NEVADA DIVISION OF
ENVIRONMENTAL
PROTECTION

A division of the
Nevada Department of Conservation & Natural Resources

STATE OF NEVADA
Joe Lombardo, *Governor*
Vinson Guthreau, *Director*
Jennifer L. Carr, *Administrator*

901 S. Stewart Street, Suite 4001
Carson City, Nevada 89701
p: 775-687-4670 f: 775-687-5856
ndep.nv.gov

FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: LANDER COUNTY WATER AND SEWER DISTRICT - BATTLE MOUNTAIN

50 STATE ROUTE 305
BATTLE MOUNTAIN, NV 89820

Permit Number: NS2019504

Permit Type: GROUNDWATER DISCHARGE

Designation: GROUNDWATER

New/Existing: EXISTING

Location: BATTLE MOUNTAIN WASTEWATER TREATMENT FACILITY, LANDER
145 WEST THIRD STREET, BATTLE MOUNTAIN, NV 89820
LATITUDE: 40.6573, LONGITUDE: -116.9436
TOWNSHIP: 32N, RANGE: 45E, SECTION: 7

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Latitude	Longitude	Receiving Water
EFL	EFFLUENT TO WETLANDS	External Outfall		40.65978060	-116.943566	GROUNDWATER
INF	INFLUENT	Influent Structure		40.658024	-116.943180	GROUNDWATER
MW1	GROUNDWATER MONITORING WELL 1 UPGRADIENT	Monitoring Well		40.658590	-116.944906	MONITORING WELL - NO DISCHARGE
MW2	GROUNDWATER MONITORING WELL 2 DOWNGRADIENT	Monitoring Well		40.658588	-116.944116	MONITORING WELL - NO DICHARGE
MW3	GROUNDWATER MONITORING WELL 3 DOWNGRADIENT	Monitoring Well		40.659485	-116.943794	MONITORING WELL - NO DICHARGE

Permit History/Description of Proposed Action
The Permittee, Lander County Water and Sewer District – Battle Mountain, has applied for the renewal of Permit NS2019504 for the Battle Mountain Wastewater Treatment Facility (BMWTF), at 145 West Third Street, located in Battle Mountain, within Lander County, Nevada. The Permittee proposes to continue discharging reclaimed water to a constructed wetlands area located onsite.

This permit was first issued November 1, 2020, and expired on October 31, 2025; the permit has been administratively continued since.

Facility Overview
The BMWTF treats domestic sewage and discharges the effluent to groundwater of the State through a constructed wetlands, covered under this permit, NS2019504. Previously, the BMWTF was discharging treated effluent to the Reese River and was covered by (now terminated) permit NV0023167. Since the issuance of this permit, this facility has stopped discharging to the Reese River and have been discharging

only to the wetlands area during the past five years. The constructed wetlands area is situated over 1,500 feet from the nearest Water of the United States (the Reese River). This distance provides adequate separation to ensure the wetlands do not meet the criteria for classification as waters of the United States but do as waters of the State per Nevada Revised Statutes (NRS) 445A.415.

The BMWTF treats incoming wastewater through two 0.4 million gallons per Day (Mgal/d) capacity JetTech Sequential Batch Reactors (SBRs), a chlorine contact basin, and one aerobic digester. The SBRs incorporate biological oxygen demand (BOD) removal, bacteria or algae consumption of phosphorus (luxury uptake), and nitrogen biological oxygen demand (NBOD) reduction via nitrification and denitrification processes. The facility has three high-density polyethylene (HDPE), single-lined ponds for biosolids storage.

The BMWTF Sequencing Batch Reactors (SBRs), an intermittent-cycle extended aeration system, produce reclaimed water that meets Category D bacteriological quality in accordance with NAC 445A.2768 and is disinfected and denitrified prior to discharge to the 72-acre constructed wetlands.

The BMWTF's treatment system is made up of headworks, biological treatment, digester, sludge dewatering, sludge holding, effluent distribution, effluent storage, hypochlorite disinfection, and filtration.

Headworks: Raw sewage flows to the BMWTF via the Cashman and Silver State lift stations. The headworks are made up of an auger (rotary) screen and a diversion channel with a bar screen. Grit removal is not presently provided at the headworks with screenings being bagged and removed. An influent lift station at the headworks is used to batch fill SBRs 1 and 2.

Biological Treatment: There is a common pre-reaction tank to provide continuous inflow of screened sewage into the two reactors via submerged baffle inlets. The intermittent cycle extended aeration system (ICEAS) reactor supervisory control and data acquisition (SCADA) cycling includes aerobic/anoxic reaction, suspended solids settling, and final effluent decanting.

Disinfection: The BMWTF has a chlorine system made up of a storage tank for the sodium hypochlorite solution, metering pumps, chlorine contact basin, and associated valves and piping.

Digester: The common aerobic sludge digester treats the waste activated sludge (WAS) discharged from the two (2) SBRs (aerobic) and into 1 of the three lined sludge holding ponds (anaerobic). Typical aerobic digestion periods range from a few days for holding pond solids and up to three weeks for the SBR solids.

Sludge Holding: The three ponds are HDPE-lined and furnished with a movable (hand cranked), submersible sludge pump to return excess sludge into the aerobic digester for aerobic treatment (e.g., Volatile Suspended Solids reduction) prior to belt filter press dewatering.

Effluent Distribution: Treated effluent, being of Category D bacteriological quality, is discharged to a constructed wetlands area for percolation into the groundwater.

Monitoring Wells: There are three permitted monitoring well outfalls (MW-1, MW-2, and MW-3), with MW-1 being located upgradient, MW-2 being located downgradient, and MW-3 to be downgradient, pending completion, to allow for continued monitoring of the treatment capabilities of the plant and associated groundwater quality.

The Technical, Compliance, and Enforcement (TCE) Branch, of Water Pollution Control, requires a Reclaimed Water Management Plan (RWMP) be submitted for review and approval, based on their wetlands re-use of the reclaimed water. This RWMP shall be due within 90 days after the permit re-issuance date. See the Schedule of Compliance Table (SOC), under the Permit, for additional information.

Outfall Summary

Outfall INF - This internal outfall is for the measuring and monitoring of incoming influent entering the

BMWTF.

Outfall EFL – This external outfall is for measuring and monitoring the Category D bacteriological quality reclaimed water flowing into the constructed wetlands area.

Outfall MW-1 – This upgradient monitoring well outfall is for monitoring of groundwater conditions near the holding ponds.

Outfall MW-2 – This downgradient monitoring well outfall is for the monitoring of groundwater conditions near the holding ponds.

Outfall MW-3 – This proposed downgradient monitoring well outfall is to be drilled to monitor groundwater conditions near the constructed wetlands area.

Facility Upgrades since last issued permit
Since June 2020, the following projects were either completed, or are pending completion, as a part of the BMWTF sewer system. The Bonus, Echo Bay, and Silver State lift stations improvement project was completed in June 2020 along with construction of the White Knife lift station and associated force main being completed in March 2024. The Yellowbrick Road sewer main extension is currently under construction.

Solids Handling
After the solids go through the belt filter press, they are removed, and taken to a local landfill.

Effluent Management and Reuse
After treatment, the Category D bacteriological quality, per NAC 445A.2768, reclaimed water is discharged to the onsite, constructed wetlands area for percolation into the groundwater.

Design Flow (and basis) and Measurement & Current Capacity
The design flow is based on a average flow of 0.80 Mgal/d and a peak flow of 2.00 Mgal/d.

The reported long-term average flow rate for Outfall 001 (Influent) was 0.28 Mgal/d, while reported daily maximum influent flow rate for Outfall 001 was 0.36 Mgal/d. There were no reported exceedances to this limit.

Based on these rates, the BMWTF is estimated to be at approximately 45% capacity.

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 BMWTF's Operation and Maintenance (O&M) Manual was last reviewed and approved on June 7, 2021. The Technical, Compliance, and Enforcement Branch of the Bureau of Water Pollution Control requires O&M Manuals to be updated every ten (10) years, with an updated O&M Manual due on June 6, 2031.

Effluent Characterization
Nevada State Network Discharge Monitoring Report (NetDMR) data, as reported from January 2021 to December 2025, was reviewed as part of this permit renewal process. BMWTF discharges tertiary treated, denitrified, and disinfected wastewater to the constructed wetlands. The long-term average total flow rate for Outfall EFL was 0.30 Mgal/d. The daily maximum flow rate for Outfall EFL is limited to 2 Mgal/d. There were no reported exceedances for this limit. There were no reported overages of either the average flow rate or daily maximum.

The BMWTF provides tertiary treated, denitrified, and disinfected reclaimed water which meets Category D

bacteriological quality, per NAC 445A.2768, to the constructed wetlands; therefore, the reclaimed water should meet, at a minimum, a daily maximum fecal coliform of 200 colony forming units (CFU) / 100 mL and a 30-day geometric mean of 400 CFU / 100 mL. The long-term average for the daily maximum fecal coliform reported was 34 CFU / 100 mL, with no overages reported.

The following reported averages were taken from January 2021 to December 2025 reporting period:

Abbreviations:
BOD5 – Biochemical Oxygen Demand, 5-day
Depth – Depth to water level feet below land surface
N – Nitrogen
TDS – Total Dissolved Solids
TSS – Total Suspended Solids
Water Level - Water level relative to mean sea level
mg/L – Milligrams per Liter
S.U. – Standard Units

Outfall INF (Influent):
BOD5: 119.42 mg/L
Flow Rate: 0.36 Mgal/d
TSS: 76.34 mg/L

Outfall EFL (Effluent):
BOD5: 6.78 mg/L
Coliform, total general: 33.44 CFU/100mL
Freeboard: 9.84 Feet
Nitrogen: 3.54 mg/L
pH: 7.97 S.U.
TDS: 713.06 mg/L
TSS: 18.13 mg/L

Outfall 003 (upgradient Monitoring Well MW-1):
Chloride: 655 mg/L
Depth: 14.22 Feet
Nitrate as N: Non-detect
Nitrogen: 1.3 mg/L
pH: 8.02 S.U.
TDS: 2,239 mg/L
Water Level: 4,486 Feet

Outfall MW-2 (monitoring well downgradient of the holding ponds):
Chloride: 533 mg/L
Depth: 9.03 Feet
Nitrate as N: 0.36 mg/L
Nitrogen: 1.37 mg/L
pH: 1.37 S.U.
TDS: 1,966 mg/L
Water Level: 4,498 Feet

Outfall MW-3 (proposed monitoring well downgradient of the constructed wetlands area):
Not Constructed.

The average rate of removal for the BMWTF was BOD5 was 94% and 76% for TSS.

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 effluent and groundwater are:

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

Monitoring Wells: Chloride, Nitrogen, pH, and TDS.

Receiving Water
The receiving water is surface water via discharge to the constructed wetlands and groundwater of the State via percolation from said constructed wetlands. Water levels are approximately 5 feet below ground surface (bgs). Groundwater monitoring is required to ensure groundwater is protected. Groundwater is monitored in three monitoring wells, located near the constructed wetlands and holding ponds.

Compliance History
The BMWTF has been in compliance with the exception of a few exceedances of their permitted limits, during the past five years, with their quarterly reported numbers for the first quarter of 2026 still pending receipt by the Division.

Proposed Effluent Limitations
The proposed discharges shall be limited, monitored, and recorded as outlined in the following tables:

WWTP Discharge Limitations Table for Sample Location Efl (Effluent To Wetlands-External Outfall) 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[4]	<= 0.8 Million Gallons per Day (Mgal/d)		Effluent Gross	EFL	Continuous	METER
Flow rate	Daily Maximum	<= 2.0 Million Gallons per Day (Mgal/d)		Effluent Gross	EFL	Continuous	METER
Freeboard[2]	Minimum	>= 3 Feet (ft)		Internal Monitoring Point	EFL	Monthly	VISUAL
BOD, 5-day[3]	30 Day Average[4]		<= 30 Milligrams per Liter (mg/L)	Effluent Gross	EFL	Monthly	DISCRT
BOD, 5-day[3]	Daily Maximum		<= 45 Milligrams per Liter (mg/L)	Effluent Gross	EFL	Monthly	DISCRT
Coliform, fecal, colony forming units[1]	30 Day Geometric Mean[4]		<= 200 Colony Forming Units per 100ml T (CFU/100mL)[1]	Effluent Gross	EFL	Monthly	DISCRT
Coliform, fecal, colony forming units	Daily Maximum		<= 400 Colony Forming Units per 100ml T (CFU/100mL)[1]	Effluent Gross	EFL	Monthly	DISCRT
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Effluent Gross	EFL	Monthly	DISCRT
pH	Daily Maximum		<= 9 Standard Units (SU)	Effluent Gross	EFL	Monthly	DISCRT
pH	Daily Minimum		>= 6.5 Standard Units (SU)	Effluent Gross	EFL	Monthly	DISCRT
Solids, total suspended	30 Day Average[4]		<= 30 Milligrams per Liter (mg/L)	Effluent Gross	EFL	Monthly	DISCRT
Solids, total suspended	Daily Maximum		<= 45 Milligrams per Liter (mg/L)	Effluent Gross	EFL	Monthly	DISCRT
Solids, total dissolved	Daily Maximum		<= 1000 Milligrams per Liter (mg/L)	Effluent Gross	EFL	Monthly	DISCRT

WWTP Discharge Limitations Table for Sample Location Efl (Effluent To Wetlands-External Outfall) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
BOD, 5-day, percent removal	Monthly Average Minimum		>= 85 Percent (%)	Effluent Gross	EFL	Monthly	CALCTD
Solids, suspended percent removal	Monthly Average Minimum		>= 85 Percent (%)	Effluent Gross	EFL	Monthly	CALCTD

Notes (WWTP Discharge Limitations Table):

1. NAC 445A.276 requirement for reuse Category D.
2. A freeboard of 3 feet, along with visual inspection of the pond condition, shall be maintained on a monthly base.
3. Sampling must be conducted concurrently when the influent is sampled (Outfall INF) to determine the actual removal rates achieved for Biochemical Oxygen Demand, 5-day (BOD5) and Total Suspended Solids (TSS).
4. To be calculated.

WWTP Discharge Limitations Table for Sample Location Efl (Effluent To Wetlands-External Outfall) 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)	Effluent Gross	EFL	Quarterly	DISCRT
Nitrogen, ammonia total (as N)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Quarterly	DISCRT
Nitrogen, nitrate total (as N)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Quarterly	DISCRT
Phosphorus, total (as P)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Quarterly	DISCRT
Sulfate (as S)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Quarterly	DISCRT

WWTP Discharge Limitations Table for Sample Location Efl (Effluent To Wetlands-External Outfall) 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	EFL	Once Per Permit Term	DISCRT
Alkalinity, total (as CaCO3)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Aluminum, dissolved (as Al)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Antimony, dissolved (as Sb)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Arsenic, dissolved (as As)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Barium, dissolved (as Ba)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Beryllium, dissolved (as Be)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Cadmium, dissolved (as Cd)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Calcium, dissolved (as Ca)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Chromium, dissolved (as Cr)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
			M&R				

WWTP Discharge Limitations Table for Sample Location Efl (Effluent To Wetlands-External Outfall) 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	EFL	Once Per Permit Term	DISCRT
Fluoride, total (as F)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Iron, dissolved (as Fe)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Lead, dissolved (as Pb)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Magnesium, dissolved (as Mg)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Manganese, dissolved (as Mn)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Mercury, dissolved (as Hg)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Nitrite plus nitrate total 1 det. (as N)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Potassium, dissolved (as K)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Selenium, dissolved [as Se]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Silver, dissolved (as Ag)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
			M&R				

WWTP Discharge Limitations Table for Sample Location Efl (Effluent To Wetlands-External Outfall) 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, dissolved (as Na)	Daily Maximum		Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Thallium, dissolved (as Tl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Uranium, natural, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Cyanide, weak acid, dissociable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT
Zinc, dissolved (as Zn)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	EFL	Once Per Permit Term	DISCRT

WWTP Discharge Limitations Table for Sample Location Inf (Influent-Internal Outfall) 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[2]	<= 0.8 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	INF	Continuous	METER
Flow rate	Daily Maximum	<= 2.0 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	INF	Continuous	METER
BOD, 5-day[1]	30 Day Average[2]		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	INF	Monthly	DISCRT
BOD, 5-day	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	INF	Monthly	DISCRT
Solids, total suspended	30 Day Average[2]		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	INF	Monthly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	INF	Monthly	DISCRT

Notes (WWTP Discharge Limitations Table):

1. Sampling must be conducted concurrently when the effluent is sampled (Outfall EFL) to determine the actual removal rates achieved for Biochemical Oxygen Demand, 5-day (BOD5) and Total Suspended Solids (TSS).
2. To be calculated.

Groundwater Monitoring Wells Table for Sample Location Mw1 (Groundwater Monitoring Well 1 Upgradient) To Be Reported Quarterly

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

Notes (Groundwater Monitoring Wells Table):

1. Depth to groundwater level will be measured at the site.
2. Groundwater Elevation (AMSL).

Groundwater Monitoring Wells Table for Sample Location Mw2 (Groundwater Monitoring Well 2 Downgradient) To Be Reported Quarterly

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

Notes (Groundwater Monitoring Wells Table):

1. Depth to groundwater level will be measured at the site.
2. Groundwater Elevation (AMSL).

Groundwater Monitoring Wells Table for Sample Location Mw3 (Groundwater Monitoring Well 3 Downgradient) To Be Reported Quarterly

	Discharge Limitations			Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW3	Quarterly	DISCRT
Depth to water level ft below landsurface[1]	Daily Maximum	M&R Feet (ft)		Groundwater	MW3	Quarterly	VISUAL
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	MW3	Quarterly	DISCRT
pH	Value		M&R Standard Units (SU)	Groundwater	MW3	Quarterly	DISCRT
Water level relative to mean sea level[2]	Daily Maximum	M&R Feet (ft)		Groundwater	MW3	Quarterly	CALCTD
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW3	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Depth to groundwater level will be measured at the site.
2. Groundwater Elevation (AMSL).

Summary of Changes From Previous Permit
Under Outfall INF, To Be Reported Monthly, the following parameters were added:

ADDED – BOD, 5-day, with a “Daily Maximum” Base, a “M&R Milligrams per Liter” Concentration, a “Raw Sewage Influent” Monitoring Location, a “INF” Sample Location, a “Monthly” Measurement Frequency, and a “Discrt” Sample Type.

ADDED – Solids, total suspended, with a “Daily Maximum” Base, a “M&R Milligrams per Liter” Concentration, a “Raw Sewage Influent” Monitoring Location, a “INF” Sample Location, a “Monthly” Measurement Frequency, and a “Discrt” Sample Type.

ADDED – Footnote 1.
1. Sampling should be conducted concurrently when the effluent is sampled (Outfall EFL) to determine the actual removal rates achieved for Biochemical Oxygen Demand, 5-day (BOD5) and Total Suspended Solids (TSS).

Under Outfall EFL, To Be Reported Monthly, the following parameters were added:

ADDED: BOD, 5-day, percent removal, with a “Monthly Average Minimum” Base, an “>=85 Percent (%)” Concentration, an “Effluent Gross’ Monitoring Location, a “EFL” Sample Location, a “Monthly” Measurement Frequency, and “Calctd” Sample Type.

ADDED: Solids, suspended percent removal, with a “Monthly Average Minimum” Base, an “>=85 Percent (%)” Concentration, an “Effluent Gross" Monitoring Location, a “EFL” Sample Location, a “Monthly” Measurement Frequency, and “Calctd” Sample Type.

ADDED – Footnote 3.

3. Sampling should be conducted concurrently when the influent is sampled (Outfall INF) to determine the actual removal rates achieved for Biochemical Oxygen Demand, 5-day (BOD5) and Total Suspended Solids (TSS).

Under Outfall EFL, To Be Reported Quarterly, the following parameters were added:

ADDED – Oxygen, dissolved, with a “Daily Maximum” Base, a “M&R Milligrams per Liter” Concentration, a “Effluent Gross” Monitoring Location, a “EFL” Sample Location, a “Quarterly” Measurement Frequency, and a “Discrt” Sample Type.

ADDED – Sulfate (as S), with a “Daily Maximum” Base, a “M&R Milligrams per Liter” Concentration, a “Effluent Gross” Monitoring Location, a “EFL” Sample Location, a “Quarterly” Measurement Frequency, and a “Discrt” Sample Type.

ADDED – Outfall EFL, To Be Reported Once During the Permit Term, along with the following parameters:

ADDED – Profile 1 analytes, with a “Daily Maximum” Base, an “M&R Milligrams per Liter” Concentration, a “Effluent Gross” Monitoring Location, a “EFL” Sample Location, “Once Per Permit Term” Measurement Frequency, and a “Discrt” Sample Type.

Under Monitoring Well Outfall MW-1, MW-2, and MW-3, To Be Reported Quarterly, the following changes or deletions were made:

DELETED – Nitrogen, nitrate total (as N), with a “Value” Base. Refer to Anti-backsliding Section for additional information.

CHANGED – Footnote 1 and Footnote 2.
Due to alphabetizing of parameters, footnotes were switched to updated order. Footnote 1 is now Footnote 2 and Footnote 2 is now Footnote 1.

Under SOC – Schedule of Compliance Table the following deletions and addition were made:

DELETED - Item 1. O&M Manual submittal requirement.

DELETED - Item 2. All DMRs shall be submitted electronically.

DELETED – Item 3. The Permittee shall submit a Monitoring Well for MW3.

ADDED - (Now) Item 1. The Permittee shall submit two (2) copies (one hard copy and one electronic copy) of a Reclaimed Water Management Plan (RWMP) to the Division for review and approval. The RWMP shall follow the Division’s guidance document WTS-1B: General Design Criteria for Preparing a Reclaimed Water Management Plan and be prepared and wet stamped by a licensed, qualified Nevada professional engineer (P.E.).

Under the SA – Special Approvals / Conditions Table the following deletions were done:

DELETED – Item 2. The Permittee must submit a request to add an outfall. This has been completed and reporting done during the past five years.

DELETED – Item 3. The Permittee shall submit a Monitoring Well Program for MW-3. This was received.

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

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

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

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

pH: Daily Maximum: <= 9.0 Standard Units

pH: Daily Minimum >= 6.0 Standard Units

Limits Based on Secondary Treatment Standards:

BOD5 Percent removal: >= 85 percent.

TSS: Percent removal: >= 85 percent.

Limits Based on Facility's Design Criteria Review:

30-day average flow rate for influent is limited to: <=0.80 Mgal/d.

Peak flow rate, as applied as the daily maximum flow rate, for influent is limited to: <=2.00 Mgal/d.

Water Quality Based Effluent Limitations
Standards applicable to all surface waters, as prescribed under NAC 445A.121, apply to the constructed wetlands.

Proposed Water Quality Based Effluent Limits (monthly/weekly/daily)
Water quality based effluent limits are not applicable to this permit.

Basis for Effluent Limitations
There are currently no specific water quality standards that have been formally adopted by the State for groundwater. However, the Division has the discretion to implement effluent limitations outside water quality standards per NAC 445A.243, which states, “In establishing an effluent limitation to carry out the policy of this State set forth in 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 BMWTF. 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 6.5 S.U. as a daily minimum and 9.0 S.U. as a daily maximum.

Fecal coliform is required to be monitored, pursuant to NAC 445A.276, to assess the quality of reclaimed water being discharged to the wetlands for the protection of human health and the environment.

Sulfate is required to be monitored to protect human health and prevent environmental degradation.

Anti-backsliding
None of the proposed permit limits were changed to a less restrictive limit compared to those in the previous permit, apart from the removal of the requirement to sample and report the following parameters - Total Nitrate (as N) from each of the monitoring wells. The Total Nitrogen (as N) parameter encompasses all forms of Nitrogen, including Inorganic, Ammonia, Nitrite, and Nitrate. Thus, no backsliding will be caused with these removals and allows this permit to adhere to the current Division reporting requirements.

Antidegradation
For the surface water portion of this permit, 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. This objective is achieved through the implementation of procedures to ensure that water is protected from regulated activities that have the potential to degrade the water quality. The regulation uses four (4) tiers of antidegradation protection. Tier 1 protects water quality for beneficial uses of the water on a parameter-by-parameter basis. Tier 2 protects high-quality waters where data show the water quality is better than levels needed to protect beneficial uses (on a parameter-by-parameter basis). Tier 2.5 and Tier 3 protect water quality and the special characteristics of waterbodies designated with the beneficial uses of “extraordinary, ecological, aesthetic or recreational value” (NAC 445A.122). The Division will conduct an antidegradation review only when a permit application is submitted for a new or expanding point source discharge to a surface water or for a new or altered zone of mixing. The constructed wetlands is considered a Tier 1 water quality with the beneficial uses of the water being based on a parameter-by-parameter basis.

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

limits of the proposed permit.

Special Conditions
See the Special Approvals / Conditions Table below:

SA – Special Approvals / Conditions Table

Item #	Description
1	Reclaimed water that meets bacteriological quality requirements of a 30-day geometric mean of 200 c.f.u. or mpn / 100 mL and a daily maximum of 400 c.f.u. or mpn 100 / mL is approved for use in an impoundment as long as public access to the impoundment is prohibited, all human activities involving contact with the reclaimed water are prohibited, and human contact with the reclaimed water does not occur, as set forth under Nevada Administrative Code (NAC) 445A.2768(g).

Discharges From Future Outfalls/ Planned Facility Changes
There are no planned future outfalls or facility changes for this facility.

Corrective Action Sites
There is one active Bureau of Corrective Actions (BCA) site within a one-mile radius of the BMWTF with an active gasoline spill (5-000009) undergoing remediation. BCA staff does not expect that the wastewater treatment activity, and associated discharge, will have any adverse effects on their site cleanup activities.

Wellhead Protection Program
The outfalls are not located within a Wellhead Protection Area, which represents an approximate l00-year capture zone of a well, or within a Drinking Water Protection Area, which is defined by a 3,000-foot radius around a public water system (PWS) well.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee shall submit two (2) copies (one hard copy and one electronic copy) of a Reclaimed Water Management Plan (RWMP) to the Division for review and approval. The RWMP shall follow the Division's guidance document WTS-1B: General Design Criteria for Preparing a Reclaimed Water Management Plan and be prepared and wet stamped by a licensed Nevada professional engineer (P.E.).	1/1/2027

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	QUARTERLY DMRs	Quarterly	1/28/2027
2	ONCE DURING THE PERMIT TERM DMRs	Once during the permit term	7/28/2031

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. **7/27/2026,** 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: **6/17/2026**
Title: **Staff II Engineer**

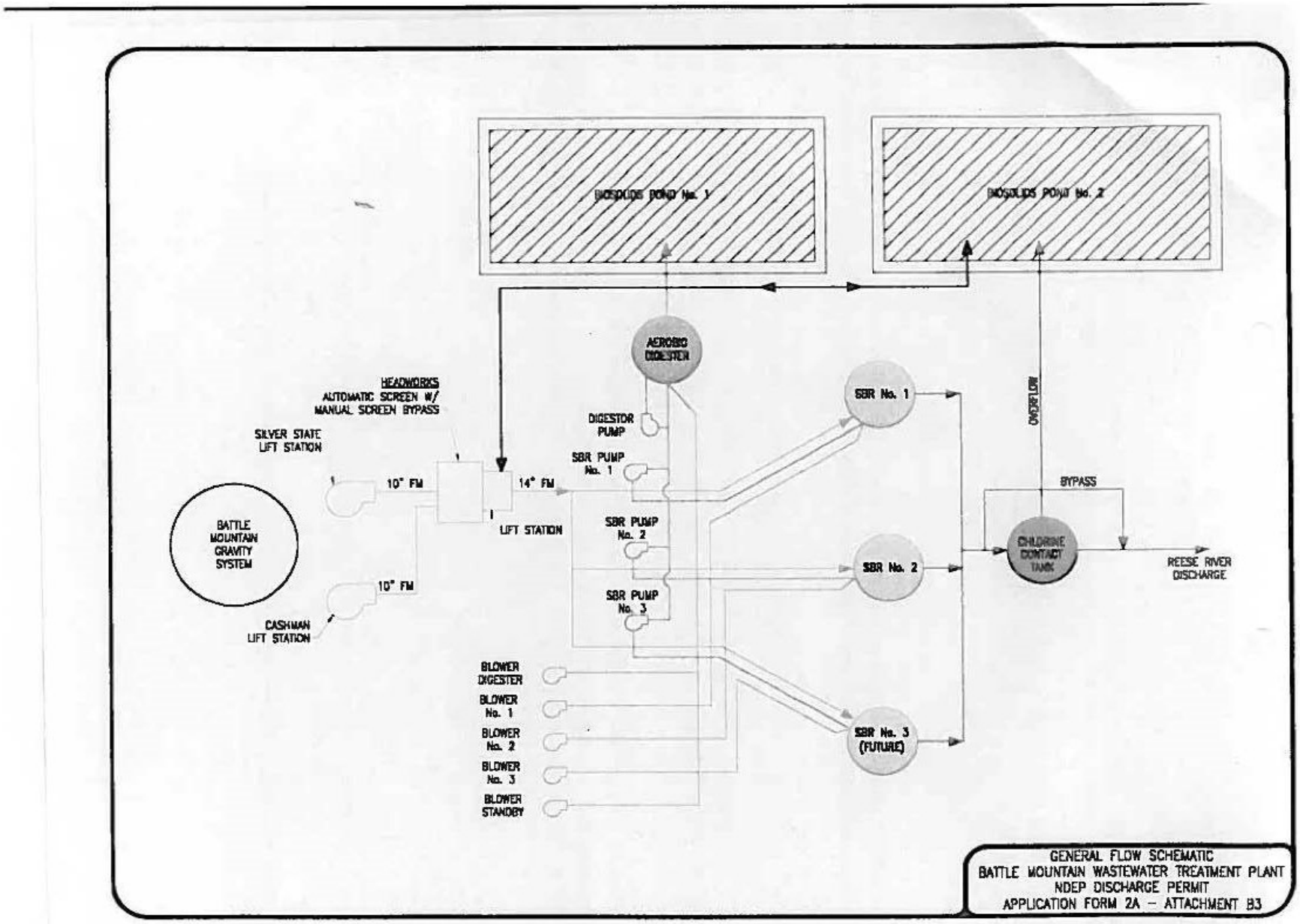

Fig. 3 – Flow Diagram