



FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: SOUTHERN NEVADA WATER AUTHORITY/LAS VEGAS VALLEY WATER DISTRICT

1001 S. VALLEY VIEW BLVD
LAS VEGAS, NV 89153

Permit Number: NS2011506

Permit Type: GROUNDWATER DISCHARGE

Designation: GROUNDWATER

New/Existing: EXISTING

Location: BIG BEND WATER DISTRICT WATER TREATMENT FACILITY, CLARK
1520 THOMAS EDISON DRIVE, LAUGHLIN, NV 89029
LATITUDE: 35.171097, LONGITUDE: -114.579556
TOWNSHIP: 32 S, RANGE: 66 E, SECTION: 12

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Latitude	Longitude	Receiving Water
001	WEST LAGOON	External Outfall		35.17	-114.5780	GROUNDWATER
002	EAST LAGOON	External Outfall		35.17	-114.5780	GROUNDWATER
003	SUM OF OUTFALLS 001 + 002	External Outfall		35.17	-114.5780	GROUNDWATER

Permit History/Description of Proposed Action

The Permittee, Las Vegas Valley Water District (LVVWD) has applied for a permit renewal of the existing reclaimed water reuse permit NS2011506, discharge filter-to-waste and backwash water from the Big Bend Water District Water Treatment Facility (BBWDWTF).

The facility has been operating since 1983. This permit was first issued on April 28, 2011. The most recent permit was issued on March 1, 2018, and expired in February 28, 2023; the permit has been administratively continued since.

Facility Overview

BBWDWTF is operated by the LVVWD. The BBWDWTF is located at 1520 Thomas Edison Drive, in Laughlin, in Clark County Nevada. BBWDWTF water source is the Colorado River, downstream of Davis Dam. BBWDWTF uses a multi-stage treatment process to provide up to 15 million gallons per day (Mgal/d) of filtered drinking water to the population of Laughlin. The maximum discharge permitted to the lagoons is 0.99 Mgal/d, about 62% of this discharge is reused in the filtration process, the rest is either evaporated or enters the groundwater. Routine maintenance requires daily filter back-wash, filter-to-waste, system overflows and drains discharge to 2 lagoons. When the level of the solids reach the point that the Lagoons need to be cleaned, they are loaded into a dump truck and taken to the Laughlin landfill.

Outfall Summary

External Outfall 001: West Lagoon is sampled for Total Dissolved Solids (TDS), Total Recoverable Arsenic (TRA), Total Recoverable Iron (TRI), Chlorine, and Potential of Hydrogen (pH).

External Outfall 002: East Lagoon is monitored quarterly for the following: TDS, TRA, TRI, Chlorine, and pH.

External Outfall 003: Sum of Outfalls 001+002 monitors the average flow rate for the sum of the west and east lagoons.

Effluent Characterization

The effluent is a byproduct of water that has passed through a multi-stage treatment process of filtration, chlorination, ozonation, and flocculation.

The averages for the reported values for 2020-2025 are listed below:

Outfall 001: West Lagoon

TDS: 605.30 mg/L

TRA: 0.0023 mg/L

TRI: 0.24 mg/L

Chloride: 0.16 mg/L

pH: 8.18

Outfall 002: East Lagoon

TDS: 601.59 mg/L

TRA: 0.0024 mg/L

TRI: 0.31 mg/L

Chloride: 0.24 mg/L

pH: 8.15

Outfall 003: Sum of Outfalls 001+002

30 Day Average Flow: 0.17 Mgal/d

Daily Average Maximum Flow: 0.23 Mgal/d

Pollutants of Concern

Pollutants of concern are any pollutants or parameters that are believed to be present in the discharge and could affect the physical, chemical, or biological condition of the receiving water. Pollutant of concern for water is arsenic. Arsenic is naturally occurring in the groundwater and is treated at the BBWDWTF.

Receiving Water

The water in the lagoons is discharged into groundwater of the State. Depth to groundwater is approximately 20 feet to 100 feet below ground surface with an estimated hydrologic gradient of 2.25 feet per mile and a groundwater flow direction to the south, parallel to the Colorado River. Arsenic is naturally occurring in the groundwater and is treated at the BBWDWTF.

Compliance History

The Permittee is in compliance with the permit.

Proposed Effluent Limitations

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

NS OTHER - Discharge Limitations Table for Sample Location 003 (Sum Of Outfalls 001 + 002) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	Daily Maximum	<= 0.99 Million Gallons per Day (Mgal/d)		Effluent Gross	003	Continuous	CALCTD
Flow rate	30 Day Average	<= 0.75 Million Gallons per Day (Mgal/d)		Effluent Gross	003	Continuous	CALCTD

Ponds / Rapid Infiltration Basins for Sample Location 001 (West Lagoon) To Be Reported Quarterly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Chlorine, total residual	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Arsenic, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Iron, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Quarterly	DISCRT
pH, maximum	Daily Maximum		<= 9 Standard Units (SU)	Effluent Gross	001	Quarterly	DISCRT
pH, minimum	Daily Minimum		>= 6 Standard Units (SU)	Effluent Gross	001	Quarterly	DISCRT
Solids, sludge, tot, dry weight ^[1]	Total	M&R Tons (ton)		Sludge	001	Quarterly	CALCTD

Notes (Ponds / Rapid Infiltration Basins):

1. Report the total sludge removed from the lagoon.

Ponds / Rapid Infiltration Basins for Sample Location 002 (East Lagoon) To Be Reported Quarterly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Chlorine, total residual	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Quarterly	DISCRT
Arsenic, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Quarterly	DISCRT
Iron, total recoverable	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Quarterly	DISCRT
pH, maximum	Daily Maximum		<= 9 Standard Units (SU)	Effluent Gross	002	Quarterly	DISCRT
pH, minimum	Daily Minimum		>= 6 Standard Units (SU)	Effluent Gross	002	Quarterly	DISCRT
Solids, sludge, tot, dry weight ^[1]	Total	M&R Tons (ton)		Sludge	002	Quarterly	CALCTD

Notes (Ponds / Rapid Infiltration Basins):

1. Report the total sludge removed from the lagoon.

Summary of Changes From Previous Permit

There are no changes from the previous permit.

Technology Based Effluent Limitations

Technology based effluent limitations are not applicable on this permit.

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 limitations are not applicable to this permit.

Basis for Effluent Limitations

The flow is limited to 0.99 Mgal/d by request of the Permittee.

Monitoring of arsenic, chlorine, iron and TDS is required to assess the level of treatment provided and to protect the groundwater of the State.

Anti-backsliding

None of the proposed permit limits were changed to a less restrictive limit compared to those in the previous permit.

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 reclaimed water discharged within the compliance limits of the proposed permit.

Special Conditions

For Special Conditions see table below:

SA – Special Approvals / Conditions Table

Item #	Description
1	The Permittee is required to continue to submit their Discharge Monitoring Reports (DMRs) through the Bureau of Water Pollution Control's Nevada NetDMR system.
2	A minimum freeboard of two (2) feet shall be maintained in each pond / lagoon at all times.
3	Section B.PB.4.4 does not apply to this facility.

Discharges From Future Outfalls/ Planned Facility Changes

This Permittee does not anticipate changes to the outfalls or to the facilities.

Corrective Action Sites

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

Wellhead Protection Program

Three Public Water Supply (PWS) wells, W04, W05, and W06, for the Riverside Resort (NV0001042) are located approximately 900, 1,090, and 1,150 feet, respectively, southwest of the lagoons. Groundwater from the alluvial fan flows to the southeast where it converges with subsurface flow to the south along the Colorado River. No Maximum Containment Level violations for the PWS wells were noted in the Bureau of Safe Drinking Water's database.

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 be prepared in accordance with WTS-2: Guidance for Preparing an O&M Manual.	6/1/2028

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly DMRs	Quarterly	1/28/2026
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. **12/5/2000**, 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: **Jason Reichelt**

Date: **10/29/2025**

Title: **Environmental Scientist 3**