of treated effluent for the irrigation of the Elko County Fairgrounds (ECF). The ECF encompass approximately 35 acres within the City of Elko and are bordered by Golf Course Road to the east, Interstate 80 to the north, Cedar Street to the south, and 13th Street to the west. During the growing season, the ECF receive secondary treated, denitrified, chlorinated, reclaimed water from the City of Elko Water Reclamation Facility (CEWRF), permit NS0020014, for spray irrigation of approximately seven acres of grass and alfalfa located within the ECF racetrack infield and for dust control on the dirt track. The reclaimed water meets Category C quality (NAC 445A.276) and is conveyed to the ECF via a 12-inch diameter pressure main. The flow enters the site via a 6-inch diameter connection and is quantified by a totalizing flow meter. The ECF are irrigated with a hand-placed spray irrigation system with dispersion nozzles. The frequency of irrigation is dependent on the time of year with daily irrigation being common from March through October and little to no irrigation from November through February. Annual reclaimed water usage for the ECF is estimated to be 0.1 million gallons per day and 31.9 acre-feet per year. Public access to the reuse area is restricted and a 100-foot buffer zone is required. The ECF have an overhead tanker truck fill station for use on the racetrack for dust control and contain no reclaimed water storage structures. Potable water is used for dust control on the racetrack when the public is present.

### Discharge Characteristics:

The reclaimed water used for irrigation and dust control meets secondary standards and is denitrified and disinfected with chlorine by the CEWRF prior to distribution for reuse. Average and maximum values for select CEWRF reclaimed water parameters during the third quarter of 2014 were as follows:

PARAMETER	AVERAGE VALUE	MAXIMUM VALUE
Fecal Coliform (CFU/100mL)	5.29	224.7
BOD <sub>5</sub> (mg/L)	3	4
Total Suspended Solids (mg/L)	3.67	5
pH (SU)	7.5	-
Total Nitrogen (mg/L)	6.37	7.3
Kjeldahl Nitrogen (mg/L)	1	1.2
Nitrate (mg/L)	5.3	6.1
Nitrite (mg/L)	< 0.08	< 0.1
Ammonia (mg/L)	0.19	0.3

### Receiving Water:

The receiving water is groundwater of the state underlying the ECF. The depth to groundwater at the ECF is not known. According to the State of Nevada Division of Water Resources Well Log Database, the static water level at City of Elko Well #18, located approximately half a mile from the ECF, is 86 feet below ground surface.

### Summary of Changes From Previous Permit:

The monitoring and reporting requirements for Nitrate and Ammonia have been removed because they are included in the total nitrogen value.

The monitoring and reporting requirements for Annual Nitrogen Loading and Crop Yield have been removed because they are included in the Effluent Management Plan.

Due to the new naming conventions at the Nevada Division of Environmental Protection (NDEP), Bureau of Water Pollution Control, the permit number has been changed from NEV2007509 to NS2007509. This change does not reflect a change in the type of permit being issued. NEV and NS permits are for groundwater discharges to the state of Nevada. These are not to be confused with NV permits which are reserved for NPDES permitting.

### Proposed Effluent Limitations:

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

**Re-use Discharge Limitations Table for Sample Location 001 (Irrigation) To Be Reported Monthly**

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Coliform, fecal general <sup>[1]</sup>	30 Day Average		<= 23 Colony Forming Units per 100ml T (CFU/100mL) <sup>[2]</sup>	Prior to Reuse	001	Biweekly	DISCRT
Coliform, fecal general <sup>[1]</sup>	Daily Maximum		<= 240 Colony Forming Units per 100ml T (CFU/100mL) <sup>[2]</sup>	Prior to Reuse	001	Biweekly	DISCRT
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	001	Continuous	METER
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	001	Continuous	METER
Nitrogen, total <sup>[1]</sup>	30 Day Average		M&R Milligrams per Liter (mg/L)	Prior to Reuse	001	Monthly	COMPOS
Nitrogen, total <sup>[1]</sup>	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Reuse	001	Monthly	COMPOS

## Notes (Re-use Discharge Limitations Table):

- Sample results to be reported by the Permittee may be obtained from the CEWRF (NS0020014). Reclaimed water quality shall be in accordance with the limits set forth in permit NS0020014.
- In accordance with NAC 445A.276, fecal coliform may be reported in CFU/100mL or MPN/100mL.

**Re-use Discharge Limitations Table for Sample Location 001 (Irrigation) To Be Reported Annually**

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow, total	Total Amount Applied	M&R Million Gallons (Mgal)		Prior to Reuse	001	Annual	CALCTD

### Re-use Discharge Limitations Table for Sample Location 002 (Dust Control) To Be Reported Monthly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	002	Continuous	METER
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	002	Continuous	METER
Nitrogen, total <sup>[1]</sup>	30 Day Average		M&R Milligrams per Liter (mg/L)	Prior to Reuse	002	Monthly	COMPOS
Nitrogen, total <sup>[1]</sup>	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Reuse	002	Monthly	COMPOS
Coliform, fecal general <sup>[1]</sup>	30 Day Average		<= 23 Colony Forming Units per 100ml T (CFU/100mL) <sup>[2]</sup>	Prior to Reuse	002	Biweekly	DISCRT
Coliform, fecal general <sup>[1]</sup>	Daily Maximum		<= 240 Colony Forming Units per 100ml T (CFU/100mL) <sup>[2]</sup>	Prior to Reuse	002	Biweekly	DISCRT

#### Notes (Re-use Discharge Limitations Table):

1. Sample results to be reported by the Permittee may be obtained from the CEWRF (NS0020014). Reclaimed water quality shall be in accordance with the limits set forth in permit NS0020014.
2. In accordance with NAC 445A.276, fecal coliform may be reported in CFU/100mL or MPN/100mL.

**Re-use Discharge Limitations Table for Sample Location 002 (Dust Control) To Be Reported Annually**

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow, total	Total Amount Applied	M&R Million Gallons (Mgal)		Prior to Reuse	002	Annual	CALCTD

**Re-use Discharge Limitations Table for Sample Location 003 (Irrigation & Dust Control) To Be Reported Monthly**

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	Daily Maximum	<= 0.1 Million Gallons per Day (Mgal/d)		Prior to Reuse	003	Continuous	METER
Flow rate	30 Day Average	<= 0.1 Million Gallons per Day (Mgal/d)		Prior to Reuse	003	Continuous	METER

**Re-use Discharge Limitations Table for Sample Location 003 (Irrigation & Dust Control) To Be Reported Annually**

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow, total	Total Amount Applied	<= 10.4 Million Gallons (Mgal) <sup>[1]</sup>		Prior to Reuse	003	Annual	CALCTD

Notes (Re-use Discharge Limitations Table):

1. 10.4 million gallons are equivalent to 31.9 acre-feet. This amount is determined from the irrigation requirements outlined in the Effluent Management Plan.

**Rationale for Permit Requirements:**

Reclaimed water monitoring is required to assess the level of treatment being provided by CEWRF, to assess the management of reclaimed water usage, and to protect groundwater quality. Fecal coliform and nitrogen are required for monitoring the quality of reclaimed water being applied, and for protection of human health and the environment.

Flow: Flow is limited by the volume of reclaimed water requested in the permit application in order to prevent ponding and runoff.

Total Application Volume: This parameter is required to be recorded and reported because it is a variable that is used to calculate the total mass of nitrogen applied to the cropland on a quarterly basis, which is used to reconcile the annual nitrogen balance.

Fecal Coliform: The concentration of fecal coliform in reclaimed water discharged for irrigation is restricted in accordance with NAC 445A.276 for a 100-foot buffer zone.

Total Nitrogen: The total nitrogen concentration in the reclaimed water is required to determine the mass discharge to the irrigated areas.

**Fecal Coliform:**

30-Day Average ≤ 23 (CFU or MPN)/100mL

Daily Maximum ≤ 240 (CFU or MPN)/100mL

**Special Conditions:**

## SA – Special Approvals / Conditions Table

There are no Special Approval / Condition items
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**Flow:**30-Day Average Flow Rate  $\leq$  0.1 MGDDaily Maximum Flow Rate  $\leq$  0.1 MGDAnnual Total Flow  $\leq$  31.9 acre-feet**Corrective Action Sites:**

The following six Bureau of Corrective Actions (BCA) remediation sites are located within a one-mile radius of the ECF:

6-000009  
6-000031  
6-000176  
6-000317  
F-000212  
F-000883

The BCA has indicated that it does not anticipate continued reuse activities to affect remediation activities at these sites.

**Wellhead Protection Program:**

The ECF are located within a 20-year Wellhead Protection Area (WHPA) and partially located within a 10-year WHPA. The ECF are also located within the 3,000-ft Drinking Water Protection Area (DWPA) for three wells and within the 6,000-ft DWPA for four wells. Continued reuse activities are not expected to negatively impact any WHPA or DWPA.

**Schedule of Compliance:**

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee shall submit a new Effluent Management Plan (EMP) to the Division within 90 days of permit issuance. The EMP shall be prepared and wet-stamped by a Nevada Registered Professional Engineer.	5/1/2015

**Deliverable Schedule:**

## DLV– Deliverable Schedule for Reports, Plans, and Other Submittals

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly DMRs	Quarterly	4/28/2015
2	Annual Report	Annually	1/28/2016

**Procedures for Public Comment:**

The Notice of the Division's intent to issue a permit authorizing the facility to discharge to 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 our mailing list. Anyone wishing to comment on the proposed permit can do so in writing until 5:00 P.M. **1/28/2015**, a period of 30 days following the date of the public notice. 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 of EPA Region IX 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.

**Proposed Determination:**

The Division has made the tentative determination to issue / re-issue the proposed 5-year permit.

Prepared by: **Alan Pineda**

Date: **12/10/2014**

Title: **Staff I Associate Engineer**