FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: HUMBOLDT COUNTY PUBLIC WORKS

50 W. FIFTH STREET
WINNEMUCCA, NV 89445

Permit Number: NS0093005

Permit Type: GROUNDWATER DISCHARGE

Designation: GROUNDWATER

New/Existing: EXISTING

Location: MCDERMITT SEWAGE TREATMENT PLANT, HUMBOLDT
1/2 MILE SW OF HWY 95 N, MCDERMITT, NV 89421
LATITUDE: 41.992222, LONGITUDE: -117.7275
TOWNSHIP: 47 N, RANGE: 38 E, SECTION: 7

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Latitude	Longitude	Receiving Water
001	INFLUENT	Internal Outfall		41.993520	-117.7286	GROUNDWATER
002	EFFLUENT	External Outfall		41.991990	-117.7283	GROUNDWATER
003	MONITORING WELL # 1	Monitoring Well		41.992260	-117.7295	GROUNDWATER
004	MONITORING WELL # 2	Monitoring Well		41.9942	-117.7273	GROUNDWATER
005	EMERGENCY POND	External Outfall		41.992570	-117.7282	GROUNDWATER

Permit History/Description of Proposed Action

The Permittee, Humboldt County Public Works, has applied for the renewal of Permit NS0093005 for the McDermitt Sewage Treatment Plant (MSTP), at ½ mile southwest of Highway 95 North near the Nevada/Oregon border, in McDermitt, being within Humboldt County, Nevada. The Permittee proposes to continue to discharge treated effluent to groundwater of the State via an rapid infiltration basin (RIB).

This permit was first issued on March 20, 1996. The most recent permit was issued on July 1, 2015, and expired on June 30, 2020; the permit has been administratively continued since.

Facility Overview

The MSTP provides wastewater treatment, primarily made up of domestic sewage, and a small portion of commercial, for the central McDermitt service area. The city of McDermitt is a small community of approximately 500 people, with the treatment plant serving approximately 100 connections including the school district, a casino and a cafe, a motel, and a gas station. The plant is designed to treat up to a 30-day average of 50,000 gallons per day (Gal/d) of domestic wastewater, with a maximum daily flow rate of 60,000 Gal/d.

Domestic sewage gravity feeds through the collection system and enters the wet well, that houses a lift station, near the wastewater treatment pond system (Outfall 001, Influent). The lift station has two submersible pumps that are manually alternated from week to week. A float sensor system activates pump controls that turn on the pump motor to transfer the raw wastewater from the wet well, through the force

main, and where it enters the bottom of the southeast side of the treatment plant.

The treatment plant consists of a baffled, high-density polyethylene (HDPE) lined pond and a polishing pond (Cell #3), along with an earthen lined evaporation / percolation pond (Outfall 002, Effluent). The HDPE lined pond acts as both the primary and secondary treatment system, by using the baffle curtain to split the pond into two sections, called cells, being Cell #1 and Cell #2. These cells allow for increased hydraulic retention time to help improve water quality by increasing the active treatment area.

Cell #1 provides aerobic conditions, through aeration, with most settleable solids accumulating to form most of the sludge in the system. This is called the primary portion of the pond. After this process, flow continues north, and flows through the curtain to Cell #2, where the rest of the solids settle. Anaerobic bacteria consume chemically combined oxygen and organic matter from the settleable solids at the bottom of the pond. The consumption of organic matter allows oxygen to be used by the bacteria, producing methane and carbon dioxide as metabolic byproducts. The chemically combined oxygen is supplied from naturally occurring organic matter such as carboxylic acids, or from naturally occurring inorganic material such as nitrates.

The semi-treated wastewater then flows, via gravity, into the polishing pond, or Cell #3, for additional biological treatment, after which it is released into the evaporation / percolation pond, allowing for additional processes that include nitrification-denitrification for nitrogen removal, filtration and adsorption to remove suspended solids and trace metals, microbial action to degrade toxic organics, biological degradation, sorption, and ion exchange to occur as the wastewater percolates through permeable soils.

There are two (2) groundwater monitoring wells used to monitor potential impacts associated with operations and treatment, that are located upgradient of the plant (Outfall 003, MW-1) and downgradient of the plant (Outfall 004, MW-2). The plant also has an emergency overflow pond (Outfall 005) located between the treatment pond and evaporation / percolation pond for use as needed.

The area's drinking water treatment system was updated in 2021, to include arsenic removal. Backwash from the arsenic filters is sent to the MSTP for treatment. As part of the removal process, iron is added, which serves as a coagulant. Both constituents were added to the permit for sampling during the last permit renewal.

Outfall Summary
Outfall 001 – This internal outfall is for measuring the domestic sewage (Influent) flowing into the MSTP.

Outfall 002- This external outfall is for the measuring and sampling of the treated effluent being discharged from the treatment ponds and into the evaporation / percolation pond.

Outfall 003 – This downgradient monitoring well (MW-1) is located near the treatment ponds.

Outfall 004 – This upgradient monitoring well (MW-2) is located near the treatment ponds.

Outfall 005 – This external outfall is for the measurement of treated water being discharged from the plant and into the emergency overflow pond.

Facility Upgrades since last issued permit
Improvements were done in Spring 2022, with the installation of a new gravity/force main sewer, grinder pump station, and manhole vaults to re-route a sanitary sewer connection for a residence and motel connection. The Division received As Built plan drawings denoting the completion of the improvement project in August 2022.

Solids Handling
Solids are removed periodically and taken to Humboldt County Landfill for disposal.

Effluent Management and Reuse
Treated wastewater is released into an earthern-lined evaporation/percolation basin for infiltration into the ground.

Design Flow (and basis) and Measurement & Current Capacity
The MSTP was designed with an average day flow rate of 100,000 Gal/d.

The average daily maximum flow rate reported for Outfall 001 (Influent) was 21,786 Gal/d. The permitted daily maximum flow rate for Outfall 001 is limited to 50,000 Gal/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 MSTP O&M Manual was last reviewed and approved on January 20, 2022. The Technical, Compliance, and Enforcement 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 manual due by January 20, 2032.

Effluent Characterization
Nevada State Network Discharge Monitoring Report (NetDMR) data, as reported from October 2020 to June 2025, was reviewed as part of this permit renewal process. The MSTP discharges treated wastewater, based on equivalent-to-secondary treatment removal standards for primary pollutants, as defined under the U.S. EPA's 40 Code of Federal Regulations (CFR) Section 133.105. The following reported averages were taken from October 2020 to June 2025 reporting period:

Abbreviations:
CBOD5 – Carbonaceous Biochemical Oxygen Demand, 5-day
MW – Monitoring Well
N - Nitrogen
TDS – Total Dissolved Solids
TSS – Total Suspended Solids
mg/L – Milligrams per Liter
Gal/d – Gallons per Day
S.U. – Standard Units

Outfall 001 (Influent)
CBOD5: 188.22 mg/L
Flow Rate: 21,786 Gal/d
TSS: 256.32 mg/L

Outfall 002 (Effluent):
Arsenic: 0.02 mg/L, with 13 exceedances
CBOD5: 20.09 mg/L
Iron: 0.42 mg/L, with 15 exceedances
pH: 8.14 S.U.
Nitrogen: 18.5 mg/L
TSS: 38.16 mg/L

Outfall 003 (MW-1):
Arsenic: 0.03 mg/L, with 16 exceedances
Chloride: 142.95 mg/L
Depth level (feet below the surface): 6.92 Feet
Iron: 0.43 mg/L, with 9 exceedances

Nitrogen: 1.04 mg/L
TDS: 746.32 mg/L
Water level (relative to mean sea level): 4412 feet

Outfall 004 (MW-2):
Arsenic: 0.01 mg/L, with 6 exceedances
Chloride: 287.63 mg/L
Depth level (feet below the surface): 7.55 Feet
Iron: 2.69 mg/L, with 13 exceedances
Nitrogen: 0.91 mg/L
TDS: 1,220 mg/L
Water level (relative to mean sea level): 4407.45 feet

Outfall 005 (Emergency Pond):
There were no discharges to the emergency pond during the period reviewed.

The level of treatment achieved for CBOD5 varied between 0%-97.58% removal rate, with an average of 78.61% being achieved.

The level of treatment achieved for TSS varied between 3.69%-96.31% removal rate, with an average of 63.94% being achieved.

Levels of iron trended up during the 2024 reporting period, with the first two quarters of 2025 showing it going back down. Continued monitoring shall be done to ensure levels to do not increase.

Notes:
In review, the high TDS levels reported in the monitoring wells were due to the shallowness of the wells, along with naturally occurring TDS in that area, due to the area being a major volcanic center, called the McDermitt Caldera, which is the primary influence on TDS levels in local groundwater. Due to Caldera volcanic geology, there are thick sequences of rhyolitic tuffaceous sediments along with high TDS brine.

In addition, the groundwater near McDermitt, Nevada, is also known to have high levels of arsenic resulting from a combination of natural geology and contamination from historical mining operations. The area sits within the McDermitt Caldera, a region rich in volcanic rock that contains naturally occurring heavy metals and was also the site of mercury mines that have spread arsenic-laden waste.<

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 treated wastewater are Total Nitrogen, TDS, Iron, CBOD5, Arsenic, along with inorganic chemicals and metals (Profile 1 contaminants).

Receiving Water
The receiving water is groundwater of the State. Depth to groundwater in the area is approximately 7 feet below ground surface; thus, the requirement for additional groundwater monitoring has been established under this permit. Groundwater flows to the southwest, toward the Oregon Canyon Creek.

Compliance History
The facility was in partial compliance during the October 2020 to June 2025 reporting period, with required reporting submitted on time, but with some exceedances. The improvement project constructed in Spring 2022 was successfully completed and “close out” documents were received by the Division.

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	30 Day Average	<= 50000 Gallons per Day (gal/d)		Raw Sewage Influent	001	Continuous	METER
Flow rate	Daily Maximum	<= 60000 Gallons per Day (gal/d)		Raw Sewage Influent	001	Continuous	METER

WWTP Discharge Limitations Table for Sample Location 001 (Influent) To Be Reported Quarterly[1][2]

	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		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		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	001	Quarterly	DISCRT

Notes (WWTP Discharge Limitations Table):

1. Sampling should be done concurrently with the quarterly sampling of the treated effluent (Outfall 002) to allow for precise determination of removal rates achieved.
2. If no sampling is done due to no treated effluent being released to the evaporation/percolation basin, then the NODI code assigned event descriptor "9" should be used when reporting.

WWTP Discharge Limitations Table for Sample Location 002 (Effluent) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Freeboard	Daily Maximum	M&R Feet (ft)		Effluent Gross	002	Monthly	VISUAL[1]
Freeboard	30 Day Average	M&R Feet (ft)		Effluent Gross	002	Monthly	VISUAL[1]

Notes (WWTP Discharge Limitations Table):

1. Staff gauges located in the earthen-lined evaporation/percolation basin.

WWTP Discharge Limitations Table for Sample Location 002 (Effluent) To Be Reported Quarterly[1][2]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Arsenic, total (as As)	Daily Maximum		<= 0.013 Milligrams per Liter (mg/L)	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
Iron, total (as Fe)	Daily Maximum		<= 0.13 Milligrams per Liter (mg/L)	Effluent Gross	002	Quarterly	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Quarterly	DISCRT
pH, maximum	Daily Maximum[3]		<= 9.0 Standard Units (SU)	Effluent Gross	002	Quarterly	DISCRT
pH, minimum	Daily Minimum[3]		>= 6.0 Standard Units (SU)	Effluent Gross	002	Quarterly	DISCRT
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
BOD, carb-5 day, 20 deg C, percent removal[4]	Quarterly Minimum[5]		>= 65 Percent (%)	Effluent Gross	002	Quarterly	CALCTD
Solids, suspended percent removal[4]	Quarterly Minimum[5]		>= 65 Percent (%)	Effluent Gross	002	Quarterly	CALCTD

Notes (WWTP Discharge Limitations Table):

1. Effluent samples shall be taken from the outlet to the earthen-lined evaporation/percolation basin (Outfall 002).
2. If no sampling is done due to no treated effluent being released to the evaporation/percolation basin, then the NODI code assigned event descriptor "9" should be used when reporting.
3. If fewer than two samples are taken during the monitoring period, enter the result as both the minimum and maximum value.

4. Sampling should be done concurrently with the quarterly sampling of the influent (Outfall 001) to allow for precise determination of removal rates achieved.
5. Quarterly Minimum Average.

WWTP Discharge Limitations Table for Sample Location 002 (Effluent) To Be Reported Once During The Permit Term

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)[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
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
Copper, dissolved (as Cu)	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 Be Reported Once During The Permit Term

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Fluoride, total (as F)	Daily Maximum		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
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

WWTP Discharge Limitations Table for Sample Location 002 (Effluent) To Be Reported Once During The Permit Term

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
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 SO4)	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.

WWTP Discharge Limitations Table for Sample Location 004 (Downgradient Monitoring Well #2) To Be Reported Quarterly

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Arsenic, total (as As)	Daily Maximum		<= 0.013 Milligrams per Liter (mg/L)	Groundwater	004	Quarterly	DISCRT
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	004	Quarterly	DISCRT
Depth to water level ft below landsurface[1]	Daily Minimum	M&R Feet (ft)		Groundwater	004	Quarterly	VISUAL
Iron, total (as Fe)	Daily Maximum		<= 0.13 Milligrams per Liter (mg/L)	Groundwater	004	Quarterly	DISCRT
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	004	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	004	Quarterly	DISCRT
Water level relative to mean sea level[2]	Daily Maximum	M&R Feet (ft)		Groundwater	004	Quarterly	CALCTD

Notes (WWTP Discharge Limitations Table):

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

WWTP Discharge Limitations Table for Sample Location 005 (Emergency Pond) To Be Reported Quarterly[1]

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		See Footnote	005	Daily When Discharging	METER
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		See Footnote	005	Daily When Discharging	METER

Notes (WWTP Discharge Limitations Table):

1. Flow shall be monitored and reported when discharges to the emergency pond occur. Report "no discharge" on the DMRs when effluent has not been discharged to the pond.

Groundwater Monitoring Wells Table for Sample Location 003 (Upgradient Monitoring Well #1) To Be Reported Quarterly

	Discharge Limitations			Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Arsenic, total (as As)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	003	Quarterly	DISCRT
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	003	Quarterly	DISCRT
Depth to water level ft below landsurface[1]	Daily Minimum	M&R Feet (ft)		Groundwater	003	Quarterly	VISUAL
Iron, total (as Fe)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	003	Quarterly	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	003	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	003	Quarterly	DISCRT
Water level relative to mean sea level[2]	Daily Maximum	M&R Feet (ft)		Groundwater	003	Quarterly	CALCTD

Notes (Groundwater Monitoring Wells Table):

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

Summary of Changes From Previous Permit

Under Outfall 001 (Influent) To Be Reported Quarterly the following parameters were revised:

CHANGED - BOD, carbonaceous, 05-day, 20 C, with a “30 Day Average” Base was changed to a “Quarterly Average” base, with the other monitoring requirements for this parameter remaining the same.

CHANGED - Solids, Total Suspended, with a "30 Day Average" Base was changed to a "Quarterly Average" base, with the other monitoring requirements for this parameter remaining the same.

The following footnotes were added:

ADDED - 1. Sampling should be done concurrently with the quarterly sampling of the treated effluent (Outfall 002) to allow for precise determination of removal rates achieved.

ADDED - 2. If no sampling is done due to no treated effluent being released to the evaporation/percolation basin, then the NODI code assigned event descriptor "9" should be used when reporting.

Under Outfall 002 (Effluent) To Be Reported Quarterly the following parameters were either deleted, changed or added:

CHANGED - BOD, carbonaceous, 05-day, 20 C, with a “30 Day Average” Base was changed to a “Quarterly Average” base, with the other monitoring requirements for this parameter remaining the same.

DELETED – Nitrogen, total, with a “30 Day Average” base, an “M&R Milligrams per Liter (mg/L)” Concentration, an “Effluent Gross” Monitoring Location, a “002” Sample Location, a “Quarterly” Measurement Frequency, and a “Discrt” sample type.

DELETED - Solids, total suspended, with a “Daily Maximum” Base, a “<=90 Milligrams per Liter (mg/L)” Concentration, an “Effluent Gross” Monitoring Location, a “002” Sample Location, a “Quarterly” Measurement Frequency, and a “Discrt” Sample Type.

DELETED - Solids, total suspended, with a “30-Day Average” Base, a “<=45 Milligrams per Liter (mg/L)” Concentration, an “Effluent Gross” Monitoring Location, a “002” Sample Location, a “Quarterly” Measurement Frequency, and a “Discrt” Sample Type.

The following footnotes were deleted:

DELETED - 2. Percent removal to be compared to corresponding samples taken from the influent and the effluent.

DELETED – 3. Percent removal to be compared to corresponding samples taken from the influent and the effluent.

The following parameters were added:

ADDED - Solids, total suspended, with a “Daily Maximum” Base, a “<=135 Milligrams per Liter (mg/L)” Concentration, an “Effluent Gross” Monitoring Location, a “002” Sample Location, a “Quarterly” Measurement Frequency, and a “Discrt” Sample Type.

ADDED - Solids, total suspended, with a “Quarterly Average” Base, a “<=90 Milligrams per Liter (mg/L)” Concentration, an “Effluent Gross” Monitoring Location, a “002” Sample Location, a “Quarterly” Measurement Frequency, and a “Discrt” Sample Type.

The following footnotes were added:

ADDED - 2. If no sampling is done due to no treated effluent being released to the evaporation/percolation basin, then the NODI code assigned event descriptor "9" should be used when reporting.

ADDED - 3. If fewer than two samples are taken during the monitoring period, enter the result as both the minimum and maximum value.

ADDED - 4. Sampling should be done concurrently with the quarterly sampling of the influent (Outfall 001) to allow for precise determination of removal rates.

ADDED - 5. Quarterly Minimum Average.

An additional reporting period for Outfall 002 (Effluent) was added for a “Once A Permit Term” Reporting Period, with the following parameters added:

Nevada's "Profile 1 pollutants" have been adopted by the Bureau of Water Pollution Control (BWPC) as standard reportable constituents, along with their associated limits. Based on reportable levels, these limits could be applied under a future renewal currently they are “monitor and report

Along the footnote:

ADDED - 1. Analysis shal be for the dissolved fraction.

Under the Schedule of Compliance Table, the following requirement was deleted:

DELETED - 1. The Permittee shall submit two copies (one electronic and one hard copy) of an Operations and Maintenance (O&M) Manual to the Division for review and approval. The O&M Manual shall be prepared in accordance with guidance document WTS2.

Under the SA – Special Approvals/Conditions Table, the following requirement was deleted:

DELETED – 1. The Permittee is required to continue to submit their Discharge Monitoring Reports (DMRs) through the Bureau of Water Pollution Control's Nevada NetDMR system.

Technology Based Effluent Limitations
The U.S. EPA published federal equivalent to secondary treatment standards under Title 40 of the Code of Federal Regulations (CFR) Section 133.105, 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, can achieve significant reductions in CBOD5 and TSS, but might not consistently achieve the secondary treatment standards for these parameters.

Because of this, the U.S. EPA promulgated regulations at 40 CFR Section 133.105 that includes alternative standards that apply to facilities using equivalent-to-secondary treatment. As allowed by 40 CFR 133, the Division has adopted these standards for groundwater discharges from facilities using equivalent-to-secondary treatment. Additionally, the Division uses a daily maximum limit in place of the 7-day average limit. The following equivalent-to-secondary treatment standards are applicable to this permit:

CBOD5: The daily maximum threshold is limited to 60 mg/L. The quarterly average threshold is limited to 40 mg/L.

pH daily maximum threshold is limited to 9.0 standard units (S.U.) and the daily minimum limit is 6.0 S.U.

The federal regulations also allow states to adjust the maximum allowable TSS concentration for waste stabilization ponds, upwards from those specified in the 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 30-day average, implemented as an average quarterly limit. Furthermore, the daily maximum TSS limit was calculated using a factor of 1.5 times the average monthly limitation (90 mg/L X 1.5 = 135 mg/L).

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

CBOD5 percent removal standard, based on a minimum quarterly average, must meet a minimum limit is 65%.

TSS percent removal standard, based on a minimum quarterly average, must meet minimum limit is 65%.

Limits Based on Facility's Design Criteria Review:
Permitted 30-day average influent flow rate is limited to <= 50,000 Gal/d.

Permitted daily maximum influent flow rate is limited to <= 60,000 Gal/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 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 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 proposed permit requires the Permittee sample these constituents once during the permit term as they are included in the Profile 1 list and they have not been sampled before.

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 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 MSTP. A quarterly sampling frequency for CBOD5 and TSS is sufficient for determining compliance with the applicable effluent limitations. Percent removal requirements for CBOD5 and TSS are established in the permit as quarterly average minimums of 65%, based on equivalent-to-secondary treatment standards.

Some wastewater treatment processes can increase or decrease wastewater pH; therefore, quarterly 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.

The requirement to monitor Arsenic has been maintained due to it being a serious concern based on its toxicity, its ability to accumulate and spread, and the ways that wastewater treatment processes and surrounding chemistry can make it more mobile. The primary risk is that this discharge could contaminate drinking water sources. Therefore, the limit of 0.013 mg/L for Arsenic, respectively, has been continued, as this concentration is the average background levels found in a nearby drinking water supply well located on Jaca Road in town.

The requirement to monitor Iron has been maintained due to its continued use as a coagulant for the Arsenic backwash. Excess iron in wastewater effluent discharged into groundwater is a concern because it can encourage the growth of harmful bacteria indirectly (food source for iron bacteria which provides an environment for other harmful bacteria to grow), induce the release of other toxic elements already in the aquifer, along with causing aesthetic problems. Though iron is an essential nutrient, and generally not considered a health risk at low concentrations, it is still considered a “secondary contaminant" and is regulated on both the State and federal levels.

Anti-backsliding
None of the permit limits were changed to a less restrictive limit compared to those in the previous permit, with the exception of TSS and Total Nitrogen.

Under the permit, the requirement to sample and report the Total Nitrogen parameter, with a "30-Day Average" Base was removed. This is not standard reporting requirements for wastewater treatment plants in Nevada on a quarterly basis.

For TSS, under Outfall 002, the concentration limits, for both the daily maximum and quarterly average, were updated to coincide with the current Technology Based Effluent Limitations, as set forth by the federal EPA for POTWs, which the state of Nevada has adopted. Based on these limitations, and the reported levels supporting this alternate applied limitations, the concentrations were revised.

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 effluent discharged within the compliance limits of the proposed permit.

Special Conditions
There are no applicable Special Approvals/Conditions for 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.

Corrective Action Sites
There is one active Bureau of Corrective Actions (BCA) remediation site (5-00056) that falls within a one-mile radius of the MSTP, being the confirmed release of gasoline from an underground storage tank. Based on the plume being stable, and confined to the immediate area, BCA does not have any concerns with the renewal of this permit.

Wellhead Protection Program
The closest Public Water Supply (PWS) well is located approximately 3,020 feet to the northeast of the outfalls. 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

There are no Schedule of Compliance items

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. **11/17/2025,** a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator.

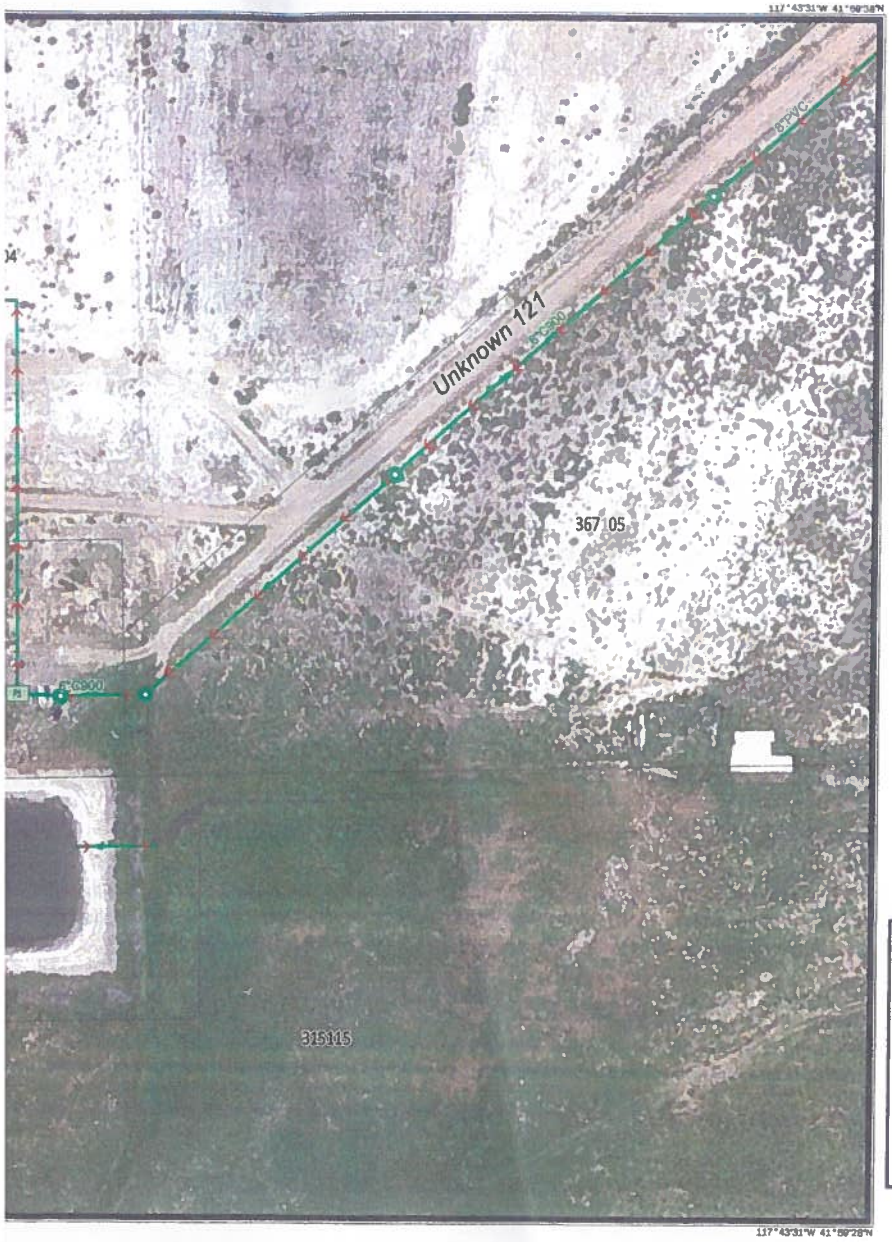
A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator of EPA Region IX or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate 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: **10/8/2025**
Title: **Staff II Engineer**



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February 2013
McDermitt
Sewer System

1 " = 100 '

FARR WEST
ENGINEERING

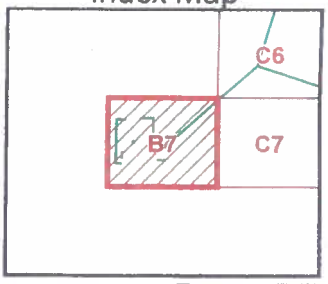
Legend

- Lateral Cleanout
- Main Line Cleanout
- Sewer Manhole
- Sewer Pump Station
- Sewer Treatment Plant
- Pond
- Gravity Main
- Forced Main
- Lateral
- Parcels

Notes:

Background Imagary data pulled from Bing Online Imagary

Index Map



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