



FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: CITY OF ELKO WRF

1751 COLLEGE AVE
ELKO, NV 89801

Permit Number: NS0020014

Permit Type: GROUNDWATER DISCHARGE

Designation: GROUNDWATER

New/Existing: EXISTING

Location: CITY OF ELKO WATER RECLAMATION FACILITY, ELKO
1600 SEWER TREATMENT PLANT ROAD, ELKO, NV 89801
LATITUDE: 40.819440, LONGITUDE: -115.788889
TOWNSHIP: 34 N, RANGE: 55 E, SECTION: 21

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Latitude	Longitude	Receiving Water
001	INFLUENT	Internal Outfall		40.821125	-115.786357	NOT APPLICABLE
002	EFFLUENT TO RIB	External Outfall		40.785716	-115.804930	GROUNDWATER
003	GEO THERMAL WATER	External Outfall		40.818984	-115.787172	GROUNDWATER
004	RUBY VIEW GOLF COURSE (PERMIT NS2003515)	Land Application Site		40.856389	-115.760833	GROUNDWATER
005	ELKO COUNTY FAIRGROUNDS (PERMIT NS2007509)	Land Application Site		40.843698	-115.762024	GROUNDWATER
007	RECLAIMED WATER STORAGE/DELIVERY	External Outfall		40.780750	-115.824402	GROUNDWATER
008	BRUCE MILLER RANCH 135 FIELD (PERMIT NS0099006)	Land Application Site		40.786101	-115.829654	GROUNDWATER
009	MILLER/YOUNG RANCH 160 FIELD (PERMIT NS0096006)	Land Application Site		40.804412	-115.808259	GROUNDWATER
011	REUSE WATER FOR VARIOUS CONSTRUCTION SITES	Land Application Site		40.821904	-115.784143	GROUNDWATER
012	MWL1	Monitoring Well		40.798370	-115.807365	GROUNDWATER
013	MWL3	Monitoring Well		40.795913	-115.801171	GROUNDWATER
014	MWL4	Monitoring Well		40.795121	-115.795271	GROUNDWATER
015	MWL8	Monitoring Well		40.784557	-115.803388	GROUNDWATER
016	MWL10	Monitoring Well		40.787083	-115.794158	GROUNDWATER
017	MW007-1	Monitoring Well		40.780783	-115.822441	GROUNDWATER
018	MW007-2	Monitoring Well		40.780989	-115.817917	GROUNDWATER
019	MW007-3	Monitoring Well		40.775139	-115.819514	GROUNDWATER
020	CITY OF ELKO SPORTS COMPLEX (PERMIT NS2019506)	Land Application Site		40.821702	-115.772926	GROUNDWATER

Permit History/Description of Proposed Action

The Permittee, City of Elko WRF, has applied for the renewal of Permit NS0020014 for the City of Elko Water Reclamation Facility (Elko WRF), at 1600 Sewer Treatment Plant Road, in Elko, being within Elko

County, Nevada. The Permittee proposes to continue to discharge reclaimed water to groundwater of the State via export pipelines to multiple local reuse sites being the Ruby View Golf Course, the Elko County Fairgrounds, the Bruce Miller Ranch, the Miller/Young Ranch, offsite storage reservoirs, and for construction water at various local sites. Treat effluent can be optionally discharged to either the rapid infiltration basins (RIBs), with both the offsite reservoirs and RIBs being owned and operated by the Elko WRF. The Elko Sports Complex (ESC) also has the ability to receive reclaimed water for irrigation use, although the ESC has been utilizing potable water since 2021. The Elko WRF receives spent geothermal water from the Elko County School District which is discharged into a small geothermal cooling pond behind the facility, with the discharge being covered under this permit also.

This permit was first issued in 1982. The most recent permit was issued on January 1, 2018, and expired on December 31, 2022; the permit has been administratively continued since.

Facility Overview

The Elko WRF is located southwest of the City of Elko. The Elko WRF is owned and operated by the City of Elko for the purposes of treating domestic and commercial wastewater collected within a service area of approximately six square miles, primarily contained within Elko city limits. The Elko WRF is adjacent to the Humboldt River at Palisade as described under NAC 445A.1438.

The Elko WRF is made up of the following plant unit processes – Headworks, Primary Clarification, Fixed Film/Activated Sludge Process, Secondary Clarification, Chlorination, Effluent Pumping, Anaerobic Sludge Digestion, along with Sludge Dewatering and Solids Handling.

Raw sewage enters the Elko WRF via a 36-inch sewer main invert at the influent distribution structure adjacent to the headworks building. Additionally, sewage from septage haulers is offloaded to the Elko WRF at an onsite receiving station where influent flow is metered and ground through a comminutor. The septage mixes with the raw sewage flow, during which ferric chloride is added, at the headworks building. Two manually operated sluice gates, within the influent distribution structure, direct the raw sewage into either the main channel pipeline or bypass channel pipeline. The 36-inch pipeline, for both the main channel pipeline or the bypass channel pipeline, enters the headworks building on the lower floor. The sewage flows into the main channel, passing through a vertical screen where large debris is removed; or, if the bypass channel is being utilized, the influent flows through a mechanically cleaned bar screen. This channel serves as a backup channel when the main channel is out of service. The screened influent then moves into the comminutor grinder, then into the washer/compactor which can be moved from the main channel to the wet well. After the large debris is removed, the influent flow rate is measured in a Parshall flume, located immediately downstream. After passing through the Parshall flume, the influent flows into the influent pump wet well. The influent pumps are automatically controlled to maintain a constant level in the wet well. The pumps convey the wastewater to the primary clarification distribution structure (splitter box).

The treated effluent next flows into one of the two primary clarifiers (east or west), sludge is pumped out of the clarifier, while the scum is collected in a scum sump and pumped out. From the primary clarifiers, the primary effluent gravity flows into the primary effluent junction box. From there, the primary effluent gravity flows to the STM-Aerotator Pump Station. In the STM Aerotator Pump Station, the primary effluent is mixed with the Return Activated Sludge (RAS) from the secondary clarifiers and then pumped, using submersible pumps, to the STM Aerotator Influent Box. The submersible pumps are equipped with Variable Frequency Drives (VFD's) and controlled to maintain a level in the wet well based on the raw plant influent and incoming RAS flows. In the Influent Box, the flow from the pump station is mixed with the internal recycled flow. The liquid mixture is distributed, via the STM Aerotator influent boxes, to anoxic basins. Any of the four anoxic basins and consequently, STM-Aeration basins may be bypassed if required. Next, the effluent is gravity-fed to the one of the three secondary clarifiers. However, an STM gate can be adjusted, in the event of a power loss, in the primary effluent box to allow a portion of the flow to be diverted back to the equalization basin.

From the STM Aerotator Bio-Reactor, flow is conveyed to the splitter box structure where it is either split to one of 3 secondary clarifiers or is diverted to a single secondary clarifier. From the secondary clarifiers, the

flow continues by gravity, to the internal mixing baffle dam structure where it is flash mixed with a hypochlorite solution for disinfection. From the dam structure the flow continues to the effluent pump wet well, where the chlorinated treated wastewater can be pumped to any of the approved reuse or disposal sites.

Settleable and floatable solids are moved from the primary clarifiers and pumped to the primary fixed dome anaerobic digester. Waste Activated Sludge (WAS) removed from the secondary clarifiers is pumped to the primary clarifier splitter box, where it is co-mingled and allowed to settle with the primary clarifier solids. The primary digested sludge is transferred to the secondary floating dome anaerobic digester to be detained in storage. The secondary digested sludge is then pumped to the biosolids dewatering rotary press system for further processing. After dewatering and thickening with polymer, the biosolids are pumped into a dump truck and hauled to the Elko Regional Landfill. If needed, some biosolid storage is available but is not regularly utilized to avoid issues with odor. If the rotary press is down, then the solids can be removed to the drying beds to allow for water removal and drying to occur, after which it can be disposed of at the Elko Regional Landfill.

The reclaimed water is discharged through a reclaimed water pipeline distribution system designed to deliver effluent directly to the reuse sites – Ruby View Golf Course (permit NS2003515), Bruce Miller Ranch (permit NS0099006), Miller/Young Ranch (permit NS0099006), the Elko County Fairgrounds (permit NS2007509), and the City of Elko Sports Complex (permit NS2019506). Construction reuse water is utilized throughout the City of Elko to provide dust control at construction sites. The Elko WRF has a treated water fill station, located outside of the WRF facility, where customers receive treated wastewater for dust control usage.

During the winter months, treated effluent from the Elko WRF is discharged into various rapid infiltration basins (RIBs), located to the south of the plant, where it can percolate into the groundwater.

Spent geothermal water, received from the Elko County School District, is discharged into a small geothermal cooling pond behind the plant where it can percolate into the ground or evaporate.

The Elko WRF's Reclaimed Water Management Plan (RWMP) (formerly known as an Effluent Management Plan) was last reviewed and approved by the Division on June 27, 2016. The Technical, Compliance, and Enforcement (TCE) Branch of the Bureau of Water Pollution Control requires RWMPs be updated every two (2) permit cycles, which equates to every ten (10) years; therefore, an updated RWMP will need to be submitted to the Division for review and approval by June 27, 2026.

The reuse sites have filed their own separate RWMPs under their individual permits.

Outfall Summary

Outfall 001 – This internal outfall is for measuring the incoming wastewater (influent) flowing into the Elko WRF.

Outfall 002 - This external outfall is for the measurement of the treated effluent being discharged to the RIBs.

Outfall 003 – This external outfall is for the discharge of spent geothermal water into a small geothermal pond located behind the Elko WRF.

Outfall 004 – This land application outfall is for the diversion of reclaimed water to the Ruby View Golf Course (permit NS2003515).

Outfall 005 – This land application outfall is for the diversion of reclaimed water to the Elko County Fairgrounds (permit NS2007509).

Outfall 006 - This land application outfall was removed due to the pivot no longer receiving reclaimed water so the pipeline was cut and capped.

Outfall 007 – This external outfall is for the diversion of the reclaimed water for storage in two reservoirs located northwest of the plant.

Outfall 008 – This land application outfall is for the diversion of reclaimed water to the Bruce Miller Ranch 135 Field (permit NS0099006).

Outfall 009 – This land application outfall is for the diversion of reclaimed water to the Miller/Young Ranch 160 Field (permit NS0099006).

Outfall 010 - This land application outfall was removed due to the pivot no longer being irrigated and the pipeline has been cut and capped.

Outfall 011 – This external outfall is for the diversion of reclaimed water for construction water use.

Outfall 012 – This downgradient monitoring well (MWL1) is located north of the RIBs.

Outfall 013 – This downgradient monitoring well (MWL3) is located north of the RIBs.

Outfall 014 – This downgradient monitoring well (MWL4) is located north of the RIBs.

Outfall 015 – This upgradient monitoring well (MWL8) is located south of the RIBs.

Outfall 016 – This upgradient monitoring well (MWL10) is located south of the RIBs.

Outfall 017 – This downgradient monitoring well (MW007-1) is located north of the storage reservoirs.

Outfall 018 – This downgradient monitoring well (MW007-2) is located north of the storage reservoirs.

Outfall 019 – This upgradient monitoring well (MW007-3) is located south of the storage reservoirs.

Outfall 020 – This land application outfall is for the diversion of reclaimed water to the Elko Sports Complex (permit NS2019506).

Facility Upgrades since last issued permit

Facility upgrades, since the last issued permit, include the construction of a reuse water fill station, installation of a standby generator, and secondary clarifier #3 improvements. There are two projects currently under construction being a sewer line extension (1) along with improvements to a lift station and force main (2).

Solids Handling

Sludge is dewatered, thickened, and then sent to the Elko Regional Landfill for disposal. If the rotary press has a failure, or is being maintained, the Elko WRF also has the option to send the sludge to onsite drying beds within which it will be dewatered and then sent to the Elko Regional Landfill for disposal.

Effluent Management and Reuse

Reclaimed water, being of Category B bacteriological quality per Nevada Administrative Code (NAC) 445A.276, is discharged to groundwater of the State via an export pipeline to either the Ruby View Golf Course, the Elko County Fairgrounds, the Elko Sports Complex, the Bruce Miller Ranch, the Miller/Young Ranch, an effluent storage area, with treated effluent being sent to the RIBs.

The geothermal water is discharged to a geothermal cooling pond behind the Elko WRF to evaporate or percolate into the groundwater.

Design Flow (and basis) and Measurement & Current Capacity

The Elko WRF was originally permitted with an average day flow rate of 4.50 Mgal/d.

The average daily maximum flow rate reported for Outfall 001 (Influent) was 2.71 Mgal/d. The permitted daily maximum flow rate for Outfall INF is limited to 5.0 Mgal/d. There were no reported exceedances to this limit.

Pretreatment Program

The facility does not meet the federal Environmental Protection Agency's (EPA's) guidelines requiring them to have a pretreatment program.

Operations & Maintenance (O&M) Manual status

The Elko WRF O&M Manual was last reviewed and approved on June 27, 2016. The TCE Branch of the Bureau of Water Pollution Control requires O&M Manuals to be updated every two (2) permit cycles, which equates to every ten (10) years with an updated O&M Manual being due on June 27, 2026.

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 Elko WRF discharges tertiary treated, denitrified, and disinfected reclaimed water treated to a Category B bacteriological quality level based on NAC 445A.276; 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 3.32 CFU / 100 mL. There were no exceedances reported during the period reviewed.

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

Abbreviations:

BOD5 – Biochemical Oxygen Demand, 5-day
 Depth – Depth to water level feet below land surface
 TDS – Total Dissolved Solids
 TSS – Total Suspended Solids
 Water Level - Water level relative to mean sea level
 mg/L – Milligrams per Liter
 Mgal/d – Million Gallons per Day
 S.U. – Standard Units
 MW – Monitoring Well

Outfall 001 (Influent):

BOD5: 249.48 mg/L
 Flow Rate: 2.71 Mgal/d
 pH: 7.69 S.U.
 TSS: 330 mg/L

Outfall 002 (Effluent):

BOD5: 4.75 mg/L
 Total Kjeldahl Nitrogen: 0.91 mg/L
 Nitrate Nitrogen: 6.68 mg/L
 Nitrite Nitrogen: 0.26 mg/L
 Total Nitrogen: 7.41 mg/L
 pH: 7.73 S.U.
 Phosphorus: 2.07 mg/L
 TSS: 4.76 mg/L

Outfall 003 (Geothermal):

Flow Rate: 0.04 Mgal/d based on three (3) reported instances during the period reviewed.
 Pollutant Parameters: NODI Code "2" – Operation Shutdown reported.

Outfall 004 (Ruby View Golf Course – Reuse Site):

Flow Rate: 1.19 Mgal/d

Outfall 005 (Elko County Fairgrounds – Reuse Site):

Flow Rate: 0.45 Mgal/d

Outfall 006 (North Center Pivots – Reuse Site):

No Flow Rate Reported, Outfall to be removed during this permit renewal.

Outfall 007 (Reservoir - Effluent Storage Area):

BOD5: 4.01 mg/L

Flow Rate: 1.59 Mgal/d

Kjeldahl Nitrogen: 0.87 mg/L

Nitrate Nitrogen: 6.51 mg/L

Nitrite Nitrogen: 0.17 mg/L

Nitrogen: 7.68 mg/L

pH: 7.79 S.U.

Phosphorus: 2.12 mg/L

TSS: 5.16 mg/L

Outfall 008 (Bruce Miller Ranch – Reuse Site):

Flow Rate: 3.03 Mgal/d

Outfall 009 (Miller/Young Ranch – Reuse Site):

Flow Rate: 2.83 Mgal/d

Outfall 010 (South Center Pivots – Reuse Site):

No Flow Rate Reported, Outfall to be removed during this permit renewal.

Outfall 011 (Construction/Dust Control Water – Reuse):

Flow Rate: 1.03 Mgal/d

Outfall 013 (L3-Monitoring Well):

Chloride: 241.29 mg/L

Depth: 83.71 Feet

Nitrate Nitrogen: 8.71 mg/L

Nitrite Nitrogen: 0.21 mg/L

Nitrogen: 9.21 mg/L

TDS: 1,233 mg/L

Water Level: 5,161 Feet

Outfall 014 (L4-Monitoring Well):

Chloride: 186.53 mg/L

Depth: 103.74 Feet

Nitrate Nitrogen: 9.03 mg/L

Nitrite Nitrogen: 0.19 mg/L

Nitrogen: 9.38 mg/L

TDS: 818 mg/L

Water Level: 5,195 Feet

Outfall 016 (L10-Monitoring Well):

Chloride: 143.45 mg/L

Depth: 142.26 Feet

Nitrate Nitrogen: 7.95 mg/L

Nitrite Nitrogen: 0.15 mg/L

Nitrogen: 8.46 mg/L

TDS: 593 mg/L
Water Level: 5,249 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 the geothermal and reclaimed water are:

Effluent – BOD5, Nitrogen, pH, General Fecal Coliform, along with potential inorganic chemicals and metals (Profile 1 contaminants).

Monitoring Wells: Chloride, Nitrogen, and TDS.

Reservoirs: BOD5, Fecal Coliform, and pH.

Geothermal Water: Specific conductance*, Temperature, pH, TDS, Arsenic, Barium, Calcium, Chlorine, Copper, Fluoride, Iron, Magnesium, Manganese, Nitrogen, Potassium, Sodium, and Sulfate.

*Note: While specific conductance itself isn't directly a pollutant, it can be a useful indicator of potential water pollution or contamination. High specific conductance in geothermal water often indicates the presence of dissolved minerals and ions, which can be detrimental to aquatic ecosystems and make the water unsuitable for human consumption or other uses.

Receiving Water

The receiving water is groundwater of the State. Groundwater monitoring is required to ensure groundwaters of the State are protected. Groundwater is monitored and was previously reported in three (3) monitoring wells, located near both the RIBs and storage reservoirs, which are both located uphill from the Elko WRF, with average depth to water levels reported varying between 83 feet to 143 feet spanning the January 2020 through December 2024 period. The reporting requirement for the other monitoring will be reinstated during this renewal cycle.

The Elko WRF is located approximately 60 feet north of the Humboldt River, falling within the Palisade segment from Osino to the Palisade Gage as described under NAC 445A.1438.

Compliance History

The facility was in substantial compliance during the January 2020 to December 2024 reporting period.

Proposed Effluent Limitations

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

WWTP Discharge Limitations Table for Sample Location 001 (Influent) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	Daily Maximum	<= 5.0 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	001	Continuous	METER
Flow rate	30 Day Average	<= 4.5 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	001	Continuous	METER
BOD, 5-day ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	001	Weekly	COMPOS
BOD, 5-day ^[1]	Monthly Average		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	001	Weekly	COMPOS
Solids, total suspended ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	001	Weekly	COMPOS
Solids, total suspended ^[1]	Monthly Average		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	001	Weekly	COMPOS

Notes (WWTP Discharge Limitations Table):

- Both BOD5 and TSS should be sampled concurrently when the effluent is done to determine the actual percentage of removal rates being achieved by the facility.

WWTP Discharge Limitations Table for Sample Location 002 (Effluent To Ribs) To Be Reported Monthly^[1]

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
BOD, 5-day	Daily Maximum		<= 45 Milligrams per Liter (mg/L)	Effluent Gross	002	Weekly	COMPOS
BOD, 5-day	Monthly Average		<= 30 Milligrams per Liter (mg/L)	Effluent Gross	002	Weekly	COMPOS
BOD, 5-day, percent removal	Monthly Average Minimum ^[2]		>= 85 Percent (%)	Effluent Gross	002	Weekly	CALCTD
Coliform, fecal general	Daily Maximum		<= 23 Colony Forming Units per 100ml T (CFU/100mL) ^[3]	Effluent Gross	002	Weekly	COMPOS
Coliform, fecal general	30 Day Geometric Mean		<= 2.2 Colony Forming Units per 100ml T (CFU/100mL) ^[3]	Effluent Gross	002	Weekly	COMPOS
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Effluent Gross	002	Weekly	COMPOS
pH, maximum	Daily Maximum		<= 9.0 Standard Units (SU)	Effluent Gross	002	Weekly	DISCRT
pH, minimum	Daily Minimum		>= 6.0 Standard Units (SU)	Effluent Gross	002	Weekly	DISCRT
Solids, total suspended	Daily Maximum		<= 45 Milligrams per Liter (mg/L)	Effluent Gross	002	Weekly	COMPOS
Solids, total suspended	Monthly Average		<= 30 Milligrams per Liter (mg/L)	Effluent Gross	002	Weekly	COMPOS
Solids, suspended percent removal	Monthly Average Minimum ^[2]		>= 85 Percent (%)	Effluent Gross	002	Weekly	CALCTD

Notes (WWTP Discharge Limitations Table):

- Between October 15th through April 15th, the effluent water will be diverted only to the RIBs, with no reuse allowed. During this time, no fecal coliform sampling is required.
- Both BOD5 and TSS treated effluent should be sampled concurrently when the influent is done to determine the actual percentage of removal rates being achieved by the facility.
- CFU or MPN/100mL.

WWTP Discharge Limitations Table for Sample Location 002 (/Effluent To Ribs) To Be Reported Annually

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Alkalinity, bicarbonate (as CaCO ₃)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Alkalinity, total (as CaCO ₃)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Aluminum, total (as Al) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Antimony, total (as Sb) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Arsenic, total (as As) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Barium, total (as Ba) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Beryllium, dissolved (as Be)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Cadmium, dissolved (as Cd)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Calcium, total (as Ca) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Chromium, total (as Cr) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
			M&R				

WWTP Discharge Limitations Table for Sample Location 002 (/Effluent To Ribs) To Be Reported Annually

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Copper, dissolved (as Cu)	Daily Maximum		Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Fluoride, total (as F)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Iron, total (as Fe) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Lead, dissolved (as Pb)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Magnesium, total (as Mg) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Manganese, total (as Mn) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Mercury, dissolved (as Hg)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Nitrite plus nitrate total 1 det. (as N)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
pH, maximum	Daily Maximum		M&R Standard Units (SU)	Effluent Gross	002	Once Per Permit Term	DISCRT
pH, minimum	Daily Minimum		M&R Standard Units (SU)	Effluent Gross	002	Once Per Permit Term	DISCRT
Potassium, total (as K) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT

WWTP Discharge Limitations Table for Sample Location 002 (/Effluent To Ribs) To Be Reported Annually

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Selenium, dissolved [as Se]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Silver, total (as Ag) [1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Sodium, total (as Na)[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Sulfate, total (as SO ₄)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Thallium, total (as Tl)[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Uranium, natural, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Cyanide, weak acid, dissociable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Zinc, dissolved (as Zn)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT

Notes (WWTP Discharge Limitations Table):

1. Analysis shall be for the dissolved fraction.

Groundwater Monitoring Wells Table for Sample Location 012 (Mwl1) 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	012	Quarterly	DISCRT
Depth to water level ft below landsurface ^[1]	Daily Minimum	M&R Feet (ft)		Groundwater	012	Quarterly	VISUAL
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	012	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	012	Quarterly	DISCRT
Water level relative to mean sea level ^[2]	Daily Maximum	M&R Feet (ft)		Groundwater	012	Quarterly	CALCTD

Notes (Groundwater Monitoring Wells Table):

1. Depth to groundwater.
2. Groundwater elevation above mean sea level (AMSL).

Groundwater Monitoring Wells Table for Sample Location 013 (Mwl3) 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	013	Quarterly	DISCRT
Depth to water level ft below landsurface ^[1]	Daily Minimum	M&R Feet (ft)		Groundwater	013	Quarterly	VISUAL
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	013	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	013	Quarterly	DISCRT
Water level relative to mean sea level ^[2]	Daily Maximum	M&R Feet (ft)		Groundwater	013	Quarterly	CALCTD

Notes (Groundwater Monitoring Wells Table):

1. Depth to groundwater.
2. Groundwater elevation above mean sea level (AMSL).

Groundwater Monitoring Wells Table for Sample Location 014 (MwI4) 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 Micrograms per Liter (ug/L)	Groundwater	014	Quarterly	DISCRT
Depth to water level ft below landsurface ^[1]	Daily Minimum	M&R Feet (ft)		Groundwater	014	Quarterly	VISUAL
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	014	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	014	Quarterly	DISCRT
Water level relative to mean sea level ^[2]	Daily Maximum	M&R Feet (ft)		Groundwater	014	Quarterly	CALCTD

Notes (Groundwater Monitoring Wells Table):

1. Depth to groundwater.
2. Groundwater elevation above mean sea level (AMSL).

Groundwater Monitoring Wells Table for Sample Location 015 (Mwl8) 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	015	Quarterly	DISCRT
Depth to water level ft below landsurface ^[1]	Daily Minimum	M&R Feet (ft)		Groundwater	015	Quarterly	VISUAL
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	015	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	015	Quarterly	DISCRT
Water level relative to mean sea level ^[2]	Daily Maximum	M&R Feet (ft)		Groundwater	015	Quarterly	CALCTD

Notes (Groundwater Monitoring Wells Table):

1. Depth to groundwater.
2. Groundwater elevation above mean sea level (AMSL).

Groundwater Monitoring Wells Table for Sample Location 016 (Mwl10) 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	016	Quarterly	DISCRT
Depth to water level ft below landsurface ^[1]	Daily Minimum	M&R Feet (ft)		Groundwater	016	Quarterly	VISUAL
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	016	Quarterly	CALCTD
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	016	Quarterly	DISCRT
Water level relative to mean sea level ^[2]	Daily Maximum	M&R Feet (ft)		Groundwater	016	Quarterly	CALCTD

Notes (Groundwater Monitoring Wells Table):

1. Depth to groundwater.
2. Groundwater elevation above mean sea level (AMSL).

Groundwater Monitoring Wells Table for Sample Location 017 (Mw007-1) 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	017	Quarterly	DISCRT
Depth to water level ft below landsurface ^[1]	Daily Minimum	M&R Feet (ft)		Groundwater	017	Quarterly	VISUAL
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	017	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	017	Quarterly	DISCRT
Water level relative to mean sea level ^[2]	Daily Maximum	M&R Feet (ft)		Groundwater	017	Quarterly	CALCTD

Notes (Groundwater Monitoring Wells Table):

1. Depth to groundwater.
2. Groundwater elevation above mean sea level (AMSL).

Groundwater Monitoring Wells Table for Sample Location 018 (Mw007-2) 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	018	Quarterly	DISCRT
Depth to water level ft below landsurface ^[1]	Daily Minimum	M&R Feet (ft)		Groundwater	018	Quarterly	VISUAL
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	018	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	018	Quarterly	DISCRT
Water level relative to mean sea level ^[2]	Daily Maximum	M&R Feet (ft)		Groundwater	018	Quarterly	CALCTD

Notes (Groundwater Monitoring Wells Table):

1. Depth to groundwater.
2. Groundwater elevation above mean sea level (AMSL).

Groundwater Monitoring Wells Table for Sample Location 019 (Mw007-3) 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	019	Quarterly	DISCRT
Depth to water level ft below landsurface ^[1]	Daily Minimum	M&R Feet (ft)		Groundwater	019	Quarterly	VISUAL
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	019	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	019	Quarterly	DISCRT
Water level relative to mean sea level ^[2]	Daily Maximum	M&R Feet (ft)		Groundwater	019	Quarterly	CALCTD

Notes (Groundwater Monitoring Wells Table):

1. Depth to groundwater.
2. Groundwater elevation above mean sea level (AMSL).

Re-use Discharge Limitations Table for Sample Location 004 (Ruby View Golf Course, Permit Ns2003515) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	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	004	Continuous	METER
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	004	Continuous	METER

Re-use Discharge Limitations Table for Sample Location 005 (Elko County Fairgrounds, Permit Ns2007509) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	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	005	Continuous	METER
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	005	Continuous	METER

Re-use Discharge Limitations Table for Sample Location 007 (Effluent Storage Area) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	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	007	Continuous	METER
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	007	Continuous	METER

Re-use Discharge Limitations Table for Sample Location 008 (Bruce Miller Ranch, Permit Ns0099006) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	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	008	Continuous	METER
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	008	Continuous	METER

Re-use Discharge Limitations Table for Sample Location 009 (Miller/Young Ranch, Permit Ns0099006) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	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	009	Continuous	METER
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	009	Continuous	METER

Re-use Discharge Limitations Table for Sample Location 011 (Construction Site Reuse) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	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	011	Continuous	METER
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	011	Continuous	METER

Re-use Discharge Limitations Table for Sample Location 020 (City Of Elko Sports Complex, Permit Ns2019506) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	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	020	Continuous	METER
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	020	Continuous	METER

NS OTHER - Discharge Limitations Table for Sample Location 003 (Geothermal Water) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	30 Day Average	<= 0.4 Million Gallons per Day (Mgal/d)		See Footnote ^[1]	003	Continuous	METER
Flow rate	Maximum	M&R Million Gallons per Day (Mgal/d)		See Footnote ^[1]	003	Continuous	METER

Notes (NS OTHER - Discharge Limitations Table):

1. Geothermal Discharge.

NS OTHER - Discharge Limitations Table for Sample Location 003 (Geothermal Water) To Be Reported Annually^[1]

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow, total	Annual Maximum	M&R Million Gallons (Mgal)	Million Gallons (Mgal)	See Footnote ^[1]	003	Annual	DISCRT
pH	Daily Maximum		M&R Standard Units (SU)	See Footnote ^[1]	003	Annual	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	003	Annual	DISCRT
Specific conductance	Daily Maximum		M&R Conductance-Micromhos per cm (uS/cm)	See Footnote ^[1]	003	Annual	DISCRT
Temperature, water deg. fahrenheit	Daily Maximum		M&R Degrees Fahrenheit (deg F)	See Footnote ^[1]	003	Annual	DISCRT
Arsenic, total (as As)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	003	Annual	DISCRT
Barium, total (as Ba)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	003	Annual	DISCRT
Calcium, total (as Ca)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	003	Annual	DISCRT
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	003	Annual	DISCRT
Copper, dissolved (as Cu)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	003	Annual	DISCRT
Fluoride, total (as F)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	003	Annual	DISCRT
Iron, total (as Fe)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	003	Annual	DISCRT
Magnesium, total (as Mg)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	003	Annual	DISCRT

NS OTHER - Discharge Limitations Table for Sample Location 003 (Geothermal Water) To Be Reported Annually^[1]

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Manganese, total (as Mn)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	003	Annual	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	003	Annual	DISCRT
Potassium, total (as K)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	003	Annual	DISCRT
Sodium, total (as Na)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	003	Annual	DISCRT
Sulfate (as S)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	003	Annual	DISCRT

Notes (NS OTHER - Discharge Limitations Table):

1. The geothermal discharge water shall be sampled during the fourth quarter of each year and analyzed for the constituents listed in the table above. The analytical method selected must ensure detection limits at or below Environmental Protection Agency's (EPA's) drinking water standards.

Summary of Changes From Previous Permit

Under Outfall 001 (Influent) the following revisions were made:

BOD, 5-day, with a "Monthly Maximum" Base was revised to a "Daily Maximum" Base, all other Monitoring Requirements remained the same.

Solids, total suspended, with a "Monthly Maximum" Base was revised to a "Daily Maximum" Base, all other Monitoring Requirements remained the same.

pH, with a "Monthly Maximum" Base, was removed to adhere to current Division reporting requirements.

pH, with a "Monthly Minimum" Base, was removed to adhere to current Division reporting requirements.

The following footnote was added:

1. Both BOD5 and TSS should be sampled concurrently when the effluent is done to determine the actual percentage of the removal rates being achieved by the plant.

Under Outfall 002 the following parameters were either revised, added, or deleted:

Parameters revised:

BOD, 5-day, with a "Monthly Maximum" Base, was revised to a "Daily Maximum" base, all other Monitoring Requirements remained the same.

Nitrogen, total, with a "Monthly Maximum" Base, was revised to a "Daily Maximum" base, all other Monitoring Requirements remained the same.

Phosphorus, total, with a "Monthly Maximum" Base, was revised to a "Daily Maximum" base, all other

Monitoring Requirements remained the same.

Solids, total suspended, with a "Monthly Maximum" Base, was revised to a "Daily Maximum" base, all other Monitoring Requirements remained the same.

Parameters added:

BOD, 5-day, percent removal, with a "Monthly Average Minimum" Base, an " ≥ 85 Percent (%)" concentration, an "Effluent Gross" Monitoring Location, a "002" Sample Location, a "Weekly" Measurement Frequency, and a "Calctd" Sample Type.

Coliform, fecal general, with a "Daily Maximum" Base, with a "23 Colony Forming Units per 100ml (CFU/100mL)" Concentration, an "Effluent Gross" Monitoring Location, a "002" Sample Location, a "Weekly" Measurement Frequency, a "Compos" Sample Type. This was moved to Outfall 002 as that is where it is actually being sampled at.

Coliform, fecal general, with a "30 Day Geometric Mean" base, with a "2.2 Colony Forming Units per 100ml (CFU/100mL)" Concentration, an "Effluent Gross" Monitoring Location, a "Weekly" Measurement Frequency, and a "Compos" Sample Type. This parameter was moved to Outfall 002 as this is where it is being sampled at.

Solids, suspended percent removal, with a "Monthly Average Minimum" Base, an " ≥ 85 Percent (%)" concentration, an "Effluent Gross" Monitoring Location, a "Weekly" Measurement Frequency, and a "Calctd" Sample Type.

The following footnotes were deleted and replaced:

Deleted:

1. As stated, "Between October 15th to April 15th the effluent water will be disposed of in outfall number 2 (EFFLUENT TO RIBs)."

New:

1. Between October 15th to April 15th, the effluent water will be diverted only to the RIBs, with no reuse allowed. During this time, no fecal coliform sampling is required.

Deleted:

2. As stated, "The effluent water will not be reused for any purpose during these months."

New:

2. Both BOD5 and TSS treated effluent should be sampled concurrently when influent is done to determine the actual percentage of removal rates being achieved by the plant.

Deleted:

3. As stated, "During these months no coliform and fecal coliform testing is needed."

New:

3. CFU or MPN/100mL.

Parameters deleted:

Phosphorus, total, with a "Daily Maximum" base, a "M&R Milligrams per Liter (mg/L)" concentration, a "Effluent Gross" monitoring location, a "Weekly" measurement frequency, and a "Compos" sample type.

Phosphorus, total, with a "Monthly Average" base, a "M&R Milligrams per Liter (mg/L)" concentration, a "Effluent Gross" monitoring location, a "Weekly" measurement frequency, and a "Compos" sample type.

Under Outfall 002 (Effluent) Profile 1 Pollutants were added for a "Once during Permit Term" reporting requirement.

With the following footnote:

1. Analysis shall be for the dissolved fraction.

Under Outfalls 002, 007, 013, 014, and 016 the following constituents were removed:

Total Nitrate Nitrogen, Total Nitrite Nitrogen, and Total Kjeldahl Nitrogen (see expanded explanation under the Anti-Backsliding Section).

Under Outfalls 004, 005, 008, 009, 011, and 020 the following were changed:

Flow rate, with a "Maximum" base was changed to a "Daily Maximum" base, all other Monitoring Requirements remained the same.

Under Outfall 007 the following parameter was added:

Flow rate, with a "Daily Maximum" base, a "M&R Million Gallons per Day (Mgal/d)" Quantity, a "Prior to Reuse" Monitoring Location, a "Continuous" Monitoring Frequency, and a "Meter" Sample Type.

Under Outfall 007 the following parameters were deleted:

BOD, 5-day, with a "Monthly Maximum" base, a " ≤ 45 Milligrams per Liter (mg/L)" concentration, an "Effluent Gross" monitoring location, a "Weekly" measurement frequency, and a "Compos" sample type.

BOD, 5-day, with a "Monthly Average" base, a " ≤ 30 Milligrams per Liter (mg/L)" concentration, an "Effluent Gross" monitoring location, a "Weekly" measurement frequency, and a "Compos" sample type.

Nitrogen, total, with a "Monthly Average" base, a " <10 Milligrams per Liter (mg/L)" concentration, an "Effluent Gross" monitoring location, a "Weekly" measurement frequency, and a "Compos" sample type.

pH, maximum, with a "Monthly Maximum" base, a " ≤ 9.0 Standard Units (SU)" concentration, an "Effluent Gross" monitoring location, a "Weekly" measurement frequency, and a "Discret" sample type.

pH, minimum, with a "Monthly Minimum" base, a " ≥ 6.0 Standard Units (SU)" concentration, an "Effluent Gross" monitoring location, a "Weekly" measurement frequency, and a "Discret" sample type.

Phosphorus, total, with a "Monthly Maximum" base, a "M&R Milligrams per Liter (mg/L)" concentration, an "Effluent Gross" monitoring location, a "Monthly" measurement frequency, and a "Compos" sample type.

Phosphorus, total, with a "Monthly Average" base, a "M&R Milligrams per Liter (mg/L)" concentration, an "Effluent Gross" monitoring location, a "Monthly" measurement frequency, and a "Compos" sample type.

Solids, total suspended, with a "Monthly Maximum" base, a " ≤ 45 Milligrams per Liter (mg/L)", an "Effluent Gross" monitoring location, a "Weekly" measurement frequency, and a "Compos" sample type.

Solids, total suspended, with a "Monthly Average" base, a " ≤ 30 Milligrams per Liter (mg/L)", an "Effluent Gross" monitoring location, a "Weekly" measurement frequency, and a "Compos" sample type.

Outfalls 012, 015, 017, 018, and 019 were reinstated to be monitored and reported, after being removed during the 2017 permit renewal. The following parameters were added to each outfall:

Chloride, for a "Daily Maximum" base, a "M&R Milligrams per Liter (mg/L)" concentration, a "Groundwater" monitoring location, a "Quarterly" measurement frequency, and a "Discret" sample type.

Depth to water level ft below landsurface, with a "Daily Minimum" base, a "M&R Feet (ft)" quantity, a "Groundwater" monitoring location, a "Quarterly" measurement frequency, and a "Visual" sample type.

Nitrogen, total, with a "Daily Maximum" base, a "10 Milligrams per Liter (mg/L)" concentration, a "Groundwater" monitoring location, a "Quarterly" measurement frequency, and a "Discret" sample type.

Solids, total dissolved, with a "Daily Maximum" base, a "M&R Milligrams per Liter (mg/L)" concentration, a "Groundwater" monitoring location, a "Quarterly" measurement frequency, and a "Discret" sample type.

Water level relative to mean sea level, with a "Daily Maximum" base, a "M&R Feet (ft)" quantity, a "Groundwater" monitoring location, a "Quarterly" measurement frequency, and a "Calculated" sample type.

Under Outfalls 012, 013, 014, 015, 016, 017, 018, and 019 the following footnotes were added:

1. Depth to groundwater.
2. Groundwater elevation above the mean sea level (AMSL).

Under the Special Approval/Conditions Table the following notes were deleted:

2. As stated, "Outfall 013, monitor well L3, and Outfall 016, monitor well L10, will be monitored for 1 more year (4 Quarters). If the total nitrogen value stays below 7 mg/L for 4 quarters, and there is a clear decrease in total nitrogen, the monitoring condition will be removed."
3. As stated, "B.T.F.9. color photographs with labels and dates of the storage reservoirs (season algal blooms & weed growth) and RIBs (uncontrolled weed growth) will be submitted every 4th quarter."
4. As stated, "The requirement for Charts and Plots will be removed after 5 years of submitting information to NetDMR, July 2021. The reason is the use of NetDMR for 5 quarters."
5. As stated, "Reclaimed water will meet category B during the reuse season. Offseason discharges will be to the RIBs. The use of the reclaim water is prohibited during the reuse offseason months for any reuse, as irrigation, golf courses or constriction (sic) or other uses."

Technology Based Effluent Limitations

Technology based effluent limitations (TBELs) are required as promulgated by the United States (U.S.) EPA for Publicly Owned Treatment Works (POTWs). The following limits are based on secondary treatment standards as allowed by the Code of Federal Regulation (CFR) Title 40, Section 133, and which has been adopted by the State of Nevada. U.S. EPA published federal secondary treatment standards at 40 CFR 133 based on an evaluation of performance data for POTWs practicing a combination of physical and biological treatment. Performance is measured by monitoring biodegradable organics, suspended solids in the effluent, and ensuring pH remains within regulatory limits. Federal secondary treatment standards are defined under 40 CFR 133 for maximum BOD5 as a 30-day average of 30 mg/L and a 7-day average of 45 mg/L and for maximum TSS as a 30-day average of 30 mg/L and a 7-day average of 45 mg/L. In addition to describing the minimum levels of effluent quality attainable by secondary treatment, 40 CFR 133.102 states that the 30-day average percent removal of BOD5 and TSS shall not be less than 85%. The Division has adopted these standards for discharges from treatment facilities, and has applied the same 7-day average thresholds as daily maximum effluent limits for BOD5 and TSS.

The following performance standards for POTWs with secondary treatment standards have been included in the permit:

BOD5: Monthly average limit: ≤ 30 mg/L; Daily maximum limit: ≤ 45 mg/L.

TSS: Monthly average limit: ≤ 30 mg/L; Daily maximum limit: ≤ 45 mg/L.

pH: Daily Maximum: ≤ 9.0 Standard Units

pH: Daily Minimum ≥ 6.0 Standard Units

Limits Based on Secondary Treatment Standards:

BOD5 Percent removal: ≥ 85 percent.

TSS: Percent removal: ≥ 85 percent.

Limits Based on Facility's Design Criteria Review:

30-day average flow rate for influent is limited to ≤ 4.50 Mgal/d.

Daily maximum flow rate for influent is limited to ≤ 5.00 Mgal/d.

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)

Water quality-based effluent limitations are not applicable to this permit.

Basis for Effluent Limitations

There are currently no specific water quality standards that have been formally adopted by the State for groundwater. However, the Division has the discretion to implement effluent limitations outside water quality standards per NAC 445A.243, which states, "In establishing an effluent limitation to carry out the policy of this State set forth in Nevada Revised Statutes (NRS) 445A.305, consideration must be given to, but is not limited by the following: ... (2) the need for standards that specify by chemical, physical, biological or other characteristics the extent to which pollution by various substances will not be tolerated."

The requirement to monitor the effluent for Profile 1 pollutants once per permit term is included to evaluate the quality of the effluent and determine whether the effluent has potential to impact the receiving water. Although cyanide and uranium are not expected to be present in the effluent, the permit requires the Permittee to sample these constituents once per term because they are included in the Profile 1 list and have not been previously tested.

The constituents listed in Profile 1 have been vetted by the Division and have been included in groundwater discharge permits for many years as a means of regulating groundwater quality. Per NRS 445A.490, "No permit may be issued which authorizes any discharge or injection of fluids through a well into any waters of the State: ... (3) which would result in the degradation of existing or potential underground sources of drinking water."

Influent and Effluent Monitoring Requirements:

Weekly influent and effluent monitoring for BOD5 and TSS are included to assess the treatment performance of the Elko WRF. A weekly sampling frequency for BOD5 and TSS is sufficient for determining compliance with the applicable effluent limitations. Percent removal requirements for BOD5 and TSS are established in the permit as monthly average minimums of 85%, based on secondary treatment standards.

Some wastewater treatment processes can increase or decrease wastewater pH; therefore, weekly monitoring for pH is included in assessing compliance with effluent limits of 6.0 S.U. as a daily minimum and 9.0 S.U. as a daily maximum.

Other Required Water Quality Monitoring:

The requirement to sample the effluent for fecal coliform prior to irrigation is for the protection of the environment and human health.

Anti-backsliding

None of the proposed permit limits were changed to a less restrictive limit compared to those in the previous permit, apart from the removal of the requirement to sample and report the following parameters - Total Nitrate Nitrogen, Total Nitrite Nitrogen, and Total Kjeldahl Nitrogen. The Total Nitrogen (as N) parameter encompasses all forms of nitrogen, including organic, ammonia, nitrite, and nitrate, while Total Kjeldahl Nitrogen (TKN) measures only the sum of organic nitrogen and ammonia. Thus, no backsliding will be caused by these removals and allows this permit to adhere to current Nevada Division of Water Pollution

Control (Division) reporting requirements.

The reporting requirements for pH under the influent outfall were removed to be consistent with current Division reporting standards. The Elko WRF cannot control the concentration levels of pH entering the plant, but must ensure effluent pH remains within the secondary treatment limits of 6.0–9.0 Standard Units., and do not have a percentage removal requirement to be achieved; thus, eliminating the need to sample for pH under Outfall 001 (Influent).

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 Nevada Revised Statute (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 treated wastewater discharged within the compliance limits of the proposed permit.

Special Conditions

There are no Special Approvals/Conditions applicable to this permit.

SA – Special Approvals / Conditions Table

There are no Special Approval / Condition items

Discharges From Future Outfalls/ Planned Facility Changes

There are no planned discharges from future outfalls or facility changes. The Permittee can request to add additional reuse sites via a modification.

Corrective Action Sites

There is one active Bureau of Corrective Actions (BCA) remediation site located within a one-mile radius of the facility and discharge locations (RIBs and reservoirs). The remediation site (6-000156) had a confirmed release of total petroleum hydrocarbons (TPH) from an underground storage tank in December 2010. It is not anticipated that the renewal of the Elko WRF's groundwater discharge permit, and associated activities, will negatively affect the site based on the size of the groundwater plume at the remediation site, the direction of groundwater flow, and the distance between the remediation site and the Elko WRF.

Wellhead Protection Program

There is a Public Water Supply (PWS) well located on site near Outfall 004 that has a depth of approximately 500 feet with a screen from 216 to 500 feet. Three wells are located within 2,530 to 2,830 feet around Outfall 005, that have depths varying between 450 to 500 feet. Additionally, there is a well located 3,000 feet to the south of the Outfall 011, that has a depth of approximately 496 feet, with a screen from 60 to 478 feet. The outfalls are located in the Drinking Water Protection Area of the wells, which is defined by a 3,000-foot radius around a PWS well. The majority of the outfalls are not located in a Wellhead Protection Area (WHPA), which represents an approximate 10-year capture zone of a well. The wells are at minimal risk based on the confined aquifer, distance, along with well structures and depths.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee shall submit two copies (one hard copy and one electronic copy) of an updated Operations and Maintenance (O&M) Manual for review and approval by the Division. The O&M Manual shall follow the Division's guidance document, WTS-2 Minimum Information Required for an Operation and Maintenance Manual for a Wastewater Treatment Plant and be prepared and wet stamped by a licensed, qualified Nevada professional engineer (P.E.).	6/27/2026
2	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 WTS-1B: General Design Criteria for Preparing a Reclaimed Water Management Plan and be prepared and wet stamped by a licensed, qualified Nevada professional engineer (P.E.).	6/27/2026

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly DMRs	Quarterly	1/28/2026
2	Annual Report	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. **9/29/2025**, 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: **8/20/2025**

Title: **Staff II Engineer**