



FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: NELLIS AFB

6020 BEALE AVENUE
NELLIS AFB, NV 89191

Permit Number: NS2017505

Permit Type: GROUNDWATER DISCHARGE

Designation: GROUNDWATER

New/Existing: EXISTING

Location: SUNRISE VISTA GOLF COURSE, CLARK
2841 KINLEY DRIVE; BLDG 1626, NELLIS AFB, NV 89191
LATITUDE: 36.21122820, LONGITUDE: -115.051016
TOWNSHIP: T20S, RANGE: R62E, SECTION: S03N

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Latitude	Longitude	Receiving Water
001	LAND APPLICATION SITE	Land Application Site	N/A	36.217282	-115.046515	GROUNDWATER

Permit History/Description of Proposed Action

The Permittee, Nellis Air Force Base (Nellis AFB), has applied for the renewal of permit NS2017505, which authorizes irrigation activities at the Sunrise Vista Golf Course (Facility). The Facility, located on Nellis AFB, is open to civilians with an association to the AFB, including retirees, and uses reclaimed water from the North Las Vegas Water Reclamation Facility (NLVWRF) to irrigate approximately 110 acres of turf, greens, tees, fairways, roughs, a driving range, and surrounding landscaped vegetation.

The reclaimed water is applied via a spray irrigation system after being transferred to a concrete-lined holding pond. The project incorporates best management practices—including buffer zones and controlled, timed irrigation—to optimize usage while protecting human health and the environment.

The Nevada Division of Environmental Protection (NDEP or Division), Bureau of Water Pollution Control (BWPC), previously authorized discharge of reclaimed water to groundwater under permit NS2017505, first issued on December 26, 2016. The permit has been administratively continued since.

Facility Overview

The Permittee owns and operates the Facility at 2841 Kinley Drive, Nellis AFB, Clark County, Nevada. The Facility continues its sustainable water reuse program by piping tertiary-treated reclaimed water (denitrified and disinfected) from NLVWRF (Permit No. NS2016501) to irrigate approximately 110 acres.

Water is delivered via a 10-inch underground pipeline at a 30-day average and daily maximum flow rate of 2.20 million gallons per day (Mgal/d) into Eagle Pond, a concrete-lined holding pond with a minimum 2-foot

freeboard. Eagle Pond can store one day's irrigation volume during peak demand in case of NLVWRF shutdowns.

Water is distributed through a spray irrigation system calibrated to meet evapotranspiration demands while preventing surface discharge. Irrigation is suspended during wet-weather events. Periodically, the root zone is flushed with well water from Nellis AFB, using an air gap for cross-connection protection.

A pump station 15 feet south of Eagle Pond distributes water via spray and drip irrigation. It includes a 30-inch intake pipe and three 100-hp pumps. Flow is measured by a Flowtronex inline flow meter, and daily discharge is logged by Facility personnel. Toro FLEX 35 and 55 sprinkler heads (34.1–35.9 gpm) are used. Irrigation is controlled by a Toro Site Pro system, which accounts for evapotranspiration (74.2 in/year) and nitrogen uptake (402 lbs/acre/year for Bermuda and Rye grass).

The Reclaimed Water Management Plan (RWMP) was last accepted on December 28, 2016. Per BWPC's Technical, Compliance, and Enforcement (TCE) Branch, RWMPs must be updated every two permit cycles (10 years), with the next update due in the upcoming cycle.

Outfall Summary

Outfall 001 – Land application of reclaimed water from NLVWRF.

Effluent Characterization

Effluent data from January 2021 to May 2025 was reviewed using DMRs from NLVWRF (Permit No. NS2016501). Due to a NetDMR system error, the Permittee could not submit DMRs; therefore, supplier data was used.

- Flow: Average daily max = 0.94 Mgal/d; 30-day average = 0.47 Mgal/d.
- Sampling Gaps: Of 99 periods, 44 used NODI code 'C' (no effluent available).
- Nitrogen: Average total nitrogen = 6.32 mg/L, within regulatory limits.
- Microbiology: Fecal coliform met Reuse Category B limits (NAC 445A.2764):
 - o 30-day average = 0.29 MPN/100mL
 - o Daily max = 4.65 CFU/100mL
 - o 70% of samples reported as "Not Detected" (NODI 'B'); 6% as "No Discharge" (NODI 'C').

Pollutants of Concern

Pollutants of concern include total coliform and total nitrogen, which may affect the physical, chemical, or biological condition of receiving waters.

Receiving Water

The receiving water is groundwater of the State. No surface water discharge is authorized. No monitoring wells are present on-site. Groundwater is approximately 64 feet below ground surface. No adverse groundwater impacts are expected.

Compliance History

A compliance review was conducted for the previous permit term and the administrative extension (January 2024–present). Due to a Division setup error, NetDMR was not configured to receive data, preventing DMR submissions. The Division requested five years of monitoring data in spreadsheet format, which was used for the review.

Findings:

- Missing 30-day geometric mean for fecal coliform due to inconsistent daily data.
- Missing annual total nitrogen data, preventing evaluation of the 402 lbs/acre/year limit.
- One flow exceedance: 2.20 Mgal/d limit exceeded on August 19, 2022.

Inspection Findings (preliminary):

- Missing signage at the land application site.
- Evidence of nutrient buildup in a storage pond.

The Facility submitted an RWMP on December 27, 2016. While it does not control influent quality from NLVWRF, it is responsible for irrigation volume and nutrient management. Total nitrogen applied remains unknown due to missing DMRs. No inspections occurred during the previous term.

Proposed Effluent Limitations

The discharge shall be limited and monitored as specified below:

Re-use Discharge Limitations Table for Sample Location 001 (Land Application Site) To Be Reported Quarterly^[1]

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Coliform, fecal general	Daily Maximum		<= 23 Colony Forming Units per 100ml T (CFU/100mL) ^[2]	Prior to Reuse	001	Daily When Discharging	DISCRT
Coliform, fecal general	30 Day Geometric Mean		<= 2.2 Colony Forming Units per 100ml T (CFU/100mL) ^[2]	Prior to Reuse	001	Daily When Discharging	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Reuse	001	Monthly When Discharging	DISCRT
Flow rate	Daily Maximum	<= 2.20 Million Gallons per Day (Mgal/d)		Prior to Reuse	001	Continuous	METER
Flow rate	30 Day Average	<= 2.20 Million Gallons per Day (Mgal/d)		Prior to Reuse	001	Continuous	METER

Notes (Re-use Discharge Limitations Table):

1. During irrigation periods, data may be obtained from the North Las Vegas Water Reclamation Facility (NLVWRF) and reported in Permittee DMRs.
2. Reporting for fecal coliform can be done in either MPN/100 mL or CFU/100 mL

Re-use Discharge Limitations Table for Sample Location 001 (Land Application Site) To Be Reported Annually

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Nitrogen, total	Annual Total	<= 402 Pounds per Year (lb/yr) ^[1]		Prior to Reuse	001	Annual	CALCTD
Nitrogen, total	Annual Mass Loading	M&R Pounds per Year (lb/yr) ^[2]		Prior to Reuse	001	Annual	CALCTD

Notes (Re-use Discharge Limitations Table):

- To be reported as pounds per acre per year (lbs/ac-yr). Refer to WTS-1B: General Criteria for Preparing a Reclaimed Water Management Plan (page 20, Worksheet 2-C).

$$\text{Effluent N Applied (lbs/ac-yr)} = \sum (\text{Mgal/d Applied} \times \text{Effluent N Conc. (mg/L)} \times 8.34 \times \text{Days/month}) \div \text{Acres}$$
- Report the percentage of nitrogen uptake (lbs/ac-yr). Refer to WTS-1B: General Criteria for Preparing a Reclaimed Water Management Plan (Page 19, Worksheet 2-B) and WTS-1C: Nutrient Management for Reuse & Biosolids Sites.

$$\text{Monthly U (lb/ac-mo)} = \text{U (lb/ac-yr)} \times \text{ET (in/mo)} \div \text{ET (total in/yr)}$$

Summary of Changes From Previous Permit

Modified table for Reuse Discharge Limitations for Sample Location 002 (Land Application Site) To Be Reported Annually. This modification includes the addition of a monitoring requirement for total pounds of nitrogen removed per year and the former footnotes were updated.

Changed Monitoring Location in Re-use Discharge Limitations Table for Sample Location 002 (Land Application Site) To Be Reported Annually from “Prior to Irrigation” to “Prior to Reuse”.

Deleted Limit Set and Outfall monitoring at Outfall 001 at the Intake Structure. All monitoring was updated to occur at the new outfall 001 at the Land Application Site previously monitored by Outfall 002.

Technology Based Effluent Limitations

Technology based effluent limitations are not applicable to 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 effluent limitations are not applicable to this permit.

Basis for Effluent Limitations

Fecal coliform is required to be monitored to assess the quality of reclaimed water being applied and for the protection of human health and the environment.

The proposed permit retains the requirement to report the total nitrogen applied to ensure groundwater of the State is not being degraded.

The proposed permit retains the requirement to report the total nitrogen uptake to ensure groundwater of the State is not being degraded.

The proposed permit retains the requirements to restrict public access to the Facility and restrict human contact with the reclaimed water as part of the approved uses of Beneficial Reuse Category B per NAC 445A.2764.

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 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	The standard boilerplate conditions for Monitoring and Reporting have been reviewed in relation to the scope and requirements of this permit. The following section is determined to be not applicable and is therefore excluded from the permit conditions: Section C.9 – Removed Substances: “Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be properly disposed as described in the SWMP (Stormwater Management Program).” <i>This condition is not applicable to this permit due to the absence of wastewater treatment or pollutant removal activities that would generate such materials.</i> All other Monitoring and Reporting conditions remain applicable and must be fulfilled as outlined in the permit documentation.
	Clarification and Addition to Section B.RU.8 – Public Access and Contact Restrictions

Item #	Description
2	Section B.RU.8 requires that irrigation areas and ponds be posted with signage clearly stating that reclaimed water is in use and that contact should be avoided, where applicable. It also requires that reclaimed water infrastructure be identified by color marking or metal tags, and that all outlets be appropriately labeled at the point of use. To further support public awareness and minimize the risk of human contact with reclaimed water, the following clarification is added: “The Permittee shall include a statement on all golf course scorecards advising players to avoid contact with reclaimed water.” This addition reinforces the existing signage and labeling requirements by providing a direct communication method to golf course patrons.
3	Clarification of Section A.2.7 – Onsite Document Requirements Section A.2.7 currently requires that copies of the permit, any subsequent modifications, and the O&M Manual be maintained at the permitted facility at all times. For this permit, the Reclaimed Water Management Plan (RWMP) shall be maintained onsite in place of the O&M Manual. This clarification is necessary to ensure that facility personnel have immediate access to the RWMP, which governs the safe and compliant use of reclaimed water at the site. During the compliance inspection, it was noted that the golf course manager did not have a copy of the RWMP available onsite.

Discharges From Future Outfalls/ Planned Facility Changes

There are no planned discharges from future outfalls or Facility changes.

Corrective Action Sites

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

Wellhead Protection Program

There is a Public Water Supply (PWS) well located approximately on site to the outfall that has a depth of approximately 804 feet with a screen from 302 to 778 feet. A second well is located 2800 feet to the west of the outfall that has a depth of approximately 650 with a screen from 290 to 630 feet. A third well is located 730 feet to the east of the outfall that has a depth of approximately 1000 with a screen from 320 to 980 feet. The outfall is located in the Drinking Water Protection Area of the wells, which is defined by a 3,000 foot

radius around a PWS well. The outfall is not located in a Wellhead Protection Area (WHPA), which represents an approximate 10year capture zone of a well. The wells are at minimal risk based on the confined aquifer and the well structures and depths.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee shall submit two (2) copies (one hard copy and one electronic copy) of a Reclaimed Water Management Plan (RWMP) to the Division for review and approval. The RWMP shall follow guidance document <i>WTS1B: General Design Criteria for Preparing a Reclaimed Water Management Plan</i> .	12/28/2026
2	All DMRs shall be submitted electronically through the Nevada NetDMR website. https://NetDMR.ndep.nv.gov/NetDMR/public/home.htm	1/28/2026

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Annual DMR	Annually	1/28/2026
2	Annual Report	Annually	1/28/2026
3	Monthly DMRs	Quarterly	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. **10/13/2025**, 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: **Tiffany Barulich**

Date: **9/5/2025**

Title: **Associate Engineer**