



STATE OF NEVADA

Department of Conservation & Natural Resources

Brian Sandoval, Governor

Leo M. Drozdoff, P.E., Director

DIVISION OF ENVIRONMENTAL PROTECTION

Colleen Cripps, Ph.D., Administrator

FACTSHEET (pursuant to NAC 445A.236)

Permittee Name: CITY OF ELY
501 MILL STREET
ELY, NV - 89301

Permit Number: NS0070015

Location: CITY OF ELY WASTEWATER TREATMENT PLANT, WHITE PINE
NORTH OGDEN ROAD, ELY, NV - 89301
LATITUDE: 39.267222, LONGITUDE: -114.871389
TOWNSHIP: T16N, RANGE: R63E, SECTION: S16

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 METER	Intake Structure		ELY	NV	89301	WHITE PINE	39.267222	-114.871389	GROUNDWATER
002	EFFLUENT	External Outfall		ELY	NV	89301	WHITE PINE	39.267778	-114.870833	GROUNDWATER
003	REUSE FIELDS	Land Application Site		ELY	NV	89301	WHITE PINE	39.2750	-114.863889	GROUNDWATER
004	RAPID INFILTRATION BASINS	Surface Disposal Site		ELY	NV	89301	WHITE PINE	39.285833	-114.861944	GROUNDWATER
MW3	MONITORING WELL 3	Monitoring Well		ELY	NV	89301	WHITE PINE	39.2750	-114.864722	GROUNDWATER
MW4	MONITORING WELL 4	Monitoring Well		ELY	NV	89301	WHITE PINE	39.288611	-114.861389	GROUNDWATER
MW5	MONITORING WELL 5	Monitoring Well		ELY	NV	89301	WHITE PINE	39.2750	-114.8675	GROUNDWATER

General:

The City of Ely has applied for renewal of groundwater discharge permit NS0070015, formerly NEV70015. The City of Ely provides sewer service to approximately 4,066 residents in the Ely area (2012 State Demographer estimate). In 2001 the previous facultative pond system was replaced by an extended-aeration mechanical treatment plant with a rated design capacity of 1.5 million gallons per day (MGD).

Pretreatment is provided at the facility headworks which include a bar screen for removing large debris, an Archimedes screw pump, and two fine-mesh rotary screens which can be operated in parallel. Secondary treatment is provided in a 0.83 MGD aeration basin with eight submerged aerators configured in four aeration zones. The basin zones are operated in a staggered on/off aeration mode to assist in BOD reduction and denitrification. Following treatment in the aeration basin, the mixed liquor flows to a 1.1 MGD secondary clarifier with a portion of the activated sludge being returned to zone #1 in the aeration basin. Waste activated sludge from the clarifier is discharged to an aerated digester for further organic matter reduction prior to dewatering in a centrifuge. Dewatered sludge is transported to the local landfill for disposal.

Treated effluent may be discharged to two separate locations. During the growing season, typically April through October, effluent is discharged to four HDPE-lined ponds (#2 - #5) for polishing and storage prior to reuse via flood irrigation of alfalfa and other forage crops at the adjacent City-owned Georgetown Ranch. Alternatively, treated effluent can be discharged to two rapid infiltration basins located approximately 1.5

miles north of the treatment plant.

During emergency events, excess sludge may be wasted to the lined storage ponds. Any facility bypass must be reported in accordance with permit section C.8.

Discharge Characteristics:

During the previous 12 month reporting period, July 2012 through June 2013, the following average discharge characteristics were reported:

1. 30-day average flow - 0.632 million gallons per day.
2. Daily maximum flow - 0.778 million gallons per day.
3. BOD - 6.6 mg/L
4. Total suspended solids - 3.8 mg/L.
5. Total nitrogen - 7.5 mg/L.
6. pH - 6.99 S.U.

Receiving Water:

Receiving water is groundwater of the State. Groundwater is reported to flow to the north. During the previous 12 month reporting period, July 2012 through June 2013, groundwater sampled from monitoring wells MW #3, MW #4, and MW #5 showed the following average characteristics:

MW #3

1. Total nitrogen as nitrogen - 1.2 mg/L.
2. Total dissolved solids - 390 mg/L.
3. Chloride - 16.5 mg/L.
4. Depth to groundwater - 10.5 feet below ground surface.

MW #4

1. Total nitrogen as nitrogen - 2.0 mg/L.
2. Total dissolved solids - 368 mg/L.
3. Chloride - 28 mg/L.
4. Depth to groundwater - 47.5 feet below ground surface.

MW #5

1. Total nitrogen as nitrogen - 5.9 mg/L.
2. Total dissolved solids - 380 mg/L.
3. Chloride - 14.5 mg/L.
4. Depth to groundwater - 22 feet below ground surface.

Summary of Changes From Previous Permit:

In order to maintain consistency with current NDEP policy and the monitoring requirements of similar treatment facilities that do not discharge to surface water, the following permit changes have been made:

1. The requirement to monitor the influent for 5-day biochemical oxygen demand (BOD) and for total suspended solids (TSS) has been removed from this permit. This requirement is applicable to facilities that require an NPDES permit.
2. The requirement to report the percent removal of BOD and TSS during the treatment process has been removed from this permit. This requirement is applicable to facilities that require an NPDES permit.
3. The requirement to report the amount of nitrate as nitrogen and the elevation of groundwater in MW #3, MW #4, and MW #5 has been removed from this permit. The requirement to report the amount of total nitrogen and the depth to groundwater in all monitoring wells has been retained.
4. The sampling frequency for groundwater monitoring well MW #5 has been increased from annually to quarterly.

5. The requirement to report the irrigation rate, annual application volume, amount of nitrogen applied, and the allowable nitrogen loading in lbs/year has been removed from this permit. These values will still be required to be calculated and recorded by the City of Ely to ensure compliance with the Division-approved Effluent Management Plan (EMP).
6. The requirement to submit a quarterly EMP adherence statement has been added to this permit.
7. The requirement to report the total flow to the reuse fields has been added to this permit.
8. The requirement to report the amount of flow to the RIBs has been added to this permit.
9. The monitoring frequency for BOD, TSS, and pH has been reduced from weekly to monthly. This requirement is consistent with other similar size treatment plants that do not require an NPDES permit.
10. The 30-Day Average and Daily Maximum limits for BOD and TSS has been replaced with a once a month value equivalent to the previous 30-Day Average limits.
11. Due to a new Permit naming convention at NDEP, Bureau of Water Pollution Control, the permit ID has been changed from NEV70015 to NS0070015. This change does not reflect a change in the type of permit being issued.

Proposed Effluent Limitations:

The Division proposes the following permit limitations and monitoring requirements:

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

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	30 Day Average	<= 1.5 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	001	Continuous	METER
Flow rate	Daily Maximum	<= 1.5 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	001	Continuous	METER

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

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
BOD, 5-day	Value		<= 30 Milligrams per Liter (mg/L)	Effluent Gross	002	Monthly	DISCRT
Nitrogen, total	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Monthly	DISCRT
Solids, total suspended	Value		<= 30 Milligrams per Liter (mg/L)	Effluent Gross	002	Monthly	DISCRT
pH, minimum	Minimum Value ^[1]		>= 6.0 Standard Units (SU)	Effluent Gross	002	Monthly	DISCRT
pH, maximum	Maximum Value ^[1]		<= 9.0 Standard Units (SU)	Effluent Gross	002	Monthly	DISCRT

Notes (WWTP Discharge Limitations Table):

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

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

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	S a m p l e Type
Depth to water level ft below landsurface	Value	M&R Feet (ft)		Groundwater	MW3	Quarterly	VISUAL
Nitrogen, total	Value		<= 10 Milligrams per Liter (mg/L)	Groundwater	MW3	Quarterly	DISCRT
Chloride (as Cl)	Value		M&R Milligrams per Liter (mg/L)	Groundwater	MW3	Quarterly	DISCRT
Solids, total dissolved	Value		M&R Milligrams per Liter (mg/L)	Groundwater	MW3	Quarterly	DISCRT

Groundwater Monitoring Wells Table for Sample Location Mw4 (Monitoring Well) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	S a m p l e Type
Depth to water level ft below landsurface	Value	M&R Feet (ft)		Groundwater	MW4	Quarterly	VISUAL
Nitrogen, total	Value		<= 10 Milligrams per Liter (mg/L)	Groundwater	MW4	Quarterly	DISCRT
Chloride (as Cl)	Value		M&R Milligrams per Liter (mg/L)	Groundwater	MW4	Quarterly	DISCRT
Solids, total dissolved	Value		M&R Milligrams per Liter (mg/L)	Groundwater	MW4	Quarterly	DISCRT

Groundwater Monitoring Wells Table for Sample Location Mw5 (Monitoring Well) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	S a m p l e Type
Depth to water level ft below landsurface	Value	M&R Feet (ft)		Groundwater	MW5	Quarterly	VISUAL
Nitrogen, total	Value		<= 10 Milligrams per Liter (mg/L)	Groundwater	MW5	Quarterly	DISCRT
Chloride (as Cl)	Value		M&R Milligrams per Liter (mg/L)	Groundwater	MW5	Quarterly	DISCRT
Solids, total dissolved	Value		M&R Milligrams per Liter (mg/L)	Groundwater	MW5	Quarterly	DISCRT

Re-use Discharge Limitations Table for Sample Location 003 (Land Application Site) To Be Reported Monthly^[1]

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow, total	Monthly Total	M&R Million Gallons (Mgal)		Prior to Irrigation	003	Continuous	METER

Notes (Re-use Discharge Limitations Table):

1. If there is no discharge from this outfall during the reporting period, enter "No Discharge" on the Discharge Monitoring Report for this outfall.

Ponds / Rapid Infiltration Basins for Sample Location 004 (Surface Disposal Site) To Be Reported Monthly^[1]

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Effluent Gross	004	Continuous	METER
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		Effluent Gross	004	Continuous	METER

Notes (Ponds / Rapid Infiltration Basins):

1. If there is no discharge from this outfall during the reporting period, enter "No Discharge" on the Discharge Monitoring Report for this outfall.

Rationale for Permit Requirements:

The Division’s rationale for the proposed monitoring conditions is as follows:

Influent Flow - Flow is continuously monitored to ensure that the design capacity of the treatment facility is not exceeded.

Effluent BOD5 - The Division’s secondary-treatment standard for the reuse of treated effluent is 30 mg/L.

Effluent Total Nitrogen - This parameter is necessary to calculate the nitrogen balance for crop irrigation at the Georgetown Ranch.

Effluent TSS - The Division’s secondary-treatment standard for the reuse of treated effluent is 30 mg/L.

Effluent pH - The Division’s secondary-treatment standard for the reuse of treated effluent is between 6.0 and 9.0 standard units.

Groundwater Monitoring - The Division requires quarterly groundwater monitoring for depth to groundwater, total dissolved solids (TDS), chlorides, and total nitrogen to ensure that State groundwater resources are not impacted from effluent percolation.

Reuse Flow – Total flow to the reuse fields is required to calculate the annual nitrogen loading.

Rapid Infiltration Basin Flow – Monitoring is required to track the amount of treated effluent discharged to the RIBs.

Special Conditions:

SA – Special Approvals / Conditions Table

Item #	Description
1	Each quarter, the Permittee shall submit a document confirming adherence to the approved EMP. This document shall be signed, and shall contain the following certification.

Item #	Description
	"I certify that, for each month during the previous quarterly reporting period, all operational procedures and calculated application rates outlined in the approved Effluent Management Plan were adhered to."

Flow:

The Permittee has requested a 30-day average flow of up to 1.5 million gallons per day.

Corrective Action Sites:

There are no NDEP Bureau of Corrective Actions remediation sites within a one-mile radius of this facility.

Wellhead Protection Program:

This facility is located within the 6,000-foot Drinking Water Protection Areas established for two Public Water Supply (PWS) wells. A Wellhead Protection Area has not been established for these PWS wells.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee shall submit two (2) copies of an updated Operation and Maintenance (O&M) Manual for review and approval by the Division. The O&M Manual shall be prepared by a Nevada Registered Professional Engineer or other Division-approved qualified person. If no updates or revisions are required, the Permittee shall submit a letter by the due date stating that there have been no changes to the previously approved O&M Manual. ^[1]	1/24/2014
2	The Permittee shall submit two (2) copies of an updated Effluent Management Plan (EMP) for review and approval by the Division. The EMP shall be prepared by a Nevada Registered Professional Engineer or other Division-approved qualified person. If no updates or revisions are required, the Permittee shall submit a letter by the due date stating that there have been no changes to the previously approved EMP. ^[1]	1/24/2014

Notes (Schedule of Compliance Table):

- O&M Manuals and EMPs prepared by a Nevada Registered Professional Engineer must be signed and stamped in accordance with NAC 625.610.

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Discharge Monitoring Reports	Quarterly	1/28/2014
2	Annual Report	Annually	1/28/2014
3	EMP Adherence Statement	Annually	1/28/2014

Procedures for Public Comment:

The Notice of the Division's intent to reissue 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 **The Ely Times and the Las Vegas Review 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. **12/9/2013**, 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.650.

Proposed Determination:

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

Prepared by: **Arthur B. Marr III**

Date: **11/6/2013**

Title: **P.E.**