



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: NS2018502

Permit Type: GROUNDWATER DISCHARGE

Designation: GROUNDWATER

New/Existing: EXISTING

Location: GREAT BASIN RANCH, WHITE PINE
HC 10 BOX 10853, ELY, NV 89301
LATITUDE: 38.898684, LONGITUDE: -114.391438

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Latitude	Longitude	Receiving Water
001	FEEDLOT TOTALS	Internal Outfall		38.896750	-114.405590	GROUNDWATER
002	CORRAL MANURE TESTING AND TRANSFER	Internal Outfall		38.896750	-114.405590	GROUNDWATER
003	EVAPORATION BASIN	Internal Outfall		38.896750	-114.405590	GROUNDWATER
004	STORMWATER DISCHARGE	External Outfall		38.896750	-114.405590	GROUNDWATER
MW1	MONITORING WELL #1	Monitoring Well		38.899710	-114.407020	GROUNDWATER
MW2	MONITORING WELL #2	Monitoring Well		38.898040	-114.404640	GROUNDWATER
MW3	MONITORING WELL #3	Monitoring Well		38.894130	-114.404910	GROUNDWATER

Permit History/Description of Proposed Action

The Permittee, Southern Nevada Water Authority/Las Vegas Valley Water District, for the Great Basin Ranch (GBR), has applied for the renewal of groundwater discharge permit NS2018502 for the ranch and associated cattle operation located at 14841 South State Route (S.R.) 894, within White Pine County, Nevada, being approximately 30 miles southeast of Ely.

This permit was first issued on October 26, 2016, and expired on October 25, 2021; the permit has been administratively continued since.

Facility Overview

The GBR is a collection of seven ranches which were purchased and combined into the one ranch by the Permittee. The GBR is defined as a concentrated animal feeding operation (CAFO) because the Permittee has indicated that they will confine at least 1,000 cattle for 30 days or more in a 12-month period, in an area devoid of vegetation during the normal growing season. The current maximum design capacity of the facility is 1,485 head of cattle (Outfall 001); however, the Permittee indicates that approximately 1,100 head of cattle will be confined for approximately 210 days per year before they are auctioned off. The rest of the time the cattle will be confined in a vegetated area along with approximately 5,000 sheep and 2,000

calves.

The facility's construction is industry typical pipe and cable fence, concrete feed aprons, bunks, and storage areas along with associated storage structures, maintenance facilities, and waste management control structures. A compacted clay/caliche stormwater retention basin (Outfall 003) has been constructed with an approximate maximum capacity of 1 million gallons; the reasonable holding capacity, without breaching the berm is approximately 656,000 gallons. A diversion ditch has also been constructed around the facility. Currently, manure in the pens (Outfall 002) is scraped and stockpiled in the center for bedding material. Once the facility has enough manure stockpiled, it will be land applied to a portion of the 2,300 acres for fertilization of nonlegume, small grain crops.

CAFOs that land apply manure and/or production area wastewater are required to comply with a Nutrient Management Plan (NMP). CAFOs are regulated primarily through adherence to nutrient application rates and NMP compliance items. The NMP is based on the number of confined cattle stated above and an available land application area of 2,300 acres. Manure produced at the facility is estimated at 1,353 tons annually.

Great Basin Ranch's NMP was last reviewed and approved by the Division on January 28, 2018. The Technical, Compliance, and Enforcement (TCE) Branch of the Bureau of Water Pollution Control requires NMP's be updated every permit cycle which equates to every five (5) years; therefore, an updated NMP will need to be submitted to the Division for review and approval by July 1, 2029.

As a CAFO, the Permittee is required to contain all manure and runoff from the production area. An exception to this is a precipitation overflow resulting from an episode greater than a 25-year, 24-hour storm event (Outfall 004). To qualify for this exception, the production area must be properly designed, constructed, operated, and maintained to contain manure, direct precipitation, and runoff from a qualifying storm event. Precipitation related runoff from land application areas where manure has been applied in accordance with the Division reviewed NMP is exempt from permitting requirements.

Outfall Summary

Outfall 001 – Internal outfall for feedlot totals

Outfall 002 - Internal outfall for corral manure testing and transfer

Outfall 003 - Internal outfall for evaporation basin

Outfall 004 - External outfall for stormwater discharge

Outfall MW1 - Monitoring Well #1 upgradient from evaporation basin

Outfall MW2 - Monitoring Well #2 downgradient from evaporation basin

Outfall MW3 - Monitoring Well #3 downgradient from evaporation basin

Effluent Characterization

The primary source of production area runoff from the facility is made up of corral manure mixed with associated precipitation events and incidental water usage for animal consumption.

Nevada State Network Discharge Monitoring Report (NetDMR) data, as reported from July 2019 to June 2024, was reviewed as part of this permit renewal process. The longterm average number of animals housed onsite was 566 head. The average manure generated at the facility was 370 tons.

There were no discharges from Outfall 004 (Stormwater Discharge) from a storm event during the July 2019 to June 2024 reporting period.

Pollutants of Concern

Pollutants of concern are any pollutant, or parameters, that are believed to be present in the discharge and could affect or alter the physical, chemical, or biological conditions of the receiving water.

Common pollutants of concern for CAFOs include total nitrogen, total phosphorus, pH, chlorides, fecal coliform, total suspended solids, and total dissolved solids.

Receiving Water

The receiving water is groundwater of the State via percolation.

Compliance History

The facility was in compliance during the July 2019 to June 2024 reporting period with two site inspections performed during August 2018 and June 2022.

Proposed Effluent Limitations

There shall be no discharge from the facility's property except as authorized by this permit. There shall be no discharge of manure or process wastewater pollutants from the production area to waters of the State, with the exception of pollutants in overflow that may be discharged when a storm greater than the 25-year, 24-hour storm event or chronic rainfall event causes an overflow from the production area. During the period beginning on the effective date of this permit, the Permittee is authorized to discharge manure and process wastewater to:

- 1) Land application areas, reported at 2,300 acres, in accordance with a Division reviewed Nutrient Management Plan; and
- 2) Waters of the State in response to storm events or a chronic rainfall event that exceeds the 25-year, 24-hour storm design, provided that the facility, and its production area, is properly designed, constructed, operated, and maintained to contain manure, pollutants, direct precipitation, and the runoff from that level of weather event.

**Groundwater Monitoring Wells Table for Sample Location Mw1 (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	DISCRT
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.
2. Groundwater elevation above mean sea level (AMSL).

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

Parameter	Discharge Limitations			Monitoring Requirements			
	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	DISCRT
Nitrogen, total	Daily Maximum		M&R 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.
2. Groundwater elevation above mean sea level (AMSL).

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

Parameter	Discharge Limitations			Monitoring Requirements			
	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 Minimum	M&R Feet (ft)		Groundwater	MW3	Quarterly	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW3	Quarterly	DISCRT
pH	Value		M&R Standard Units (SU)	Groundwater	MW3	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW3	Quarterly	DISCRT
Water level relative to mean sea level ^[2]	Daily Maximum	M&R Feet (ft)		Groundwater	MW3	Quarterly	CALCTD

Notes (Groundwater Monitoring Wells Table):

1. Depth to groundwater.
2. Groundwater elevation above mean sea level (AMSL).

CAFO Discharge Limitations Table for Sample Location 001 (Feedlot Totals) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Animals, total estimated no. of	30 Day Average		M&R Number (#)	Internal Monitoring Point	001	Monthly	CALCTD
Manure, wet tons removed ^[1]	30 Day Average		M&R Tons (ton)	Internal Monitoring Point	001	Monthly	ESTIMA
Manure, wet tons total ^[2]	30 Day Average		M&R Tons (ton)	Internal Monitoring Point	001	Monthly	ESTIMA

Notes (CAFO Discharge Limitations Table):

1. Estimated wet tons transferred based on the number of truck loads or the number of loader buckets.
2. Estimated total wet tons produced.

CAFO Discharge Limitations Table for Sample Location 002 (Manure Testing And Transfer) To Be Reported Annually

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Manure, wet tons removed ^[1]	Annual Total		M&R Tons (ton)	Internal Monitoring Point	002	Annual	CALCTD
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	002	Annual	DISCRT
Phosphorus, total (as P)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	002	Annual	DISCRT

Notes (CAFO Discharge Limitations Table):

1. Total wet tons transferred for the year.

CAFO Discharge Limitations Table for Sample Location 003 (Evaporation Basin) To Be Reported Semi Annually¹

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
BOD, 5-day	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Semiannual	DISCRT
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Semiannual	DISCRT
Coliform, fecal general	Daily Maximum		M&R Most Probable Number per 100ml T (MPN/100mL)	Effluent Gross	003	Semiannual	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Semiannual	DISCRT
pH	Value		M&R Standard Units (SU)	Effluent Gross	003	Semiannual	DISCRT
Phosphorus, total (as P)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Semiannual	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Semiannual	DISCRT
Solids, total suspended	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	003	Semiannual	DISCRT

Notes (CAFO Discharge Limitations Table):

1. Semi-annual measurements shall be conducted in the 2nd quarter and 4th quarter of each calendar year when water is present in the basin.

CAFO Discharge Limitations Table for Sample Location 004 (Stormwater Discharge) To Be Reported Annually^[2]

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
BOD, 5-day	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	004	Report	DISCRT
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	004	Report	DISCRT
Coliform, fecal general	Daily Maximum		M&R Most Probable Number per 100ml T (MPN/100mL)	See Footnote ^[1]	004	Report	DISCRT
Flow, total	Daily Maximum	M&R Million Gallons (Mgal)		See Footnote ^[1]	004	Report	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	004	Report	DISCRT
pH, maximum	Daily Maximum		M&R Standard Units (SU)	See Footnote ^[1]	004	Report	DISCRT
pH, minimum	Daily Minimum		M&R Standard Units (SU)	See Footnote ^[1]	004	Report	DISCRT
Phosphorus, total (as P)	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	004	Report	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	004	Report	DISCRT
Solids, total suspended	Daily Maximum		M&R Milligrams per Liter (mg/L)	See Footnote ^[1]	004	Report	DISCRT

Notes (CAFO Discharge Limitations Table):

1. Sampling of the representative stormwater discharge shall occur at the point of overflow.
2. The Permittee shall report date and time of each discharge and collect the sample within 30 minutes of first knowledge of the stormwater discharge. If sampling in that period is not possible due to dangerous weather conditions, the Permittee shall collect the sample as soon as possible after suitable conditions occur. Reason for the sampling delay shall be documented.

Crop Rotation Table

Crop In Year						
Field	Area (acres)	2025	2026	2027	2028	2029
REFER TO NUTRIENT MANAGEMENT PLAN (NMP) ON FILE WITH NDEP	2300					

CAFO Nutrient Management Plan (NMP) Table

Field	Area (acres)	Crop	Design Yield (tons/acre)	Hazard Class	Liquid Applied (Million Gallons)	Nitrogen Applied (lbs/acre)	Irrigation Method	Other N Sources	Application Timing
REFER TO NMP ON FILE WITH NDEP	2300	VARIES	0 ^[1]		0 ^[2]	0 ^[1]	CENTER PIVOTS	VARIES	VARIES

Notes (CAFO Nutrient Management Plan (NMP) Table):

1. Zero (0) in this field indicates that parameter varies. For detailed information refer to the NMP.
2. Zero (0) in this field indicates that no liquid waste is applied.

Summary of Changes From Previous Permit

Latitude/Longitude information was updated to reflect approximate location of facility, Monitoring Wells 001, 002 and 003, and Outfall 004 (Stormwater Discharge).

Under the Special Approvals/Conditions Table, Items 1 and 2 have been removed, being the groundwater monitoring sampling and the Division's approval of the monitoring well system. Both of those conditions have been satisfied.

Technology Based Effluent Limitations

Technology based requirements of a CAFO that confine cattle, other than veal calves, may not discharge manure or process wastewater pollutants into waters of the State from the production area. The only exception to the no-discharge standard is an overflow that occurs because of a storm, or chronic rainfall, event from a facility that is designed, constructed, operated, and maintained to contain all manure and process wastewater plus the runoff from a 25-year, 24-hour storm event.

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)

Proposed water quality based effluent limitations are not applicable to this permit.

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 potential discharges to groundwater in response to storm events or a chronic rainfall event that exceeds the 25-year, 24-hour storm design, 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

See Special Approvals/Conditions table below

SA – Special Approvals / Conditions Table

Item #	Description
1	Part B, Section B.CO.4 does not apply to this permit. This section only applies to swine, poultry, and veal calf operations.
2	Part C, Section C.2 does not apply to this permit. Operations and maintenance of this facility are specifically identified in the Division reviewed NMP.
3	The annual CAFO report (Part B, Section B.CO.39) shall be submitted as an attachment via the NetDMR system.
4	The Great Basin Ranch NMP is based on the "narrative rate approach" and provides for changes to crop rotation without permit modification provided the crop and nutrient application parameters are identified in the NMP.
5	Part B, Section B.CO.23 does not apply to this permit. Soil sampling shall be conducted in accordance with the Division approved NMP and results shall be submitted to the Division as part of the annual report.
6	Part C, Section C.9 does not apply to this permit. This section refers to substances associated with wastewater treatment facilities. The management of solids (i.e. manure) is addressed in the NMP.

Discharges From Future Outfalls/ Planned Facility Changes

There are no potential discharges from future outfalls or planned facility changes.

Corrective Action Sites

There are no active Bureau of Corrective Action (BCA) sites located within a one-mile radius of the discharge locations.

Wellhead Protection Program

The nearest Public Water Supply (PWS) well is located approximately nine (9) miles to the northeast of the facility. There are other PWS wells located to the northwest of the facility. The facility is not located within a Wellhead Protection Area, which represents an approximate 10-year capture zone of a well, or within a Drinking Water Protection Area, which is defined by a 3,000-foot radius around a PWS well.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	180 days prior to the expiration of this permit, the Permittee shall submit, with their renewal application, an updated Nutrient Management Plan that will address the CAFO activities for the next permit term.	7/1/2029

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly DMRs	Quarterly	4/28/2025
2	Annual DMRs	Annually	1/28/2026
3	Annual Reports	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. **12/27/2024**, 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 Marr**
 Date: **11/19/2024**
 Title: **Staff II Engineer**