



STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor

Leo M. Drozdoff, P.E., Director

Colleen Cripps, Ph.D., Administrator

FACTSHEET (pursuant to NAC 445A.236)

Permittee Name: HAWTHORNE PUBLIC UTILITIES
PO BOX 1448
HAWTHORNE, NV - 894151448

Permit Number: NS0020009

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	Outfall City	Outfall State	Outfall Zip	Outfall County	Latitude	Longitude	Receiving Water
001	INFLUENT FLOW TO FLUME	Internal Outfall		HAWTHORNE	NV	89415	MINERAL	38.567222	-118.638611	GROUNDWATER
002	SEPTAGE DUMP STATION	Internal Outfall		HAWTHORNE	NV	89415	MINERAL	38.567222	-118.638611	GROUNDWATER
003	TOTAL INFLUENT	Sum		HAWTHORNE	NV	89415	MINERAL	38.567222	-118.638611	GROUNDWATER
004	RAPID INFILTRATION BASINS	External Outfall		HAWTHORNE	NV	89415	MINERAL	38.567222	-118.638611	GROUNDWATER
005	MONITORING WELL #1	Monitoring Well		HAWTHORNE	NV	89415	MINERAL	38.566139	-118.635361	GROUNDWATER
006	MONITORING WELL #2	Monitoring Well		HAWTHORNE	NV	89415	MINERAL	38.567694	-118.640333	GROUNDWATER
007	MONITORING WELL #3	Monitoring Well		HAWTHORNE	NV	89415	MINERAL	38.566389	-118.643611	GROUNDWATER

General:

Hawthorne Utilities manages and operates the Hawthorne Utilities Wastewater Treatment Plant (HUWWTP) that is located approximately 2.5 miles north-northwest of the City of Hawthorne, on the Hawthorne Army Ammunition Depot, in Mineral County, Nevada. The HUWWTP treats a daily maximum of 0.50 million gallons per day (MGD) of wastewater generated by the City of Hawthorne and the Hawthorne Army Depot. The wastewater collection system consists of a ten-inch diameter, three-mile long interceptor line from Hawthorne to the HUWWTP and a sewer line from the Hawthorne Army depot to the HUWWTP. The original treatment system consisted of a collection system, headworks, two clay-lined aerated primary ponds and three rapid infiltration basins (RIBs). In 2011, the facility was upgraded with a new headworks area, an Anaerobic Integrated Pond System (AIPS), the lining of ponds 1-3, and the installation of monitoring wells #1-3. The HUWWTP provides secondary treatment of wastewater with an anaerobic pond, two aeration ponds, two evaporation ponds, and three RIBs that may be operated in parallel or series.

Discharge Characteristics:

The facility discharges secondary treated effluent to groundwaters of the State.

The following average discharge concentrations were reported for 2013:

30-day average influent flow (Flume): 0.255 MGD

Daily maximum influent flow (Flume): 0.371 MGD

Influent BOD₅ (Distribution Structure): 236 mg/L
 Influent TSS (Distribution Structure): 288 mg/L
 Effluent BOD₅ (RIB Diversion Vault): 19.3 mg/L
 Effluent TSS (RIB Diversion Vault): 38.5 mg/L
 30-day average effluent DO (RIB Diversion Vault): 2.8 mg/L
 Daily maximum effluent DO (RIB Diversion Vault): 5.0 mg/L
 30-day average effluent pH (RIB Diversion Vault): 7.6 S.U.
 Daily maximum effluent pH (RIB Diversion Vault): 7.9 S.U.
 30-day average influent flow (Dump Station): 0.018 MGD
 Daily maximum influent flow (Dump Station): 0.028 MGD

Receiving Water:

The secondary-treated wastewater is currently discharged to an anaerobic pond, two aeration ponds, and three RIBs. In the future, two wetland ponds will be included in the treatment process before the discharge to the RIBs. The receiving water is groundwaters of the State of Nevada. Groundwater in the vicinity of the HUWWTP is reported to be approximately 58 feet below the ground surface.

Summary of Changes From Previous Permit:

Due to the new naming conventions at NDEP, Bureau of Water Pollution Control, the permit ID number has been changed from NEV20009 to NS0020009. This change does not reflect a change in the type of permit being issued. NEV and NS permits are for groundwater discharges to the State of Nevada. These are not to be confused with "NV" permits which are reserved for NPDES permitting.

In 2011, the facility was upgraded with a new headworks area, an Anaerobic Integrated Pond System (AIPS) and the installation of monitoring wells #1-3. The HUWWTP now provides secondary treatment of wastewater with an anaerobic pond, two aeration ponds, two evaporation ponds (future wetlands ponds), and three RIBs that may be operated in parallel or series. A windmill for aeration is expected to be added to the anaerobic pond, pond 1, in the second half of 2014 to decrease odors at the facility.

Since the treatment system has been upgraded, many of the Outfall IDs have been reassigned. Outfall 002, the Influent Distribution Structure, has been removed from the permit. Outfall 004, representing the upstream discharge point for the Army's septage and portable toilet waste pumping contractor, has been officially added to the monitoring requirements for this permit as the new Outfall 002. Outfall 003, discharge end of the primary ponds prior to discharge to the RIBs, is now assigned as Outfall 004. The new Outfall 003 is represented as the sum of the total influent. Outfall 004 will now be located after the wetlands ponds 4 and 5 and before the discharge enters the RIBs (ponds 6-8). The two evaporation ponds, ponds 4 and 5, are currently not receiving treated effluent and are in the process of drying out. Once the ponds are dry they will be turned into wetland ponds for additional wastewater treatment.

The addition of the three new monitoring wells (#1-3) now requires quarterly sampling for the depth to water below land surface, total nitrogen, chloride, and total dissolved solids.

To match the design treatment capacity for the facility, the 30-day average influent flow has been decreased from 0.65 MGD to 0.44 MGD, and the daily maximum influent flow has been decreased from 0.70 MGD to 0.50 MGD.

The requirement to monitor the influent 5-day biochemical oxygen demand (BOD₅) and total suspended solids (TSS) has been removed from this permit, as this requirement is applicable to facilities that require a National Pollutant Discharge Elimination System (NPDES) permit.

The requirement to report the pH weekly has been decreased to monthly to coincide with the TSS and BOD₅ sampling requirements. The requirement to report the staff gauge reading and the dissolved oxygen (DO) for the discharge end of the primary ponds has been removed from this permit.

Proposed Effluent Limitations:

The Division proposes the following permit limitations and monitoring requirements.

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

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)		Raw Sewage Influent	001	Continuous	METER
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Raw Sewage Influent	001	Continuous	METER

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

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)		Raw Sewage Influent	002	Daily	CALCTD
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Raw Sewage Influent	002	Daily	CALCTD

WWTP Discharge Limitations Table for Sample Location 003 (Sum) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	Daily Maximum	<= 0.50 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	003	Continuous	CALCTD
Flow rate	30 Day Average	<= 0.44 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	003	Continuous	CALCTD

Groundwater Monitoring Wells Table for Sample Location 005 (Monitoring Well #1) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Depth to water level ft below landsurface	Value	M&R Feet (ft)		Groundwater	005	Quarterly	VISUAL
Nitrogen, total	Value		<= 10 Milligrams per Liter (mg/L)	Groundwater	005	Quarterly	DISCRT
Solids, total dissolved	Value		M&R Milligrams per Liter (mg/L)	Groundwater	005	Quarterly	DISCRT
Chloride (as Cl)	Value		M&R Milligrams per Liter (mg/L)	Groundwater	005	Quarterly	DISCRT

Groundwater Monitoring Wells Table for Sample Location 006 (Monitoring Well #2) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Depth to water level ft below landsurface	Value	M&R Feet (ft)		Groundwater	006	Quarterly	VISUAL
Chloride (as Cl)	Value		M&R Milligrams per Liter (mg/L)	Groundwater	006	Quarterly	DISCRT
Nitrogen, total	Value		<= 10 Milligrams per Liter (mg/L)	Groundwater	006	Quarterly	DISCRT
Solids, total dissolved	Value		M&R Milligrams per Liter (mg/L)	Groundwater	006	Quarterly	DISCRT

Groundwater Monitoring Wells Table for Sample Location 007 (Monitoring Well #3) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Depth to water level ft below landsurface	Value	M&R Feet (ft)		Groundwater	007	Quarterly	VISUAL
Nitrogen, total	Value		<= 10 Milligrams per Liter (mg/L)	Groundwater	007	Quarterly	DISCRT
Solids, total dissolved	Value		M&R Milligrams per Liter (mg/L)	Groundwater	007	Quarterly	DISCRT
Chloride (as Cl)	Value		M&R Milligrams per Liter (mg/L)	Groundwater	007	Quarterly	DISCRT

Ponds / Rapid Infiltration Basins for Sample Location 004 (External Outfall) To Be Reported Monthly^[1]

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
pH, minimum	Minimum Value		>= 6.0 Standard Units (SU)	Effluent Gross	004	Monthly	DISCRT
Solids, total dissolved	Value		<= 90 Milligrams per Liter (mg/L)	Effluent Gross	004	Monthly	DISCRT
pH, maximum	Maximum Value		<= 9.0 Standard Units (SU)	Effluent Gross	004	Monthly	DISCRT
BOD, 5-day	Value		<= 45 Milligrams per Liter (mg/L)	Effluent Gross	004	Monthly	DISCRT

Notes (Ponds / Rapid Infiltration Basins):

1. Indicate on the Quarterly DMR whether each sample was taken from the diversion vault to the RIB or the RIB itself.

Rationale for Permit Requirements:

Influent Flow: Influent flow to the treatment system from the Hawthorne Army Depot and the City of Hawthorne is continuously monitored via flow meters, while the discharge point for the Army's septage and portable toilet waste is monitored per each dumping event. This monitoring ensures that the design capacity of the treatment facility is not exceeded.

Effluent BOD₅: This parameter is monitored to ensure that the Permittee meets the Division's secondary-treatment daily maximum standard of 45 mg/L.

Effluent Total Suspended Solids (TSS): This parameter is monitored to ensure that the Permittee meets the Division's secondary-treatment daily maximum standard of 90 mg/L.

Effluent pH: This parameter is monitored to ensure that the Permittee meets the Division's secondary-treatment 30-day average and daily maximum standards of between 6.0 and 9.0 standard units (S.U.).

Groundwater Monitoring: Quarterly groundwater monitoring for depth to groundwater, total dissolved solids, chlorides, and total nitrogen is required to ensure that the groundwater of the State is not impacted by the percolation of treated effluent.

Special Conditions:

See Special Approvals/Conditions Table.

SA – Special Approvals / Conditions Table

Item #	Description
1	The Permittee shall notify the Division within 60 days of the two evaporation ponds (ponds 4 and 5) being turned into wetland ponds and becoming part of the treatment process.

Flow:

Influent flow to the treatment facility is limited to a 30-day average and daily maximum of 0.44 MGD and 0.50 MGD respectively.

Corrective Action Sites:

There are no Bureau of Corrective Actions (BCA) remediation sites located within one (1) mile of this facility.

Wellhead Protection Program:

This facility is not located within a drinking water protection area, nor is it located within a wellhead protection area.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	Within 60 days of permit issuance the Permittee shall submit, for Division review, two (2) copies of an Operations and Maintenance (O&M) Manual signed by a Nevada Professional Engineer or Division-approved qualified person. If there have been no changes to the existing O&M Manual, the Permittee shall submit a letter stating so.	5/30/2015
2	The Permittee shall ensure that the HUWWTP facility has a reliable power source. The installation of a backup power source at the facility shall be completed within 120 days of permit issuance.	7/29/2015

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly DMRs	Quarterly	7/28/2015
2	Annual Report	Annually	1/28/2016

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 sent to the **Mineral County Independent News, Reno Gazette Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing until 5:00 P.M. **2/9/2015**, 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 to 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: **Briana Johnson**

Date: **12/29/2014**

Title: **Environmental Scientist**