FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: EUREKA COUNTY

PO BOX 714
EUREKA, NV 89316

Permit Number: NS0000042

Permit Type: GROUNDWATER DISCHARGE

Designation: GROUNDWATER

New/Existing: EXISTING

Location: EUREKA WASTEWATER TREATMENT FACILITY, EUREKA
2.5 MILES NORTH OF EUREKA ON COUNTY ROAD M-101, EUREKA, NV 89316
LATITUDE: 39.553611, LONGITUDE: -115.966389
TOWNSHIP: 20 N, RANGE: 53 E, SECTION: 35

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Latitude	Longitude	Receiving Water
001	INFLUENT	Internal Outfall		39.55348820	-115.966104	GROUNDWATER
002	EFFLUENT	External Outfall		39.553611	-115.966389	GROUNDWATER
003	POND 1	External Outfall		39.55348280	-115.966083	GROUNDWATER
004	POND 2	External Outfall		39.55438870	-115.965509	GROUNDWATER

Permit History/Description of Proposed Action

The Permittee, Eureka County, is requesting a renewal of its groundwater discharge permit, Permit No. NS0000042, for the continued operation of its facultative pond wastewater treatment facility (facility or WWTF). This permit renewal requires the Permittee to continue adhering to State of Nevada (State) regulatory standards, ensuring effective wastewater treatment and disposal, and protecting public health and the environment, including groundwater resources. The Permittee proposes to continue to discharge secondary treated wastewater to groundwater of the State.

The Nevada Division of Environmental Protection (NDEP or Division), Bureau of Water Pollution Control (BWPC), previously authorized discharge of treated effluent to groundwater for the facility in 1998, with its last renewal occurring in 2016 and expiring March 31, 2021; the permit has been administratively continued since.

Facility Overview

The facility serves the Town of Eureka, located three miles north of the town center, treating domestic sewage with a facultative pond system with rapid infiltration basins (RIBs). The facility serves around 300 homes and several commercial customers, with no industrial dischargers. It has a capacity of 0.1 million gallons per day (Mgal/d) and an average flow rate of 70,000 gallons per day (Gal/d). The system includes two ponds (primary and secondary ponds), operating in series, with effluent flowing into two RIBs. In 2020, Eureka County completed a re-lining and sludge removal project for Pond No. 1 under Public Works Project #EU-2020-322. The primary treatment facultative pond No. 1 improvements included removal of sludge,

grading and re-lining with a 60-mil High-Density Polyethylene (HDPE) liner, piping modifications and associated site improvements. A future sludge removal, relining, and piping improvement project is planned for the bentonite clay-lined Pond No. 2 at a later date. The entire system is enclosed by a four-foot high barbed-wire fence. The facility operates on gravity flow, powered by solar panels and batteries.

The collection system features a lift station at the high school. From the 60-inch transfer manhole, the raw sewage flows to pond 1 inlet manhole where it flows by gravity to pond 1. The gravity pipe includes an 8-inch polyvinyl chloride (PVC) inlet pipe directly discharging to pond 1 at the facility. Flow is monitored with an ultrasonic meter in the Parshall Flume. The daily maximum flow rate for the new design is 100,000 gallons per day. Local septage haulers can discharge up to 1,500 gallons (7.4 cubic yards) per day into the new septage receiving facility installed with the facility upgrade , with a maximum 30-day limit of septage of 6,000 gallons (29.7 cubic yards).

Pond No. 1 and Pond No. 2 are the primary and secondary treatment provided to domestic septage at the facility, respectively. Pond 1 gravity flows into pond 2 via an 8-inch plug valve with an additional 8-inch overflow pipe. The ponds are facultative ponds, run in series, using a plug flow design with an aerobic layer overlaying an anaerobic layer. The ponds allow for settling of solids, anaerobic digestion of sludge in the bottom layer, anoxic treatment between the two layers, and aerobic treatment in the top layer. Principal oxygenation of the top layer is via algae photosynthesis and surface (non-mechanical) aeration. This treatment process reduces 5-day carbonaceous biochemical oxygen demand (CBOD5) and total suspended solids (TSS). After the completion of the project at Pond No. 1, the designed hydraulic retention time (HRT), at the design capacity of 0.1 Mgal/d, is approximately 89 days when ponds operate in series (40.4 days in pond 1 and 48.4 days in pond 2).

Inorganic solids and sludge buildup in the ponds are removed and disposed of in approved locations or used for land application. When sludge depth exceeds 20% of the pond height, a removal plan must be submitted within two years. The sludge removal project in 2020 included removal of 1,140 cubic yards of sludge from facultative Pond No. 1 which was disposed of at the Eureka County Class II Landfill (Permit SW055REV05). The Eureka County Class II Landfill accepted the sludge after passing a paint filter liquids test prior to being hauled off-site and required the disposed of sludge to be covered with a minimum of 12-inches of compacted soil within 12 hours of disposal.

Effluent is managed through evaporation and percolation in the RIBs. The RIB inlets are controlled by plug valves and inspected regularly to remove any debris. Flows are balanced between the RIBs to ensure one basin does not take on more treated wastewater than the other on average. Maintenance includes raking and cleaning basins to ensure appropriate infiltrations can occur.

Outfall Summary

Outfall 001: This internal outfall is for the discharge of raw domestic sewage (Influent) entering the HDPE-lined primary pond No. 1.

Outfall 002: This external outfall is for the discharge of treated wastewater (Effluent) prior to entering any of the onsite RIBs.

Outfall 003: This external outfall is for Pond 1.

Outfall 004: This external outfall is for Pond 2.

Facility Upgrades since last issued permit

Since the last permit was issued, the facility has undergone significant upgrades to enhance its treatment capabilities and ensure compliance with regulatory standards. One of the major upgrades includes the relining and sludge removal of Pond No. 1, completed in 2020 under Public Works Project #EU-2020-322. This project involved installing a new 60-mil HDPE liner and removing accumulated sludge from Pond No. 1 to improve the pond's efficiency and longevity.

Solids Handling
Solids generated during the treatment process primarily settle in the treatment ponds. All methods of disposal for the facility's generated solid waste screenings and sewage sludge require approval by the Division and Eureka County prior to any removal or disposal activities. Sludge is tested for landfill suitability if landfill burial is an option. Sludge depths are measured annually in the third quarter using an approved method. When the average sludge depth reaches 20% of the total pond depth, Eureka County must submit a plan to remove and safely dispose of the sludge within two years.

Eureka County completed a re-lining and sludge removal project for Pond No. 1 in 2020 under Public Works Project #EU-2020-322, with on-site project completion on October 28, 2020. The NDEP-BWPC acknowledged substantial completion on October 7, 2020, and granted permission to resume treatment.

Effluent Management and Reuse
The facility is designed to treat domestic sewage to a level equivalent to secondary treatment standards, with effluent discharged into lined treatment ponds followed by infiltration into the subsurface through the RIBs. There is no direct reuse of reclaimed water for irrigation, industrial, or recreational purposes.

Design Flow (and basis) and Measurement & Current Capacity
The treatment system was designed for an Annual Average Flow (AAF) of 0.1 Mgal/d, consistent with the size of the residential service area. These design flows, determined by the original design engineer based on population projections and historical data, ensure the system can handle peak flows and variations in wastewater generation.

Pretreatment Program
Eureka County is not subject to federal pretreatment requirements, as defined under 40 CFR Part 403. The service area consists exclusively of domestic sources with no significant industrial dischargers to the system.

Operations & Maintenance (O&M) Manual status
The Permittee's Operations and Maintenance (O&M) Manual was last accepted by the Division on June 13, 2016. The Technical, Compliance, and Enforcement (TCE) Branch of the BWPC requires the O&M Manual to be updated every two permit cycles, equating to every ten years, with an updated O&M manual due in the next permit cycle. The manual must comply with the Division's guidance document, WTS-2 Minimum Information Required for an Operation and Maintenance Manual for a Wastewater Treatment Plant, and must be prepared and wet-stamped by a licensed, qualified Nevada professional engineer (P.E.).

Effluent Characterization

Nevada State Network Discharge Monitoring Report (NetDMR) data, as reported from May 2020 to May 2025, was reviewed as part of this permit renewal process. Effluent characterization data indicates that the treatment system effectively reduces pollutant concentrations prior to discharge into the RIBs. Key parameters include:

- Flow Rate: 30-day average at Outfall 001 was 0.05 Mgal/d, limit 0.1 Mgal/d; daily max average 0.16 Mgal/d, limit 0.1 Mgal/d.
- pH Levels: Ranged from 7.25 Standard Units (S.U.) to 8.99 S.U. at Outfall 002.
- Sludge Depth ranged from 0.12 feet to 1 foot in depth.
- CBOD5: Quarterly Maximum average concentration at Outfall 001 was 103.7 mg/L, whereas Outfall 002 averaged 88.3 mg/L, yielding a percent reduction of approximately 15%.
- TSS: Quarterly average concentration at Outfall 001 was 125.5 mg/L, while Outfall 002 averaged 37.9 mg/L, reflecting a percent reduction of approximately 70%.

The removal efficiency of TSS and CBOD5 varied throughout the permit term:

TSS Removal Efficiency

- 4th Quarter (Q4) 2024*: -66.67%
- Q4 2023: 40.38%
- Q4 2022: 80.00%
- Q4 2021: 77.59%
- Q4 2020: 91.16%

CBOD5 Removal Efficiency

- Q4 2024: 3.03%
- Q4 2023*: -30.77%
- Q4 2022: 73.21%
- Q4 2021: 18.92%
- Q4 2020: 83.18%

These calculations show that the facility has variable removal efficiencies for TSS and CBOD5, with some periods showing negative removal efficiencies, identified above using the *, indicating potential issues with the treatment process during those times.

The facility does not have consistent treatment of the influent in the lined ponds prior to discharge into the RIBs. The renewal of Permit NS0000042 will maintain oversight of treatment operations, ensuring continued protection of groundwater resources in the Diamond Valley hydrologic area.

Pollutants of Concern
Pollutants of concern are any pollutant, or parameters, that are believed to be present in the discharge and could affect or alter the physical, chemical, or biological conditions of the receiving water. Common pollutants of concern for wastewater treatment facilities that use waste stabilization ponds and RIBs include CBOD5, TSS, and pH.

Receiving Water
The receiving water for the facility is groundwater in the Diamond Valley hydrologic area, which is groundwater of the State. The groundwater level in this area is likely over 200 feet below ground surface. This significant depth provides a natural buffer that helps protect the groundwater from potential contamination from surface activities.

Compliance History
During the previous permit term, the facility generally remained in compliance with its permit requirements but did experience some effluent limit exceedances and operational challenges.

The facility had several instances of pH fluctuations. For example, the pH minimum was recorded at 7.25 S.U.in first quarter (Q1) 2022, and the pH maximum reached 8.99 S.U. in 4th Quarter (Q4) 2024. These fluctuations could be influenced by seasonal changes in temperature and biological activity. However, it is important to note that these values were within the permit range of 6.0 to 9.0 S.U. and did not constitute exceedances. One report of No Data Indicator (NODI) code ‘E’ indicating “Failed to Sample/Required Analysis Not Conducted.”

Additionally, there were multiple exceedances of the CBOD5 quarterly maximum limit of 45 mg/L. Notably, in Q1 2024, the CBOD5 value reached 1000 mg/L, significantly exceeding the permit limit. Other exceedances include Q4 2022 with 75 mg/L and Q1 2023 with 56 mg/L. These variations might be related to seasonal changes in influent characteristics and treatment efficiency.

The facility also experienced exceedances in TSS. For instance, in Q4 2022, the TSS value was 170 mg/L, nearly double the permit limit of 90 mg/L. Other notable exceedances include Q1 2023 with 180 mg/L and Q4 2024 with 110 mg/L. These fluctuations could be due to changes in flow rates and retention times during different seasons.

The flow rates exhibit some seasonal patterns. For example, the daily maximum flow rate reached 1.4 Mgal/d in October 2023, which is significantly higher than the permit limit of 0.1 Mgal/d. This spike could be attributed to reported heavy seasonal rainfall or other factors affecting inflow and infiltration.

The facility was required to maintain an Operations and Maintenance (O&M) Manual, last approved in 2016, which must be updated every two permit cycles (10 years). An updated manual is required for the next permit cycle to ensure continued compliance with state and federal regulations.

Despite these exceedances, no unauthorized discharges from the RIBs were reported, indicating that wastewater was properly contained within the designated disposal system. Overall, the facility wastewater treatment and effluent disposal remained largely effective, with no significant violations impacting groundwater quality or unauthorized discharges from RIBs. Continued monitoring and operational adjustments will help maintain compliance moving forward.

Proposed Effluent Limitations
The discharge shall be limited and monitored 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	<= 0.1 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	001	Continuous	METER
Flow rate	30 Day Average	<= 0.1 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	001	Continuous	METER
Volume, total	Daily Maximum	<= 1500 Gallons per Day (gal/d)		Raw Sewage Influent[1]	001	Daily When Discharging	TOTALZ
Volume, total	Monthly Average	<= 6000 Gallons per Day (gal/d)		Raw Sewage Influent[1]	001	Daily When Discharging	TOTALZ

Notes (WWTP Discharge Limitations Table):

1. Volume of septage disposal at septage receiving pit.

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

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
BOD, carbonaceous, 05 day, 20 C	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	001	Quarterly	DISCRT
BOD, carbonaceous, 05 day, 20 C	Quarterly Average[1]		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	001	Quarterly	DISCRT
Solids, total suspended	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	001	Quarterly	DISCRT
Solids, total suspended	Quarterly Average[1]		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	001	Quarterly	DISCRT

Notes (WWTP Discharge Limitations Table):

1. EPA recommends the 30-day and 7-day average equivalent to secondary standards, as specified in § 133.105, be applied as average monthly (calendar month) and average weekly (calendar week) discharge limitations, per § 122.45(d)(2). The Division has adopted these recommendations and requires the Quarterly Minimum to be reported as the Quarterly Average Minimum.

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

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
pH, maximum	Daily Maximum		<= 9 Standard Units (SU)	Effluent Gross	002	Quarterly	DISCRT
pH, minimum	Daily Minimum		>= 6 Standard Units (SU)	Effluent Gross	002	Quarterly	DISCRT
BOD, carbonaceous, 05 day, 20 C	Daily Maximum		<= 60 Milligrams per Liter (mg/L)	Effluent Gross	002	Quarterly	DISCRT
BOD, carbonaceous, 05 day, 20 C	Quarterly Average		<= 40 Milligrams per Liter (mg/L)	Effluent Gross	002	Quarterly	DISCRT
BOD, carb-5 day, 20 deg C, percent removal	Quarterly Minimum[3]		>= 65 Percent (%)	Effluent Gross	002	Quarterly	CALCTD[2]
Solids, total suspended	Daily Maximum		<= 135 Milligrams per Liter (mg/L)	Effluent Gross	002	Quarterly	DISCRT
Solids, total suspended	Quarterly Average		<= 90 Milligrams per Liter (mg/L)	Effluent Gross	002	Quarterly	DISCRT
Solids, suspended percent removal	Quarterly Minimum[3]		>= 65 Percent (%)	Effluent Gross	002	Quarterly	CALCTD[2]

Notes (WWTP Discharge Limitations Table):

1. Sample shall be obtained prior to entering the RIBs. If no effluent is discharged into a percolation pond, indicate NODI Code C for 'No Discharge' on DMR.

2. Effluent sampling is not required for CBOD5 or TSS during monitoring periods when no effluent flow is present, as percent removal calculations cannot be determined without corresponding influent data. When reporting this condition in NetDMR, use NODI code ‘C’ to indicate ‘No Discharge'.

   % removal = (Ci-Ce) ÷ Ci × 100

   Where:
   Ci = Influent quarterly average concentration (mg/L)
   Ce = Effluent quarterly average concentration (mg/L)

3. EPA recommends the 30-day and 7-day average equivalent to secondary standards, as specified in § 133.105, be applied as average monthly (calendar month) and average weekly (calendar week) discharge limitations, per § 122.45(d)(2). The Division has adopted these recommendations and requires the Quarterly Minimum to be reported as the Quarterly Average Minimum.

Ponds / Rapid Infiltration Basins for Sample Location 002 (Effluent) To Be Reported Once During The Permit Term[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Alkalinity, bicarbonate (as CaCO3)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Alkalinity, total (as CaCO3)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Aluminum, total (as Al)[2]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Antimony, total (as Sb)[2]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Arsenic, total (as As)[2]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Barium, total (as Ba)[2]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Beryllium, total (as Be)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Cadmium, total (as Cd)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Calcium, total (as Ca)[2]	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)[2]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
			M&R				

Ponds / Rapid Infiltration Basins for Sample Location 002 (Effluent) To Be Reported Once During The Permit Term[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Copper, total (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)[2]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Lead, total (as Pb)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Magnesium, total (as Mg)[2]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Manganese, total (as Mn)[2]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Mercury, total (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)[2]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT

Ponds / Rapid Infiltration Basins for Sample Location 002 (Effluent) To Be Reported Once During The Permit Term[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Selenium, total (as Se)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Silver, total (as Ag) [2]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Sodium, total (as Na)[2]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Sulfate, total (as SO4)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Thallium, total (as Tl)[2]	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[3]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Cyanide, weak acid, dissociable[3]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT
Zinc, total (as Zn)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Once Per Permit Term	DISCRT

Notes (Ponds / Rapid Infiltration Basins):

1. Sample shall be obtained prior to entering the RIBs. If no effluent is discharged into a percolation pond, indicate NODI Code C for 'No Discharge'on DMR.
2. Analysis is for the dissolved fraction.
3. Profile I pollutants must be sampled and analyzed at least once during the permit term. While the presence of dissociable cyanide and natural uranium is not anticipated at this facility, results for the full Profile I suite are required to support a comprehensive groundwater protection evaluation. Based on the findings, the Division may consider modifying or removing certain parameters in the next permit cycle.

Ponds / Rapid Infiltration Basins for Sample Location 003 (Pond 1) To Be Reported Quarterly

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Freeboard[1]	Daily Minimum	>= 3 Feet (ft)		See Footnote	003	Quarterly	STATIC

Notes (Ponds / Rapid Infiltration Basins):

1. Design minimum is 3 feet from the top perimeter of the pond to the water surface. The reported value should be the height from the water surface to the top of the berm, and not the length of the side wall of the pond. The assumed slope of the side wall is 3:1. Use of Staff Gauge near the emergency escape ladder, measured from the toe of the pond slope. Report readings in tenths of a foot as recorded on the field gauge.

Ponds / Rapid Infiltration Basins for Sample Location 003 (Pond 1 Sludge) To Be Reported Annually[1][2]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Sludge/Solids, depth[3]	Annual Maximum	M&R Feet (ft)		See Footnote[4]	003	Annual[5]	VISUAL

Notes (Ponds / Rapid Infiltration Basins):

1. The Permittee shall use a method approved by NDEP to determine the sludge depth in its ponds. The plan for monitoring the sludge depths shall be submitted with the O&M Manual.
2. When sludge depths average 20-percent of the total depth of the pond(s), the Permittee shall submit to NDEP a plan to remove the sludge within two years.
3. The Permittee shall report the total depth of the pond and the depth of sludge.
4. The Permittee shall test the sludge depths at various spots in the pond that have been approved by NDEP.
5. The Permittee shall sample the sludge depths during the 3rd quarter.

Ponds / Rapid Infiltration Basins for Sample Location 004 (Pond 2) To Be Reported Quarterly

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Freeboard	Daily Minimum	>= 3 Feet (ft)		See Footnote[1]	004	Quarterly	STATIC

Notes (Ponds / Rapid Infiltration Basins):

1. Design minimum is 3 feet from the top perimeter of the pond to the water surface. The reported value should be the height from the water surface to the top of the berm, and not the length of the side wall of the pond. The assumed slope of the side wall is 3:1. Use of Staff Gauge near the emergency escape ladder, measured from the toe of the pond slope. Report readings in tenths of a foot as recorded on the field gauge.

Ponds / Rapid Infiltration Basins for Sample Location 004 (Pond 2 Sludge) To Be Reported Annually[1][2]

	Discharge Limitations			Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Sludge/Solids, depth[3]	Annual Maximum	M&R Feet (ft)		See Footnote[4]	004	Annual[5]	STATIC

Notes (Ponds / Rapid Infiltration Basins):

1. The Permittee shall use a method approved by NDEP to determine the sludge depth in its ponds. The plan for monitoring the sludge depths shall be submitted with the O&M Manual.
2. When sludge depths average 20-percent of the total depth of the pond(s), the Permittee shall submit to NDEP a plan to remove the sludge within two years.
3. The Permittee shall report the total depth of the pond and the depth of sludge.
4. The Permittee shall test the sludge depths at various spots in the pond that have been approved by NDEP.
5. The Permittee shall sample the sludge depths during the 3rd quarter.

Summary of Changes From Previous Permit

Addition of Outfall 004: Discharge Limitations Table for Sample Location 004 (Septage) to be reported monthly:

- Re-added the Daily Maximum 1,500 gallons of septage weekly limit.
- Added the monthly average maximum of 6,000 gallons of septage.

The following changes were made to the Discharge Limitations Table for Sample Location 001 (Influent) to be Reported Quarterly:

- Added monitoring for Daily Maximum Flow Rate, CBOD5, and TSS
- Updated Base from Quarterly Maximum to Quarterly Average.

The following changes were made to the Discharge Limitations Table for Sample Location 002 (Effluent) to be Reported Quarterly:

- Changed Base from Quarterly Maximum to Daily Maximum for CBOD5, TSS, and pH.
- Added Quarterly Average monitoring of CBOD5 and TSS.
- Quarterly Average for CBOD5 was changed to 40 mg/L to comply with the equivalent to secondary treatment standards for 30-day average, as specified in § 133.105.
- Daily Maximum CBOD5 was changed to 60 mg/L because it was previously incorrect, and the limit now reflects the equivalent to secondary treatment standards for 7-day average, as specified in § 133.105.
- Updated Daily Maximum limit for TSS to 135 mg/L, and Quarterly Average limit to 90 mg/L for TSS.
- The proposed permit establishes quarterly average minimum effluent limits for CBOD5 and TSS percent removal at 65%.

The following changes were made to the Discharge Limitations Table for Sample Location 003 (Pond Sludge) to be reported annually:

- Added the parameter of freeboard to be monitored and reported.
- A note was added on monitoring location for the freeboard to be recorded.

The proposed permit establishes once per permit term effluent monitoring and reporting requirements for

Profile I Pollutants.

Technology Based Effluent Limitations

The following technology-based effluent limitations (TBELs) are based on equivalent to secondary treatment standards for pond systems as allowed by the Code of Federal Regulations (CFR), Title 40, section 133, and as adopted by the state of Nevada:

- **CBOD5**: The daily maximum threshold is limited to 60 mg/L and the quarterly average percent removal is limited to not less than 65%.
- **TSS**: The daily maximum threshold is limited to 135 mg/L and the quarterly average percent removal is limited to not less than 65%.
- **pH**: The daily maximum is limited to 9.0 S.U. and the daily minimum is limited to 6.0 S.U.

U.S. EPA published federal secondary treatment standards at 40 CFR 133 based on an evaluation of performance data for Publicly Owned Treatment Works (POTWs) practicing a combination of physical and biological treatment. Facilities primarily using biological treatment technologies, such as trickling filters or waste stabilization ponds, are capable of achieving significant reductions in CBOD5 and TSS, but might not consistently achieve the secondary treatment standards for these parameters. Because of this, EPA promulgated regulations at 40 CFR 133.105 that include alternative standards that apply to facilities using equivalent to secondary treatment. Federal equivalent to secondary treatment standards are defined at 40 CFR 133.105 for maximum CBOD5 as a 30-day average of 40 mg/L and a 7-day average of 60 mg/L, for maximum TSS as a 30-day average of 45 mg/L and a 7-day average of 65 mg/L, for CBOD5 and TSS percent removal as a monthly average of not less than 65%, and for pH as within the range of 6.0 S.U. and 9.0 S.U. The Division has adopted these standards for groundwater discharges from facilities using equivalent to secondary treatment.

EPA recommends the 30-day and 7-day average equivalent to secondary standards, as specified in § 133.105, be applied as average monthly (calendar month) and average weekly (calendar week) discharge limitations, per § 122.45(d)(2).

Eureka WWTF is eligible for discharge limitations based on equivalent to secondary treatment standards and the alternate TSS requirement, because the facility provides significant biological treatment of municipal wastewater, treated primarily in waste stabilization ponds, and the facility is unable to consistently achieve secondary treatment standards. The federal regulations also allow states to adjust the maximum allowable TSS concentration for waste stabilization ponds upward from those specified in the equivalent to secondary treatment standards to conform to TSS concentrations achievable with waste stabilization ponds. The approved alternate TSS requirement in the state of Nevada is 90 mg/L as a quarterly average.

Mass-based limitations have not been included in the permit because the facility's influent flow is often too low to accurately measure using existing equipment. This approach is consistent with the federal provisions at 40 CFR §122.45(f), which allow flexibility in cases where dilution is not a concern and flow rates are unreliable.

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 Nevada Administrative Code (NAC) 445A.243, which states, “In establishing an effluent limitation to carry out the policy of this State set forth in 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 constituents listed in Profile I have been vetted by the Division and have been included in groundwater discharge permits as a means of regulating groundwater quality. Per Nevada Revised Statute (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: Quarterly influent and effluent monitoring for CBOD5 and TSS are included to assess the treatment performance of the primary and secondary waste stabilization ponds. A quarterly sampling frequency for CBOD5 and TSS is sufficient for determining compliance with the equivalent to secondary treatment standards as specified in EPA promulgated regulations at § 133.105.

Quarterly monitoring for pH is included to assess compliance with effluent limits of 6.0 S.U. as a daily minimum and 9.0 S.U. as a daily maximum, consistent with secondary treatment standards for pH.

The requirement to monitor the volume of septage discharged into the treatment ponds is included to monitor the loading of CBOD5 and TSS that is not being captured by the influent flow rate and influent water quality monitoring. It’s important to know the excess loading of the ponds from septage because compared to raw domestic wastewater, septage usually is higher in organics, grease, grit, and other extraneous debris. Additional unmonitored pollutants such as phosphorus, ammonia nitrogen and bacterial growth inhibitors may cause additional threat to the pond treatment processes and groundwater quality. Monitoring the volume and restricting excess discharge of septage to the ponds can increase the reliability of the treatment in the ponds.

Other Required Water Quality Monitoring: The requirement to monitor the effluent for all Profile I pollutants once per permit term is included to evaluate the quality of the effluent and determine its potential impact on the receiving water.

The effluent limitations included in this permit are intended to ensure the protection of State waters, particularly groundwater in the Diamond Valley hydrologic area, consistent with NRS 445A.490 and NAC 445A.243. Although Nevada has not adopted numeric groundwater quality standards, the Division has long used the parameters listed in Profile I and federal effluent guidance to establish protective thresholds for groundwater discharge permits. While numeric permit limits have been included, emphasis is placed on surveillance and characterization.

Anti-backsliding

To prevent backsliding, effluent limitations in a reissued permit are required to be as stringent as those in the previous permit, with some exceptions.

According to federal regulations (49 Federal Register 37005, September 20, 1984), the State can adjust the 30-day average allowable TSS concentration for waste stabilization ponds to align with achievable levels. In Nevada, the approved alternate TSS requirement is 90 mg/L as a 30-day average. The previous permit set a limit of 90 mg/L for TSS as a quarterly maximum. However, it was determined that the 90 mg/L limit for TSS was mistakenly applied as a quarterly maximum rather than a 30-day average. To accommodate monitoring frequencies at the facility, the Division accepts quarterly average in lieu of 30-day average monitoring. To correct this and ensure compliance with adjusted standards, the Division now sets two new equivalent to secondary effluent limits: 90 mg/L as a quarterly average and 135 mg/L as a daily maximum. The daily maximum limit was calculated as 1.5 times the 30-day average alternate TSS limit (90 mg/L x 1.5 = 135 mg/L).

The federal equivalent to secondary treatment standards, defined at 40 CFR 133.105, lists a 30-day average limit of 40 mg/L and a 7-day average limit of 60 mg/L for CBOD5. The Division has determined that the previous permit mistakenly applied the 30-day average limit of 45 mg/L as the quarterly maximum limit for CBOD5. To correct this, the proposed permit implements the correct limits for CBOD5: 40 mg/L as a quarterly average and 60 mg/L as a daily maximum.

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 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 RIBs within the compliance limits of the proposed permit.

Special Conditions

See special approvals/conditions table below.

SA – Special Approvals / Conditions Table

Item #	Description
1	The Permittee shall continue to submit their Discharge Monitoring Reports (DMRs) through the Nevada NetDMR website: https://netdmr.ndep.nv.gov/netdmr/public/home.htm.

Discharges From Future Outfalls/ Planned Facility Changes

Pond No. 2 is scheduled for a significant upgrade, including the installation of a new bentonite clay liner and the removal of accumulated sludge. This upgrade will enhance the pond's treatment efficiency and extend its operational lifespan. These improvements aim to support the growing needs of the community while maintaining high environmental protection standards.

Corrective Action Sites

There are no Bureau of Corrective Actions sites within one mile of the facility.

Wellhead Protection Program

The outfalls are 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 copies to NDEP for review of an updated copy of an O&M Manual prepared in accordance with the NDEP's guidance document WTS-2: Minimum Information Required for an Operations and Maintenance Manual. The revised O&M Manual shall be wet stamped and signed by a Nevada Professional Engineer (P.E.).	6/1/2026

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly DMR	Quarterly	10/28/2025
2	Annual Report	Annually	1/28/2026
3	Annual DMR	Annually	1/28/2026
4	Once Per Permit Term DMR	Once during the permit term	10/28/2030

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. **9/8/2025,** 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: **Tiffany Barulich**
Date: **8/6/2025**
Title: **Associate Engineer**