



FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: HAWTHORNE UTILITIES
PO BOX 1448
HAWTHORNE, NV 89415

Permit Number: NS0020009

Permit Type: GROUNDWATER DISCHARGE

Designation: GROUNDWATER

New/Existing: EXISTING

Location: HAWTHORNE UTILITIES, MINERAL
PO BOX 1448, HAWTHORNE, NV 89415
LATITUDE: 38.567222, LONGITUDE: -118.638611
TOWNSHIP: 8 N, RANGE: 30 E, SECTION: 9

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Latitude	Longitude	Receiving Water
001	INFLUENT FLOW TO FLUME	Internal Outfall		38.567222	-118.638611	NOT APPLICABLE
002	SEPTAGE DUMP STATION	Internal Outfall		38.567222	-118.638611	NOT APPLICABLE
003	TOTAL INFLUENT	Sum		38.567222	-118.638611	NOT APPLICABLE
004	RAPID INFILTRATION BASINS-EFFLUENT	External Outfall		38.567222	-118.638611	GROUNDWATER
005	MONITORING WELL #1	Monitoring Well		38.566139	-118.635361	GROUNDWATER
006	MONITORING WELL #2	Monitoring Well		38.567694	-118.640333	GROUNDWATER
007	MONITORING WELL #3	Monitoring Well		38.566389	-118.643611	GROUNDWATER

Permit History/Description of Proposed Action

The Permittee, Hawthorne Utilities, has applied for the renewal of Permit NS0020009 for the Hawthorne Utilities Wastewater Treatment Plant (HUWWTP), at the Hawthorne Army Depot, 1 South Maine Avenue, outside of the town of Hawthorne, within Mineral County, Nevada. The Permittee proposes to continue discharging treated wastewater to groundwater of the State via three rapid infiltration basins (RIBs).

This permit was first issued December 7, 1994. The most recent permit was issued on April 1, 2015, and expired on March 31, 2020; the permit has been administratively continued since.

Facility Overview

The HUWWTP is located 2.5 miles northwest of the town of Hawthorne. The HUWWTP was constructed for the purpose of treating domestic and commercial wastewater collected within the town of Hawthorne and the Hawthorne Army Depot.

The HUWWTP is made up of the following plant unit processes - Headworks including a grit chamber, Paschall flume, and bar screen, a Primary Treatment Pond (Pond 1), two Secondary Treatment Ponds (Ponds 2 and 3), six Wetland Cells, three RIBs, and three (3) Monitoring Wells being either upgradient (MW-1) or down-gradient (MW-2 and MW-3) of the plant.

The raw domestic sewage enters the headworks, flowing through a grit chamber where sands, gravel and other heavy solids settle out. The influent then flows through a Parshall flume, where it is measured by a Supervisory Control and Data Acquisition (SCADA) system, and passes through a mechanical bar screen, used for the removal of larger debris, before continuing to the first treatment pond (Pond 1).

Pond 1 is a high-density polyethylene (HDPE) lined anaerobic pond where specialized anaerobic bacteria break down organic waste through acid formation and methane fermentation. From Pond 1, the wastewater continues to partial-mix Ponds 2 and 3, which are HDPE-lined aerated facultative ponds, where algae produce oxygen on the surface, supporting aerobic bacteria that consume organic matter, while deeper, oxygen-depleted zones rely on anaerobic bacteria to digest the remaining solids. The treated wastewater then continues to the wetland system for the next step of the treatment process.

In 2018, construction of the wetlands system was completed. The wetlands serve to polish the effluent discharged from the plant. The treated effluent is discharged into the six (6) wetland ponds (Ponds 4A-4C and 5A-5C), where nitrogen is removed through denitrification and nitrification processes. Each pond contains three treatment zones - the vegetated zones (Zone 1 and Zone 3) provide treatment through denitrification; the open water zone (Zone 2), does not include vegetation (it is manually removed), and is intended to facilitate nitrification; and in Zone 3, the wastewater is conditioned through conversion of ammonia to nitrate for further nitrogen removal through denitrification. After this process, the treated effluent is discharged to one of the RIBs, where the treated wastewater either percolates into the ground or evaporates.

There are also three (3) groundwater monitoring wells used to monitor potential impacts associated with the plant operations and treatment, with one being located upgradient of the plant (Outfall 005 MW-1) and the other two being located downgradient of the plant (Outfall 006 MW-2 and Outfall 007 MW-3).

Outfall Summary

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

Outfall 002 - This internal outfall is for the measurement of the incoming septage delivered to the dump station near the HUWWTP.

Outfall 003 – This sum outfall is for the total incoming domestic sewage received from the dump station and the flow to the ponds.

Outfall 004 – This external outfall is for measuring the treated wastewater discharged to the RIBs.

Outfall 005 – This monitoring well outfall (MW-1) is located upgradient of Ponds 1-3.

Outfall 006 – This monitoring well outfall (MW-2) is located downgradient of Ponds 4 and 5, which have been decommissioned.

Outfall 007 – This monitoring well outfall (MW-3) is located downgradient of Ponds 6-8 (RIBs 1-3).

Facility Upgrades since last issued permit

Facility upgrades since the last issued permit include improvements to Armory Road, with a new sewer line installed to serve four (4) additional parcels, completed in 2022.

Solids Handling

Solids are removed and disposed of at the local landfill.

Effluent Management and Reuse

Treated wastewater is discharged into the RIBs for evaporation/percolation into the ground. There is currently no reuse. Should the HUWWTP determine that applied reuse is a viable option in the future, then additional approval and permits may be required at that time.

Design Flow (and basis) and Measurement & Current Capacity

The HUWWTP was originally permitted for an monthly average flow rate of 0.44 million gallons per day (Mgal/d), with a reported average monthly flow rate of 0.26 Mgal/d.

The average daily maximum flow rate reported for Outfall 003 (SUM) was 0.39 Mgal/d. The permitted daily maximum flow rate for Outfall INF is limited to 0.50 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 HUWWTP Operation and Maintenance Manual (O&M Manual) was last reviewed and approved on October 7, 2019. 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 O&M Manual being due on October 7, 2029.

Effluent Characterization

Nevada State Network Discharge Monitoring Report (NetDMR) data, as reported from July 2020 to June 2025, was reviewed as part of this permit renewal process.

The HUWWTP discharges treated wastewater, based on secondary treatment removal standards for primary pollutants under the U.S. EPA's 40 Code of Federal Regulations (CFR) Section 133.105. The following averages were taken from the July 2020 to June 2025 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):

Flow Rate: 0.22 Mgal/d (Daily Maximum)

Outfall 002 (Dump Station Septage):

Flow Rate: 0.17 Mgal/d (Daily Maximum)

Outfall 003 (Sum of Outfalls 001 and 002):

Flow Rate: 0.39 Mgal/d (Daily Maximum)

Outfall 004 (Effluent discharged to RIBs):

BOD5: 19.30 mg/L
 pH: 7.73 S.U.
 TSS: 18.98 mg/L

Outfall 005 (MW-1):

Chloride: 94.71 mg/L
 Depth: 87.73 feet
 Nitrogen: 4.29 mg/L
 TDS: 845.73 mg/L

Outfall 006 (MW-2):
Chloride: 98.04 mg/L
Depth: 67.67 feet
Nitrogen: 33.31 mg/L
TDS: 1,080.44 mg/L

Outfall 007 (MW-3):
Chloride: 99.57 mg/L
Depth: 62.66 feet
Nitrogen: 12.11 mg/L
TDS: 750.77 mg/L

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 wastewater treatment facilities are:

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

Monitoring Wells - Chloride, Nitrogen, and TDS.

Receiving Water

The receiving water is groundwater of the State. Groundwater, in the vicinity of the HUWWTP, is approximately 58 feet below the ground surface. To ensure groundwater of the State is protected, and to monitor potential impacts associated with operations and treatment, three (3) monitoring wells have been drilled, with quarterly reporting of associated parameters required.

Compliance History

The HUWWTP has been in compliance, with the exception of sporadic non-reporting through the NetDMR system.

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 Flow To Flume) 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)		Raw Sewage Influent	001	Continuous	METER
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		Raw Sewage Influent	001	Continuous	METER

WWTP Discharge Limitations Table for Sample Location 002 (Septage Dump Station) 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)		Raw Sewage Influent	002	Daily	CALCTD
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		Raw Sewage Influent	002	Daily	CALCTD

WWTP Discharge Limitations Table for Sample Location 003 (Total 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	<= 0.44 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	003	Continuous	CALCTD
Flow rate	Daily Maximum	<= 0.50 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	003	Continuous	CALCTD
BOD, 5-day ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	003	Monthly	DISCRT
BOD, 5-day ^[1]	Monthly Average		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	003	Monthly	DISCRT
Solids, total suspended ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	003	Monthly	DISCRT
Solids, total suspended ^[1]	Monthly Average		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	003	Monthly	DISCRT

Notes (WWTP Discharge Limitations Table):

1. Sampling for BOD, 5-day and total suspended solids (TSS) should be done concurrently when the effluent (Outfall 004) is sampled to determine exact percentages of removal achieved.

Groundwater Monitoring Wells Table for Sample Location 005 (Monitoring Well #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	005	Quarterly	DISCRT
Depth to water level ft below landsurface ^[1]	Daily Minimum	M&R Feet (ft)		Groundwater	005	Quarterly	VISUAL
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	005	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	005	Quarterly	DISCRT
Water level relative to mean sea level ^[2]	Daily Maximum	M&R Feet (ft)		Groundwater	005	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 006 (Monitoring Well #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	006	Quarterly	DISCRT
Depth to water level ft below landsurface ^[1]	Daily Minimum	M&R Feet (ft)		Groundwater	006	Quarterly	VISUAL
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	006	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	006	Quarterly	DISCRT
Water level relative to mean sea level ^[2]	Daily Maximum	M&R Feet (ft)		Groundwater	006	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 007 (Monitoring Well #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	007	Quarterly	DISCRT
Depth to water level ft below landsurface ^[1]	Daily Minimum	M&R Feet (ft)		Groundwater	007	Quarterly	VISUAL
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	007	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	007	Quarterly	DISCRT
Water level relative to mean sea level ^[2]	Daily Maximum	M&R Feet (ft)		Groundwater	007	Quarterly	CALCTD

Notes (Groundwater Monitoring Wells Table):

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

Ponds / Rapid Infiltration Basins for Sample Location 004 (Rapid Infiltration-Effluent Basin) 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	004	Monthly	DISCRT
BOD, 5-day	Monthly Average		<= 30 Milligrams per Liter (mg/L)	Effluent Gross	004	Monthly	DISCRT
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Effluent Gross	004	Monthly	DISCRT
pH, maximum	Daily Maximum		<= 9.0 Standard Units (SU)	Effluent Gross	004	Monthly	DISCRT
pH, minimum	Daily Minimum		>= 6.0 Standard Units (SU)	Effluent Gross	004	Monthly	DISCRT
Solids, total suspended	Daily Maximum		<= 45 Milligrams per Liter (mg/L)	Effluent Gross	004	Monthly	DISCRT
Solids, total suspended	Monthly Average		<= 30 Milligrams per Liter (mg/L)	Effluent Gross	004	Monthly	DISCRT
BOD, 5-day, percent removal ^[2]	Monthly Average Minimum ^[3]		>= 85 Percent (%)	Effluent Gross	004	Monthly	CALCTD
Solids, suspended percent removal ^[2]	Monthly Average Minimum ^[3]		>= 85 Percent (%)	Effluent Gross	004	Monthly	CALCTD

Notes (Ponds / Rapid Infiltration Basins):

1. Indicate on the monthly DMR whether each sample was taken from the diversion vault to the RIB or the RIB itself.
2. Percent removal shall be based on the 30-day average taken from the influent and effluent.
3. Sampling for BOD, 5-day and total suspended solids (TSS) should be done concurrently when the influent (Outfall 003) is sampled to determine the exact percentages of removal achieved.

Ponds / Rapid Infiltration Basins for Sample Location 004 (Rapid Infiltration Basin-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 CaCO ₃)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Alkalinity, total (as CaCO ₃)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Aluminum, total (as Al) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Antimony, total (as Sb) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Arsenic, total (as As) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Barium, total (as Ba) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Beryllium, dissolved (as Be)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Cadmium, dissolved (as Cd)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Calcium, total (as Ca) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Chromium, total (as Cr) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
			M&R				

Ponds / Rapid Infiltration Basins for Sample Location 004 (Rapid Infiltration Basin-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
Copper, dissolved (as Cu)	Daily Maximum		Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Fluoride, total (as F)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Iron, total (as Fe) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Lead, dissolved (as Pb)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Magnesium, total (as Mg) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Manganese, total (as Mn) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Mercury, dissolved (as Hg)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Nitrite plus nitrate total 1 det. (as N)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
pH, maximum	Daily Maximum		M&R Standard Units (SU)	Effluent Gross	004	Once Per Permit Term	DISCRT
pH, minimum	Daily Minimum		M&R Standard Units (SU)	Effluent Gross	004	Once Per Permit Term	DISCRT
Potassium, total (as K) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT

Ponds / Rapid Infiltration Basins for Sample Location 004 (Rapid Infiltration Basin-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
Selenium, dissolved [as Se]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Silver, total (as Ag)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Sodium, total (as Na) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Sulfate, total (as SO ₄)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Thallium, total (as Tl) ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Uranium, natural, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Cyanide, weak acid, dissociable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT
Zinc, dissolved (as Zn)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	004	Once Per Permit Term	DISCRT

Notes (Ponds / Rapid Infiltration Basins):

1. Analysis shall be for the dissolved fraction.

Summary of Changes From Previous Permit

There were no changes, additions, or deletions made to Outfalls 001 and 002.

Under the Add New Discharge Locations section, Outfall 008 (Effluent to Wetlands) was added:

ADDED – “Outfall 008” Outfall ID, with an “Effluent to Wetlands” Outfall Name, an “External Outfall”

Location Type, in "Hawthorne" Outfall City, in "NV" Outfall State, in "89415" Outfall Zip, "Mineral County" Outfall County, "38.566630" Latitude in Decimal Degrees, and "-118.637361" Longitude in Decimal Degrees.

Under the Permit, for Limit Sets, the following changes were made:

CHANGED: Outfall 001 Limit Set Name from "Internal Outfall" to "Influent Flow to Flume", the other limitations/requirements remained the same.

CHANGED: Outfall 002 Limit Set Name from "Internal Outfall" to "Septage Dump Station", the other limitations/requirements remained the same.

CHANGED: Outfall 003 Limit Set Name from "Sum" to "Total Influent", the other limitations/requirements remained the same.

CHANGED: Outfall 004 Limit Set Name from "External Outfall" to "Rapid Infiltration Basins – Effluent", the other limitations/requirements remained the same.

Under Outfall 003 (Total Influent) the following revisions were made:

ADDED: BOD, 5-day, with a "Daily Maximum" Base, an "M&R Milligrams per Liter (mg/L)" Concentration, a "Raw Sewage Influent" Monitoring Location, a "003" Sample Location, a "Monthly" Measurement Frequency, and a "Discret" Sample Type.

ADDED: BOD, 5-day, with a "Monthly Average" Base, an "M&R Milligrams per Liter (mg/L)" Concentration, a "Raw Sewage Influent" Monitoring Location, a "003" Sample Location, a "Monthly" Measurement Frequency, and a "Discret" Sample Type.

ADDED: Solids, total suspended, with a "Daily Maximum" Base, an "M&R Milligrams per Liter (mg/L)" Concentration, a "Raw Sewage Influent" Monitoring Location, a "003" Sample Location, a "Monthly" Measurement Frequency, and a "Discret" Sample Type.

ADDED: Solids, total suspended, with a "Monthly Average" Base, an "M&R Milligrams per Liter (mg/L)" Concentration, a "Raw Sewage Influent" Monitoring Location, a "003" Sample Location, a "Monthly" Measurement Frequency, and a "Discret" Sample Type.

The following footnote was added:

ADDED - 1. Sampling for BOD, 5-day and total suspended solids (TSS) should be done concurrently when the effluent (Outfall 004) is sampled to determine exact percentages of removal achieved.

Under Outfall 004 (Rapid Infiltration Basin – Effluent) To Be Reported Monthly the following changes or additions, or removals were made:

CHANGED: Nitrogen, total, with a "Value" Base was changed to a "Daily Maximum" Base, the other limitations/requirements remained the same.

CHANGED: pH, Maximum, with a "Value" Base was changed to a "Daily Maximum" Base, the other limitations/requirements remained the same.

CHANGED: pH, Minimum, with a "Value" Base was changed to a "Daily Minimum" Base, the other limitations/requirements remained the same.

CHANGED: BOD, 5-day, with a "Value" Base was changed to a "Daily Maximum" Base, the other limitations/requirements remained the same.

CHANGED: Solids, total suspended, with a "Value" Base was changed to a "Daily Maximum" Base and the concentration was changed from a "90 Milligrams per liter (mg/L)" Concentration to "45 Milligrams per Liter

(mg/L)" Concentration, the remaining requirements remained the same.

ADDED: BOD, 5-day, with a "Monthly Average" base, a " ≤ 30 Milligrams per Liter (mg/L)" Concentration, a "Effluent Gross" Monitoring Location, a "004" Sample Location, a "Monthly" Measurement Frequency, and a "Discret" Sample Type.

ADDED: Nitrogen, total, with a "Daily Maximum" Base, a " ≤ 10 Milligrams per Liter (mg/L)" Concentration, a "Effluent Gross" Monitoring Location, a "004" Sample Location, a "Monthly" Measurement Frequency, and a "Discret" Sample Type.

ADDED: Solids, total suspended, with a "Monthly Average" Base, a " ≤ 30 Milligrams per Liter (mg/L)" Concentration, a "Effluent Gross" Monitoring Location, a "004" Sample Location, a "Monthly" Measurement Frequency, and a "Discret" Sample Type.

ADDED: BOD, 5-day, percent removal, with a "Monthly Average Minimum" Base, with a " ≥ 85 Percent (%)" Concentration, a "Effluent Gross" Monitoring Location, a "004" Sample Location, a "Monthly" Measurement Frequency, and a "Calculated" Sample Type.

ADDED: Solids, suspended percent removal, with a "Monthly Average Minimum" Base, with a " ≥ 85 Percent (%)" Concentration, a "Effluent Gross" Monitoring Location, a "004" Sample Location, a "Monthly" Measurement Frequency, and a "Calculated" Sample Type.

The following footnote was added:

ADDED - 3. Sampling for BOD, 5-day and total suspended solids (TSS) should be done concurrently when the influent (Outfall 003) is sampled to determine the exact percentages of removal achieved.

Under Outfall 004 (Effluent) Profile 1 Pollutants were added for a "Once during Permit Term" reporting requirement.

The following footnote was added:

ADDED: 1. Analysis shall be for the dissolved fraction.

Under Outfall 005 (MW-1) the following change was done:

CHANGED - Nitrogen, total, with a "Daily Maximum" Base, from a "10 Milligrams per Liter (mg/L)" Concentration TO a "M&R Milligrams per Liter (mg/L)" Concentration, the remaining discharge limitations/requirements remained the same.

Under Outfalls 005 (MW-1), 006 (MW-2), and 007 (MW-3) the following changes or additions were made:

ADDED: Water level relative to mean sea level, with a "Daily Maximum" base, an "M&R Feet (ft) Quantity, a "Groundwater" Monitoring Location, a "007" Sample Location, a "Quarterly" Monitoring Frequency, and a "Calculated" Sample Type.

The following footnotes were added:

ADDED - 1. Depth to groundwater.

ADDED - 2. Groundwater elevation above mean sea level (AMSL).

CHANGED: Chloride, with a "Value" Base was changed to a "Daily Maximum" Base, the other limitations/requirements remained the same.

CHANGED: Depth to water level below landsurface, with a "Value" Base was changed to a "Daily Minimum" Base and changed the Sample Type from "Discret" to "Visual", the other limitations/requirements remained the same.

CHANGED: Nitrogen, total, with a "Value" Base was changed to a "Daily Maximum" Base, the other

limitations/requirements remained the same.

CHANGED: Solids, total dissolved, with a "Value" Base was changed to a "Daily Maximum" Base, the other limitations/requirements remained the same.

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 40 CFR 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 the Facility's Design Criteria Review:

Permitted 30-day average influent flow rate is limited to ≤ 0.44 Mgal/d.

Permitted daily maximum influent flow rate is limited to ≤ 0.50 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 limits are not applicable to this permit.

Rationale for Permit Requirements

During the 2015 permit renewal, the requirement to monitor the Influent's parameters for BOD5 and TSS were removed, as this requirement was previously only applicable to facilities that required a National Pollutant Discharge Elimination System (NPDES) permit.

With the renewal of this permit, the requirement to monitor the Influent for BOD5 and TSS were re-established due to the State of Nevada having adopted federal TBELs, as promulgated by the U.S. EPA for POTWs. These re-established limits are based on secondary treatment standards as allowed by the 40

CFR Section 133.

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:

Monthly influent and effluent monitoring for BOD5 and TSS are included to assess the treatment performance of the HUWWTP. A monthly 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, monthly 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 groundwater monitoring requirement has been maintained to allow for continued assessment of potential contamination, understanding aquifer behavior, along with determining plant performance based on discharged treated effluent and associated interaction with the groundwater.

Anti-backsliding

None of the proposed permit limits were changed to a less restrictive limit compared to those in the previous permit, with the exception of the nitrogen concentration limit under Outfall 005 (MW-1). The limit was changed to a less restrictive limit (M&R Milligrams per Liter (mg/L)) compared to that in the previous permit, as the Permittee has no control over the nitrogen levels upgradient of the plant.

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

A new outfall was added during this permit renewal under Outfall 008. This outfall shall be for the reporting of flow rate going to the wetland system. There are no other planned discharges from future outfalls or facility changes.

Corrective Action Sites

There are no active Bureau of Corrective Actions (BCA) remediation sites within a one-mile radius of the plant (HUWWTP).

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 (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 engineer (P.E.).	10/7/2029

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly DMRs	Quarterly	4/28/2026
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. **12/8/2025**, 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:

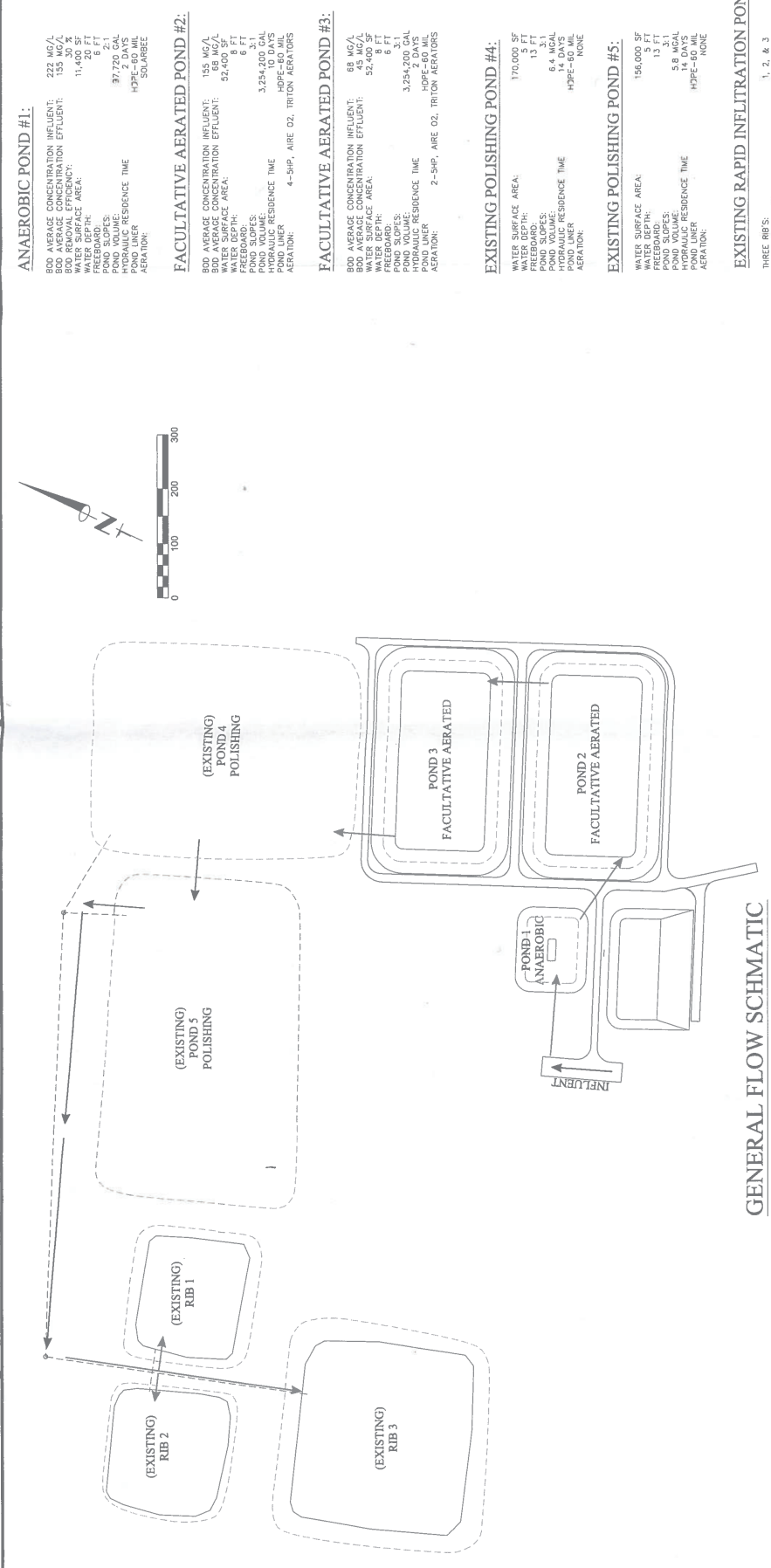
The Division has made the tentative determination to issue/re-issue the proposed 5-year permit.

Prepared by: **Melissa Hanson**

Date: **10/30/2025**

Title: **Staff II Engineer**

A B C D E F G H



GENERAL FLOW SCHEMATIC

GENERAL CHARACTERISTICS:

SITE ELEVATION - 4112
AIR TEMPERATURE:
WINTER AVERAGE - 5° C
SUMMER AVERAGE - 30° C
ESTIMATED POPULATION - 3,450

INFLUENT CHARACTERISTICS:

DESIGN FLOWS:
30 DAY AVERAGE
MAXIMUM DAY
PEAK HOUR (PF=3)
BOD AVERAGE
TSS
30 DAY AVERAGE
MAXIMUM DAY
PEAK HOUR (PF=3)
HEADWORKS:
GRIT CHAMBER LENGTH - 18 FT
FLOW METER - 3" PARSHALL FLUME
BAR SCREEN - 15mm BAR SPACING
PERMITTED FLOWS:
30 DAY AVERAGE
MAXIMUM DAY
TSS
BOD
PH

ANAEROBIC POND #1:

BOD AVERAGE CONCENTRATION INFLUENT: 222 MG/L
BOD AVERAGE CONCENTRATION EFFLUENT: 155 MG/L
WATER SURFACE AREA: 11,400 SF
WATER DEPTH: 20 FT
POND SLOPE: 2:1
POND VOLUME: 97,720 GAL
HYDRAULIC RESIDENCE TIME: HOPE-60 ML
POND LINER: HOPE-60 ML
AERATION: SOLARBEE

FACULTATIVE AERATED POND #2:

BOD AVERAGE CONCENTRATION INFLUENT: 155 MG/L
BOD AVERAGE CONCENTRATION EFFLUENT: 66 MG/L
WATER SURFACE AREA: 52,400 SF
WATER DEPTH: 6 FT
POND SLOPE: 2:1
POND VOLUME: 3,254,200 GAL
HYDRAULIC RESIDENCE TIME: HOPE-60 ML
POND LINER: HOPE-60 ML
AERATION: 4-SHP, AIRE O2, TRITON AERATORS

FACULTATIVE AERATED POND #3:

BOD AVERAGE CONCENTRATION INFLUENT: 95 MG/L
BOD AVERAGE CONCENTRATION EFFLUENT: 52,400 SF
WATER SURFACE AREA: 52,400 SF
WATER DEPTH: 6 FT
POND SLOPE: 2:1
POND VOLUME: 3,254,200 GAL
HYDRAULIC RESIDENCE TIME: HOPE-60 ML
POND LINER: HOPE-60 ML
AERATION: 2-SHP, AIRE O2, TRITON AERATORS

EXISTING POLISHING POND #4:

WATER SURFACE AREA: 170,000 SF
WATER DEPTH: 5 FT
POND SLOPE: 2:1
POND VOLUME: 6.4 MGAL
HYDRAULIC RESIDENCE TIME: 14 DAYS
POND LINER: HOPE-60 ML
AERATION: NONE

EXISTING POLISHING POND #5:

WATER SURFACE AREA: 156,000 SF
WATER DEPTH: 5 FT
POND SLOPE: 2:1
POND VOLUME: 5.8 MGAL
HYDRAULIC RESIDENCE TIME: 14 DAYS
POND LINER: HOPE-60 ML
AERATION: NONE

EXISTING RAPID INFILTRATION PONDS:

THREE RIBS:
TOTAL ACREAGE: 1.2, 4, 3
APPROXIMATE INFILTRATION RATE: 3.4 ACRES
APPROXIMATE WATER DEPTH: 6.5 IN/HR
2 FT