

Brian Sandoval, Governor Leo M. Drozdoff, P.E., Director David Emme, Administrator

FACTSHEET (pursuant to NAC 445A.236)

Permittee Name: LYON COUNTY UTILITIES DEPARTMENT PO BOX 1699 DAYTON, NV - 89403

Permit Number: NS0099012

Location: SILVER SPRINGS WATER RECLAMATION FACILITY, LYON 1900 EUREKA STREET, SILVER SPRINGS, NV - 89429 LATITUDE: 39.415155, LONGITUDE: -119.213095 TOWNSHIP: 18N, RANGE: 25E, SECTION: 19

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	Influent Structure		SILVER SPRINGS	NV	89429	LYON	39.4142	-119.212470	GROUNDWATER
002	CHLORINE CONTACT CHAMBER	Internal Outfall		SILVER SPRINGS	NV	89429	LYON	39.414475	-119.212605	GROUNDWATER
003	EFFLUENT STORAGE POND	External Outfall		SILVER SPRINGS	NV	89429	LYON	39.415299	-119.213566	GROUNDWATER
004	IRRIGATION	External Outfall		SILVER SPRINGS	NV	89429	LYON	39.40	-119.25	GROUNDWATER
005	DUST CONTROL	External Outfall		SILVER SPRINGS	NV	89429	LYON	39.415155	-119.213095	GROUNDWATER
MW1	MW-1	Monitoring Well		SILVER SPRINGS	NV	89429	LYON	39.415095	-119.214255	GROUNDWATER
MW2	MW-2	Monitoring Well		SILVER SPRINGS	NV	89429	LYON	39.415382	-119.212289	GROUNDWATER

General:

The Lyon County Utilities Department operates the Silver Springs Water Reclamation Facility (SSWRF) in Lyon County, Nevada. The SSWRF is designed to treat up to 0.600 million gallons per day (MGD) of domestic wastewater from residential and commercial sources in the Silver Springs General Improvement District service area. Wastewater at the SSWRF is treated using biological nutrient removal in an extended aeration basin, filtration, and chlorination. Reclaimed water is tertiary-treated, denitrified, disinfected, and meets reuse category B in accordance with NAC 445A.276.

Influent wastewater is directed to the SSWRF headworks area where it is screened to remove grit and large particles. Following the headworks, the wastewater is routed to an extended aeration basin where it is treated by a Biolac activated sludge process. Sludge removed from the aeration basin is discharged into the sludge lagoons or recycled back into the head of the aeration basin to maintain a given solids level. Following biological nutrient removal in the aeration basin, wastewater flows into a clarifier for the removal of suspended solids by gravity separation. The wastewater then goes through a sand filter, is disinfected in the chlorine contact chamber, and is discharged into a high-density polyethylene-lined effluent storage pond. Filter backwash water is directed to the sludge lagoons and the treated effluent from the storage pond is reused, as needed, by Dayton Valley Turf for irrigation of landscape and agricultural fields at the Silver Springs Airport (NS0099017). The SSWRF is also permitted to use treated effluent from the storage pond for onsite dust control.

This permit renewal allows for continued SSWRF operation and reuse irrigation and dust control.

Discharge Characteristics:

The SSWRF discharge consists of tertiary-treated, denitrified, disinfected reclaimed water that meets Category B quality in accordance with NAC 445A.276. Average effluent characteristics from the third quarter of 2010 through the second quarter of 2015 are listed below.

Fecal Coliform: 2.9 CFU/100mL Biochemical Oxygen Demand: 6 mg/L Total Suspended Solids: 7 mg/L Total Nitrogen: 4.0 mg/L pH: 7.57 standard units

Receiving Water:

The receiving water is groundwater of the State. Groundwater in the area reportedly flows to the southwest. Average values for groundwater monitoring results from upgradient well MW-1 and downgradient well MW-2 from the third quarter of 2010 through the second quarter of 2015 are listed below.

MW-1 Depth: 26 feet Total Dissolved Solids (TDS): 7400 mg/L Nitrate: 54 mg/L Chloride: 2311 mg/L

MW-2 Depth: 26 feet TDS: 13632 mg/L Nitrate: 66 mg/L Chloride: 6179 mg/L

The historically elevated levels of nitrate in the groundwater are attributed to the use of individual septic disposal systems in the area. The Permittee is considered to be in substantial compliance with the permit.

Summary of Changes From Previous Permit:

The 30-day average irrigation flow rate limit of 0.449 MGD has been changed to 0.499 MGD. The new limit is based on the flow limit requested in the permit renewal application.

The daily maximum irrigation flow rate limit of 0.600 MGD has been removed; monitoring and reporting of the daily maximum flow rate is required.

The measurement and reporting frequency for total nitrogen has been changed from annually to monthly.

A daily maximum limit of 10 mg/L of total nitrogen has been added.

The 30-day average limit of 10 mg/L of total nitrogen has been removed; monitoring and reporting of the 30-day average concentration of total nitrogen is required.

Item #1 has been added to the special approvals / conditions table due to the historically elevated levels of total nitrogen in the groundwater, which are attributed to the use of individual septic disposal systems in the area.

The following changes have been made to the groundwater monitoring requirements:

- The requirement to monitor and report the depth to groundwater has been added.
- The requirement to monitor and report the groundwater elevation has been removed.
- The requirement to monitor and report total nitrogen has been added.

• The nitrate limit of 10 mg/L has been removed; monitoring and reporting of nitrate is not required because nitrate is a component of total nitrogen, which will be monitored and reported quarterly.

Due to the new naming conventions at the Nevada Division of Environmental Protection (NDEP), Bureau of Water Pollution Control, the permit number has been changed from NEV99012 to NS0099012. This change does not reflect a change in the type of permit being issued.

Proposed Effluent Limitations:

The discharge shall be limited and monitored by the Permittee as specified below:

		Discharge Lim	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 ^[1]	001	Continuous	METER
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Raw Sewage Influent ^[1]	001	Continuous	METER
BOD, 5-day	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent ^[2]	001	Monthly	DISCRT
BOD, 5-day	30 Day Average		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent ^[2]	001	Monthly	DISCRT
Solids, total suspended	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent ^[2]	001	Monthly	DISCRT
Solids, total suspended	30 Day Average		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent ^[2]	001	Monthly	DISCRT

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

Notes (WWTP Discharge Limitations Table):

1. In the meter vault

2. Prior to the grit chamber

WWTP Discharge Limitations Table for Sample Location 002 (Chlorine Contact Chamber) To Be Reported Monthly

		Discharge Li	mitations		Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type	
Coliform, fecal, colony forming units	Daily Maximum		<= 23 Colony Forming Units per 100ml T (CFU/100mL)	End of Chlorine Contact Chamber	002	Monthly	DISCRT	
Coliform, fecal, colony forming units	30 Day Average		<= 2.2 Colony Forming Units per 100ml T (CFU/100mL)	End of Chlorine Contact Chamber	002	Monthly	DISCRT	
pH, minimum	Daily Minimum		>= 6.0 Standard Units (SU)	End of Chlorine Contact Chamber	002	Monthly	DISCRT	
pH, maximum	Daily Maximum		<= 9.0 Standard Units (SU)	End of Chlorine Contact Chamber	002	Monthly	DISCRT	
Solids, total suspended	30 Day Average		<= 30 Milligrams per Liter (mg/L)	End of Chlorine Contact Chamber	002	Monthly	COMPOS	
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	End of Chlorine Contact Chamber	002	Monthly	COMPOS	
Nitrogen, total	30 Day Average		M&R Milligrams per Liter (mg/L)	End of Chlorine Contact Chamber	002	Monthly	COMPOS	
BOD, 5-day	Daily Maximum		<= 45 Milligrams per Liter (mg/L)	End of Chlorine Contact Chamber	002	Monthly	COMPOS	
BOD, 5-day	30 Day Average		<= 30 Milligrams per Liter (mg/L)	End of Chlorine Contact Chamber	002	Monthly	COMPOS	
Solids, total suspended	Daily Maximum		<= 45 Milligrams per Liter (mg/L)	End of Chlorine Contact Chamber	002	Monthly	COMPOS	

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

		Discharge Li	Monitoring Requirements				
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Depth to water level ft below landsurface	Quarterly Maximum	M&R Feet (ft)		Groundwater	MW1	Quarterly	VISUAL ^[1]
Solids, total dissolved	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW1	Quarterly	DISCRT
Nitrogen, total	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW1	Quarterly	DISCRT
Chloride (as Cl)	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW1	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Field measurement

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

		Discharge Li	mitations	Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Solids, total dissolved	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW2	Quarterly	DISCRT
Nitrogen, total	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW2	Quarterly	DISCRT
Depth to water level ft below landsurface	Quarterly Maximum	M&R Feet (ft)		Groundwater	MW2	Quarterly	VISUAL ^[1]
Chloride (as Cl)	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW2	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Field measurement

		Discharge Lim	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)		Prior to Irrigation	003	Continuous	METER
Flow rate	30 Day Average	<= 0.499 Million Gallons per Day (Mgal/d)		Prior to Irrigation	003	Continuous	METER

Re-use Discharge Limitations Table for Sample Location 004 (Irrigation) To Be Reported Monthly

Re-use Discharge Limitations Table for Sample Location 005 (Dust Control) To Be Reported Monthly

		Discharge Lim	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)		Prior to Reuse	005	Daily	CALCTD
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	005	Daily	CALCTD

Ponds / Rapid Infiltration Basins for Sample Location 003 (Effluent Storage Pond) To Be Reported Monthly

		Discharge Lim	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)		Effluent Gross ^[1]	003	Daily	CALCTD
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Effluent Gross ^[1]	003	Daily	CALCTD

Notes (Ponds / Rapid Infiltration Basins):

1. Prior to the chlorine contact chamber

Rationale for Permit Requirements:

Flow rate is limited to prevent ponding and runoff of the discharge.

Biochemical oxygen demand, total suspended solids, and pH are limited in accordance with NAC 445A.275.

Fecal coliform is limited to ensure that the concentration of fecal coliform in the treated effluent does not exceed the allowable concentration for Reuse Category B in accordance with NAC 445A.276.

Total nitrogen is limited to prevent leaching and consequential degradation of the underlying groundwater.

Groundwater monitoring is required to ensure that the groundwater underlying the reuse areas and the SSWRF is not degraded by the discharge.

Fecal Coliform:

Daily Maximum ≤ 23 CFU/100mL

30-Day Average ≤ 2.2 CFU/100mL

Special Conditions:

Substantial compliance with the current permit is a condition of permit renewal.

SA – Special Approvals / Conditions Table

ltem #	Description
1	Due to the historically elevated concentration of total nitrogen in the groundwater, which is attributed to the use of individual septic disposal systems in the area, the Permittee is exempt from permit section B.MW.3.

Flow:

30-Day Average Flow Rate ≤ 0.499 MGD

Corrective Action Sites:

There are no Bureau of Corrective Actions remediation sites located within a one-mile radius of the SSWRF.

Wellhead Protection Program:

The SSWRF is not located within a Wellhead Protection Area or a Drinking Water Protection Area.

Schedule of Compliance:

lte ;	em #	Description	Due Date				
	1	The Permittee shall submit a new Operations and Maintenance (O&M) Manual to the Division. The O&M Manual shall be prepared in accordance with guidance document WTS-2: Minimum Information Required for an Operation and Maintenance Manual for a Wastewater Treatment Plant.	5/28/2016				

SOC – Schedule of Compliance Table

Deliverable Schedule:

Item #	Description	Interval	First Scheduled Due Date						
1	Quarterly DMRs	Quarterly	4/28/2016						
2	Annual Report	Annually	1/28/2017						

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

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 **Reno Gazette Journal, Mason Valley News** 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. **1/15/2016**, 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:Alan PinedaDate:11/30/2015Title:Staff I Associate Engineer