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

**Permittee Name:** CITY OF ELKO

1751 COLLEGE AVE
ELKO, NV 89801

**Permit Number:** NS2019506

**Permit Type:** GROUNDWATER DISCHARGE

**Designation:** GROUNDWATER

**New/Existing:** EXISTING

**Location:** CITY OF ELKO SPORTS COMPLEX, ELKO
522 ERRECART BLVD., ELKO, NV 89801
LATITUDE: 40.821205, LONGITUDE: -115.773317
TOWNSHIP: 34N, RANGE: 55E, SECTION: NW1/4 SEC 22

| Outfall / Well Num | Outfall / Well Name | Location Type | Well Log Num | Latitude | Longitude | Receiving Water |
|---|---|---|---|---|---|---|
| 001 | ELKO SPORTS COMPLEX | Land Application Site | | 40.821774 | -115.772357 | GROUNDWATER |
| MW1 | DOWNGRADIENT MONITORING WELL MW1 | Monitoring Well | | 40.821503 | -115.773136 | GROUNDWATER |
| MW2 | DOWNGRADIENT MONITORING WELL MW2 | Monitoring Well | | 40.822450 | -115.770992 | GROUNDWATER |
| MW3 | UPGRADIENT MONITORING WELL MW3 | Monitoring Well | | 40.820989 | -115.768308 | GROUNDWATER |

### Permit History/Description of Proposed Action

The Permittee, City of Elko, has applied for the renewal of permit NS2019506 for the City of Elko Sports Complex, located at 522 Errecart Boulevard, in Elko, within Elko County, Nevada. The Permittee proposes to continue to use reclaimed water to irrigate their sports complex and associated landscaping falling within the Elko SC's boundary. The reclaimed water is supplied by the City of Elko Water Reclamation Facility (Elko WRF, permit NS0020014).

This permit was first issued on October 1, 2019, and expired on September 30, 2024; the permit has been administratively continued since.

### Facility Overview

The Elko SC reuse site is situated on Elko County Assessor's Parcel No. (APN) 001-690-001 and is owned by the City of Elko. The Elko SC property is located within the corporate boundary of the City of Elko, and is bordered to the northwest by the Humboldt River and the Union Pacific Railroad mainline track corridor, and to the southeast by residential properties. The Elko SC's land area is approximately 80 acres total in size, with turf and landscape irrigation being applied onto 50 acres within the complex's boundary. The Elko SC offers several baseball fields and grass turf areas for public use.

The Elko SC receives Category B bacteriological quality reclaimed water, per Nevada Administrative Code (NAC) 445A.276, from the Elko WRF. The reclaimed water is treated, denitrified, and chlorinated prior to

delivery to the Elko SC and other users.

The Elko SC's irrigation system is made up of a 12-inch pipeline, a reclaimed water flow meter, an irrigation pump station, and a distribution system for sprinkler irrigation of the landscaped areas. The Elko SC gently slopes from the southeast property line of the parcel towards the Humboldt River, which is located along the northwest property line of the site. Overflow berms, along with drainage channels and storm drainpipes, have been constructed to divert runoff from around the perimeters of the ball fields, the paved parking lots, and the grass turf areas to prevent any runoff from reaching the river. The Humboldt River, defined at Palisade segment (NAC 445A.1438), from Osino to the Palisade Gage, is separated from the Elko SC by a wetlands area and is located approximately 60 feet to the north of the sports complex.

At the request of the City of Elko, this permit is being maintained although the park has not received delivery of any reclaimed water since mid-2021.

The site's Reclaimed Water Management Plan (RWMP) (formerly known as an Effluent Management Plan) was last reviewed and approved by the Division on September 20, 2018. The Technical, Compliance, and Enforcement (TCE) Branch of the Bureau of Water Pollution Control requires RWMPs be updated every two (2) permit cycles which equate to every ten (10) years; therefore, an updated RWMP will need to be submitted to the Division for review and approval by September 20, 2028. The RWMP shall follow guidance document, WTS1B General Design Criteria for Preparing a Reclaimed Water Management Plan.

**Outfall Summary**
Outfall 001 – This external outfall is for the discharge of reclaimed water to the Elko SC.

Outfall MW1 – This downgradient monitoring well is located to the west of the baseball fields.

Outfall MW2 – This downgradient monitoring well is located to the north of the baseball fields.

Outfall MW3 – This upgradient monitoring well is located to the southeast of the baseball fields.

**Effluent Characterization**
Nevada State Network Discharge Monitoring Report (NetDMR) data, as reported from January 2020 to December 2024, was reviewed as part of this permit renewal process. The 30-day average flow rate for Outfall 001, had an reported 5-year average of 0.04 million gallons per day (Mgal/d), being originally permitted for 0.40 Mgal/d. The 5-year average daily maximum flow rate was 0.41 Mgal/d, with it originally being permitted for 0.50 Mgal/d. There were no reported exceedances of either limit.

The Elko WRF provides tertiary treated, denitrified, and disinfected reclaimed water which meets Category B bacteriological quality per NAC 445A.276 to Elko SC; therefore, the reclaimed water should meet, at a minimum, a daily maximum fecal coliform of 23 colony forming units (CFU) / 100 mL and a 30-day geometric mean of 2.2 CFU / 100 mL. The long-term average for the daily maximum fecal coliform reported was 3.5 CFU / 100 mL. There were no reported overages.

The following reported averages were taken from the January 2020 to December 2024 reporting period:

Abbreviations:
MW – Monitoring Well
TDS – Total Dissolved Solids
TSS – Total Suspended Solids
mg/L – Milligrams per Liter

Outfall 001:
Alkalinity, bicarbonate: 170 mg/L
Alkalinity, total: 170 mg/L
Aluminum, total: 0.25 mg/L

Antimony, total: 0.001 mg/L
Arsenic, total: 0.007 mg/L
Barium, total: 0.02 mg/L
Beryllium, total: 0.001 mg/L
Cadmium, total: 0.001 mg/L
Calcium, total: 41 mg/L
Chloride: 150 mg/L
Chromium, total: 0.003 mg/L
Copper, total: 0.02 mg/L
Cyanide, weak acid, dissociable: 0.008 mg/L
Fluoride, total: 0.54 mg/L
Iron, total: 0.18 mg/L
Lead, total: 0.001 mg/L
Magnesium, total: 11.5 mg/L
Manganese, total: 0.035 mg/L
Mercury, total: 0.002 mg/L
Nickel: 0.015 mg/L
*Nitrite plus nitrate total 1 det.: 8.15 mg/L
Nitrogen, total: 7.57 mg/L
Phosphorus, total: 0.08 mg/L
Potassium, total: 20.5 mg/L
Selenium, total: 0.003 mg/L
Silver, total: 0.003 mg/L
Sodium, total: 150 mg/L
Sulfate, total: 66.5 mg/L
TDS: 570 mg/L
Thallium, total: 0.001 mg/L
Zinc, total: 0.038 mg/L

*Note: "Nitrite plus Nitrate Total 1 Det" refers to the combined concentration of nitrite and nitrate, measured as nitrogen. The "1 Det" signifies that the wastewater test has a detection limit (minimum concentration) of 1 unit (this permit being measured as mg/L).

Outfall MW1:
Depth to water level (ft. below surface): 7.38 Feet
Nitrogen, total: 7.22 mg/L
TDS: 2,585 mg/L
Water level relative to mean sea level: 5,054 Feet

Outfall MW2:
Depth to water level (ft. below surface): 5.25 Feet
Nitrogen, total: 1.91 mg/L
TDS: 1,459 mg/L
Water level relative to mean sea level: 5,052 Feet

Note: This monitoring well had been submerged under the Humboldt River in June 2023 although numbers do not show any major fluctuations.

Outfall MW3:
Depth to water level (ft. below surface): 10.83 Feet
Nitrogen, total: 5.95 mg/L
TDS: 2,265 mg/L
Water level relative to mean sea level: 4,304 Feet

**Pollutants of Concern**

Pollutants of concern are any pollutants or parameters that are believed to be present in the discharge and could affect or alter the physical, chemical, or biological condition of the receiving water. Common pollutants of concern for denitrified reclaimed water are fecal coliform, total nitrogen, along with potential inorganic chemicals and metals (Profile 1 contaminants).

**Receiving Water**
Receiving water is groundwater of the State. Depth to groundwater at the site varies between 10 to 20 feet below ground surface (bgs). Due to the shallow depth to groundwater, three monitoring wells were drilled to observe groundwater levels, flow conditions, and obtain samples for determining groundwater quality.

**Compliance History**
The facility was in compliance during the January 2020 to December 2024 reporting period apart from high concentrations of TDS reported at the monitoring well sites.

Reported TDS showed higher levels of concentration observed at the Elko SC's monitoring well sites, due to their proximity to the Humboldt River. Levels observed near the Humboldt River are nearly double the TDS concentrations being reported at the Elko WRF's monitoring wells located uphill and south of the Elko SC. It is assumed that both naturally occurring TDS levels and human-based activities (i.e. mining) have raised TDS levels in and around the river and are the causes of the elevated TDS levels reported.

**Proposed Effluent Limitations**
The discharge shall be limited and monitored by the Permittee as specified below.

**Groundwater Monitoring Wells Table for Sample Location Mw1 (Downgradient Monitoring Well Mw1) To Be Reported Quarterly**

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Chloride (as Cl) | Daily Maximum | | M&R Milligrams per Liter (mg/L) | Groundwater | MW1 | Quarterly | DISCRT |
| Depth to water level ft below landsurface[1] | Daily Minimum | M&R Feet (ft) | | Groundwater | MW1 | Quarterly | DISCRT |
| Nitrogen, total | Daily Maximum | | <= 10 Milligrams per Liter (mg/L) | Groundwater | MW1 | Quarterly | DISCRT |
| Solids, total dissolved | Daily Maximum | | M&R Milligrams per Liter (mg/L) | Groundwater | MW1 | Quarterly | DISCRT |
| Water level relative to mean sea level[2] | Daily Maximum | M&R Feet (ft) | | Groundwater | MW1 | Quarterly | CALCTD |

Notes (Groundwater Monitoring Wells Table):

1. Depth to Groundwater (feet).
2. Groundwater Elevation (AMSL).

**Groundwater Monitoring Wells Table for Sample Location Mw2 (Downgradient Monitoring Well Mw2) To Be Reported Quarterly**

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Chloride (as Cl) | Daily Maximum | | M&R Milligrams per Liter (mg/L) | Groundwater | MW2 | Quarterly | DISCRT |
| Depth to water level ft below landsurface[1] | Daily Minimum | M&R Feet (ft) | | Groundwater | MW2 | Quarterly | DISCRT |
| Nitrogen, total | Daily Maximum | | <= 10 Milligrams per Liter (mg/L) | Groundwater | MW2 | Quarterly | DISCRT |
| Solids, total dissolved | Daily Maximum | | M&R Milligrams per Liter (mg/L) | Groundwater | MW2 | Quarterly | DISCRT |
| Water level relative to mean sea level[2] | Daily Maximum | M&R Feet (ft) | | Groundwater | MW2 | Quarterly | CALCTD |

Notes (Groundwater Monitoring Wells Table):

1. Depth to Groundwater (feet).
2. Groundwater Elevation (AMSL).

**Groundwater Monitoring Wells Table for Sample Location Mw3 (Upgradient Monitoring Well Mw3) To Be Reported Quarterly**

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Chloride (as Cl) | Daily Maximum | | M&R Milligrams per Liter (mg/L) | Groundwater | MW3 | Quarterly | DISCRT |
| Depth of pond or reservoir in feet[1] | Daily Minimum | M&R Feet (ft) | | Groundwater | MW3 | Quarterly | DISCRT |
| Nitrogen, total | Daily Maximum | | M&R Milligrams per Liter (mg/L) | Groundwater | MW3 | Quarterly | DISCRT |
| Solids, total dissolved | Daily Maximum | | M&R Milligrams per Liter (mg/L) | Groundwater | MW3 | Quarterly | DISCRT |
| Water level relative to mean sea level[2] | Daily Maximum | M&R Feet (ft) | | Groundwater | MW3 | Quarterly | CALCTD |

Notes (Groundwater Monitoring Wells Table):

1. Depth to Groundwater (feet).
2. Groundwater Elevation (AMSL).

**Re-use Discharge Limitations Table for Sample Location 001(Elko Sports Complex- Land Application Site) To Be Reported Monthly[1]**

| Discharge Limitations | | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Coliform, fecal general | 30 Day Geometric Mean | | <= 2.2 Number per 100 Milliliters T (#/100mL) [2] | Prior to Reuse | 001 | Monthly | DISCRT |
| Coliform, fecal general | Daily Maximum | | <= 23 Number per 100 Milliliters T (#/100mL) [2] | Prior to Reuse | 001 | Monthly | DISCRT |
| Flow rate | 30 Day Average | <= 0.40 Million Gallons per Day (Mgal/d) | | Prior to Reuse | 001 | Daily | METER |
| Flow rate | Daily Maximum | <= 0.50 Million Gallons per Day (Mgal/d) | | Prior to Reuse | 001 | Daily | METER |
| Nitrogen, total | Maximum | | <= 10 Milligrams per Liter (mg/L) | Prior to Reuse | 001 | Monthly | DISCRT |

Notes (Re-use Discharge Limitations Table):

1. Sample results to be reported by the Permittee may be obtained from the Elko WRF (NS0020014).
2. In accordance with NAC 445A.276, fecal coliform may be reported as either CFU or MPN/100mL.

**Re-use Discharge Limitations Table for Sample Location 001 (Elko Sports Complex-Land Application Site) To Be Reported Annually**

| Discharge Limitations | | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Flow, total | Annual Total | M&R Million Gallons (Mgal) | | Prior to Irrigation | 001 | Annual | CALCTD |
| Nitrogen, total[1] | Annual Mass Loading[2] | M&R Pounds per Year (lb/yr)[3] | | Beneficial Reuse | 001 | Annual | CALCTD |
| Nitrogen, total[4] | Minimum Value | | M&R Percent (%) | Prior to Irrigation | 001 | Annual | CALCTD |

Notes (Re-use Discharge Limitations Table):

1. The total nitrogen applied (pounds per acre per year) shall not be greater than the maximum yearly nitrogen application defined in the Reclaimed Water Management Plan (RWMP).
2. The annual nitrogen loading shall include the total nitrogen from all nitrogen sources, including reuse water, commercial fertilizer, and all other sources of nitrogen.
3. To be reported as pounds per acres per year (lbs/acre/year) refer to Page 20 of the WTS1B: General Criteria for Preparing a Reclaimed Water Management Plan. This formula is below:
   Effluent N Applied = (Mgal/d Applied x Effluent N Conc. (mg/L) x 8.34 x # days/mo.) ÷ # Acres.
4. Report the Theoretical Nitrogen Uptake/Annual Mass Loading of Nitrogen as a percentage. Refer to Technical Sheets WTS1B: General Criteria for Preparing a Reclaimed Water Management Plan and WTS1C Nutrient Management for Reuse & Biosolids Sites.

**Summary of Changes From Previous Permit**

Outfall 001:

Profile 1 parameters were removed and added to the Elko WRF for these pollutants, with results being reported to NetDMR under their groundwater discharge permit (permit NS0020014).

A "Re-Use Discharge Limitation Table" to be Reported Annually was added for Outfall 001, with the following parameters:

Flow Rate, with a “Annual Total”, a “M&R Million Gallons (Mgal)" quantity, a “Prior to Irrigation” monitoring location, a “Annual” measuring frequency, and a “Calctd” sample type.

Nitrogen, total was revised, from a "Annual" to an “Annual Mass Loading” base, a “M&R Pounds per Year (lb/yr)”, with a “Prior to Irrigation” monitoring location, an “Annual” measurement frequency, and a “Calctd” sample type.

Nitrogen, total was added, with a "Minimum Value" base, a "M&R Percent (%)" concentration, with a "Prior to Irrigation" monitoring location, an "Annual" measurement frequency, and a "Calctd" sample type.

Along with the following footnotes:

1. The total nitrogen applied (pounds per acre per year) shall not be greater than the maximum yearly nitrogen application defined in the Reclaimed Water Management Plan (RWMP).

2. The annual nitrogen loading shall include the total nitrogen from all nitrogen sources, including reuse water, commercial fertilizer, and all other sources of nitrogen.

3. To be reported as pounds per acres per year (lbs/acre/year) refer to Page 20 of the WTS1B: General Criteria for Preparing a Reclaimed Water Management Plan. This formula is below:
Effluent N Applied = (Mgal/d Applied x Effluent N Conc. (mg/L) x 8.34 x # days/mo.) ÷ # Acres.

4. Report the Theoretical Nitrogen Uptake/Annual Mass Loading of Nitrogen as a percentage. Refer to Technical Sheets WTS1B: General Criteria for Preparing a Reclaimed Water Management Plan and WTS1C Nutrient Management for Reuse & Biosolids Sites.

Solids, total dissolved (TDS) parameter, for an Annual reporting period, was removed from Outfall 001.

Under MW1, MW2, and MW3 Outfalls:

The concentration for the parameter, "Solids, total dissolved (TDS)" was updated from “1,000 milligrams per Liter (mg/L)” to a “M&R Milligrams per Liter (mg/L)” to eliminate the site from being constantly out of compliance due to the high levels of naturally occurring TDS being observed.

Depth to water level ft below landsurface parameter was changed from a "Value" base to a "Daily Minimum" base.

Nitrogen, total parameter was changed from a "Quarterly Maximum" base to "Daily Maximum" base.

Solids, total dissolved parameter was changed from a "Quarterly Maximum" base to a "Daily Maximum" base.

**Technology Based Effluent Limitations**
Technology based effluent limitations are not applicable to this permit.

**Water Quality Based Effluent Limitations**
Water quality based effluent limitations are not applicable to this permit.

**Proposed Water Quality Based Effluent Limits (monthly/weekly/daily)**
There are no proposed water quality based effluent limits applicable to this permit.

**Basis for Effluent Limitations**
Fecal coliform is required to be monitored to assess the quality of reclaimed water being applied and for the protection of human health and the environment.

The proposed permit retains the requirement to report the total nitrogen applied to ensure groundwater of the State is not being degraded.

The proposed permit establishes the requirement to report the total nitrogen uptake to ensure groundwater of the State is not being degraded.

**Anti-backsliding**
Anti-backsliding requirements, in environmental law, generally prohibit the renewal, reissuance, or modification of permits with less stringent conditions than those in the previous permit. This is to prevent the weakening of environmental protection over time, even when new regulations or technologies are developed. Thus, anti-backsliding requirements for effluent limitations in a reissued permit should be as stringent as those in the previous permit with some exceptions.

The previous permit included the requirement to sample for Profile 1 pollutants for an annual reporting period. It was determined that this sampling would be more applicable to the reclaimed water, prior to delivery to any reuse sites, being discharged from Elko WRF. A yearly requirement to sample for Profile 1 pollutants was added to the permit, for which terms are currently under development, for the Elko WRF, permit NS0020014.

The previous permit included the requirement to sample for TDS under all three of the monitoring wells. Due to the high levels of TDS naturally occurring at all three monitoring well outfalls (MW1, MW2, and MW3), the concentration limitations for this parameter were changed from "1000 milligrams per liter (mg/L)"

to a "M&R milligrams per liter (mg/L)". These changes do not make the permit less restrictive and will prevent the Permittee from continually being out of compliance due to uncontrollable high TDS levels.

**Antidegradation**
The Division has developed an antidegradation regulation that is applied on a statewide basis, and which meets the statutory requirements of Nevada's water pollution control law found at NRS 445A.520 and NRS 445A.565 and is consistent with the federal antidegradation policy found at Title 40 in the Code of Federal Regulations (CFR) § 131.12. The objective of the Division's antidegradation regulation is to prevent degradation of Nevada's surface waters and maintain the unique attributes and special characteristics and water quality associated with high-quality waters.

As this permit is for discharges to groundwater, and not surface water, the new antidegradation rule is not applicable. There are currently no specific water quality standards that have been formally adopted by the State for groundwater, however, data reviewed during the renewal process does not indicate the potential for degradation of the groundwater from the reclaimed water discharged within the compliance limits of the proposed permit.

**Special Conditions**
Refer to the Special Approvals/Conditions applicable to this permit.

SA – Special Approvals / Conditions Table

| Item # | Description |
|---|---|
| 1 | After two years of substantiated low nitrogen levels (being less than 7 mg/L), the Permittee may submit a written request, a study done by a professional hydrogeologist, and supporting abandonment plan to the Division to plug and abandon the wells. |

**Discharges From Future Outfalls/ Planned Facility Changes**
The Permittee does not anticipate any discharges from any future outfalls or any other changes to the facility.

**Corrective Action Sites**
There are no active Bureau of Corrective Actions (BCA) remediation sites located within a one-mile radius of the Elko SC.

**Wellhead Protection Program**
The outfall is not located within a Wellhead Protection Area, which represents an approximate 10-year capture zone of a well, or within a Drinking Water Protection Area, which is defined by a 3,000-foot radius around a PWS well.

**Schedule of Compliance:**

SOC – Schedule of Compliance Table

| Item # | Description | Due Date |
|---|---|---|
| 1 | The Permittee shall submit two (2) copies (one hard copy and one electronic copy) of a Reclaimed Water Management Plan (RWMP) to the Division for review and approval. The RWMP shall follow the Division's guidance document WTS1B: General Design Criteria for Preparing a Reclaimed Water Management Plan and be prepared and wet stamped by a licensed, Nevada professional engineer (P.E.). | 9/20/2028 |

**Deliverable Schedule:**

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

| Item # | Description | Interval | First Scheduled Due Date |
|---|---|---|---|
| 1 | QUARTERLY DISCHARGE MONITORING REPORTS | Quarterly | 1/28/2026 |
| 2 | ANNUAL REPORTS | Annually | 1/28/2026 |

**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 mailed to interested persons on our mailing list and will be posted on our website at https://ndep.nv.gov/posts. Anyone wishing to comment on the proposed permit can do so in writing until 5:00 P.M. **9/14/2025,** 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 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 issue/re-issue the proposed 5-year permit.

Prepared by: **Melissa Hanson**
Date: **8/8/2025**
Title: **Staff II Engineer**