FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: SUN CITY MACDONALD RANCH COMMUNITY ASSOC INC

2020 HORIZON RIDGE PKWY
HENDERSON, NV 89012

Permit Number: NS0095038

Permit Type: GROUNDWATER DISCHARGE

Designation: GROUNDWATER

New/Existing: EXISTING

Location: DESERT WILLOW GOLF COURSE, CLARK
2020 HORIZON RIDGE PKWY, HENDERSON, NV 89012
LATITUDE: 36.006389, LONGITUDE: -115.076667
TOWNSHIP: T22S, RANGE: R62E, SECTION: S29

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Latitude	Longitude	Receiving Water
001	EFFLUENT REUSE	External Outfall		36.00770810	-115.076399	GROUNDWATER

Permit History/Description of Proposed Action
The Permittee, Sun City MacDonald Ranch Community Association Inc., has applied for the renewal of permit NS0095038 for the Desert Willow Golf Course, located at 2020 West Horizon Ridge Parkway, in Henderson, within Clark County, Nevada. The Permittee proposes to continue to use reclaimed water to irrigate golf course landscaping and fill associated pond areas falling within the course's boundary.

This permit was first issued on May 3, 1996. The most recent permit was issued on October 1, 2013, and expired on September 30, 2018; the permit has been administratively continued since.

Facility Overview
The Desert Willow Golf Course (DWGC) is composed of a clubhouse and 18-hole golf course, with common areas encompassing approximately 82 acres total. The golf course is irrigated with reclaimed water supplied by the Kurt R. Segler Water Reclamation Facility (KRSWRF), which discharges to the Green Valley Reclaimed Water Distribution System (GVRWDS) and the Southwest Water Reclamation Facilities (SWRF), under KRSWRF permit NS0080003, then into a reclaimed water transmission main for applied use at various reuse sites throughout Henderson.

The KRSWRF, via the GVRWDS and the SWRF, supplies Desert Willow Golf Course with Category B bacteriological quality reclaimed water per Nevada Administative Code (NAC) 445A.276. The reclaimed water is initially discharged into a synthetic lined storage pond located near the 18th hole. There is a second pond that receives overflow from the first. The reclaimed water is pumped from the storage ponds as needed and applied via bubblers, popup sprayers, and rotary sprinklers. The golf course uses weather stations and Rainbird software to manage the system.

The site's Reclaimed Water Management Plan (RWMP) (formerly known as an Effluent Management

Plan) was last reviewed and approved by the Division on February 19, 2014. The Technical, Compliance, and Enforcement (TCE) Branch of the Bureau of Water Pollution Control requires RWMPs be updated every two (2) permit cycles which equates to every ten (10) years; therefore, an updated RWMP will need to be submitted to the Division for review and approval within 90 days of the permit's issuance date. The RWMP shall follow the Division's guidance document, WTS1B General Design Criteria for Preparing a Reclaimed Water Management Plan.

Outfall Summary
Outfall 001 – This external outfall is for the discharge of reclaimed water for irrigation of the golf course.

Effluent Characterization
Nevada State Network Discharge Monitoring Report (NetDMR) data, as reported from the years July 2019 to June 2024, was reviewed as part of this permit renewal process. The long-term average discharge flow rate for Outfall 001 was 0.689 million gallons per day (MGD). The daily maximum discharge flow rate for Outfall 001 is limited to 1.0 MGD. There were no exceedances.

The KRSWRF, via the GVRWDS and the SWRF, provides tertiary treated, partial denitrified, and disinfected reclaimed water which meets Category B bacteriological quality per Nevada Administrative Code (NAC) 445A.276 to the Desert Willow Golf Course; therefore, the reclaimed water should meet, at a minimum, a daily maximum fecal coliform of 23 colony forming units (CFU) / 100 mL and a 30-day geometric mean of 2.2 CFU / 100 mL. The long-term average for the weekly maximum fecal coliform was 3.1 CFU / 100 mL and a 30-day average of 1.0 CFU / 100 mL. The base limitations are to be revised to a “daily maximum” and “30-day geometric mean” with the issuance of the renewal permit (see Summary of Changes from Previous Permit under the Fact Sheet).

Nitrogen (mg/L): 14.37 mg/L based on a monthly reported value (averaged)

Pollutants of Concern
Pollutants of concern are any pollutants or parameters that are believed to be present in the discharge and could affect or alter the physical, chemical, or biological condition of the receiving water. Common pollutants of concern for partially denitrified reclaimed water are fecal coliform and nitrogen.

Receiving Water
Receiving water is groundwater of the State. Depth to groundwater at the site is more than 300 feet below ground surface (bgs). Based on this depth to groundwater level, there is no monitoring well requirement because impacts to groundwater are not anticipated.

Compliance History
The facility was in substantial compliance during the July 2019 to June 2024 reporting period.

Proposed Effluent Limitations
The discharge shall be limited and monitored by the Permittee as specified below.

Re-use Discharge Limitations Table for Sample Location 001 (External Outfall) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Coliform, fecal general[1]	30 Day Geometric Mean		<= 2.2 Colony Forming Units per 100ml T (CFU/100mL)[2]	Prior to Irrigation	001	Weekly	DISCRT
Coliform, fecal general[1]	Daily Maximum		<= 23 Colony Forming Units per 100ml T (CFU/100mL)[2]	Prior to Irrigation	001	Weekly	DISCRT
Flow rate	Daily Maximum	< 1.0 Million Gallons per Day (Mgal/d)		Prior to Irrigation	001	Continuous	METER
Flow rate	30 Day Average	< 1.0 Million Gallons per Day (Mgal/d)		Prior to Irrigation	001	Continuous	METER
Nitrogen, total[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Irrigation	001	Weekly	DISCRT

Notes (Re-use Discharge Limitations Table):

1. The Permittee may use the monitoring data submitted under Permit NS0080003, but shall report the data separately in the Discharge Monitoring Reports associated with this permit.
2. CFU or MPN/100 mL.

Re-use Discharge Limitations Table for Sample Location 001 (External Outfall) To Be Reported Annually

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Nitrogen, total	Annual Mass Loading	M&R Pounds per Year (lb/yr)[1]		Prior to Reuse	001	Annual	CALCTD
Nitrogen, total[2]	Minimum Value		M&R Percent (%)	Prior to Reuse	001	Annual	CALCTD

Notes (Re-use Discharge Limitations Table):

1. To be reported as pounds per acre per year (lbs/acre/year), refer to Page 20 of WTS-1B: General Criteria for Preparing a Reclaimed Water Management Plan. This formula is below:
   Effluent N Applied = (MGD Applied x Effluent N Conc. (mg/L) x 8.34 x # days/mo.) ÷ # Acres.
2. Report the percentage of nitrogen uptake. Refer to Technical Sheets WTS1B: General Criteria for Preparing a Reclaimed Water Management Plan and WTS1C Nutrient Management for Reuse & Biosolids Sites.

Summary of Changes From Previous Permit
Coordinates were revised to reflect actual location of Outfall 001. These are N(orth) 36.0077081, W(est) -115.0763990.

Facility street address was revised from **"2048 High Mesa Drive"** to **"2020 Horizon Ridge Parkway"** to match Clark County Assessor's mailing address for the golf course parcels, and physical address of club house, behind which lies the golf course itself. No physical street address was assigned to the parcels on the Clark County website.

Under the Re-Use Discharge Limitation Table, the following revisions were done:

- Coliform changed from **"Weekly Maximum"** to **"Daily Maximum"**, along with changing the concentration unit from **"Most Probable Number per 100 ml T (MPN/100)"** to **"Colony Forming Units per 100 ml T (CFU/100mL)".**

- Coliform changed from **"30-Day Average"** to **"30-Day Geometric Mean"**, along with changing the concentration unit from **"Most Probable Number per 100 ml T (MPN/100)**" to **"Colony Forming Units per 100 ml T (CFU/100mL)".**

- Nitrogen changed from **"Value"** to **"Daily Maximum"**, now with a concentration of **"M&R (Monitor & Report)"**, and from a **"Monthly"** measurement frequency to **"Weekly".**

Additional parameters were added to Outfall 001 for Annual reporting period being:

- Nitrogen, total, with a "**Annual Mass Loading**" base, an "**M&R Pounds per Year (lb/yr)**" quantity, a "**Prior to Reuse**" monitoring location, an "**Annual**" measurement frequench, and a "**Calctd**" sample type.

- Nitrogen, total, with a "**Minimum Value**" base, an "**M&R Percent (%)**" concentration, a "**Prior to Reuse**" monitoring location, an "**Annual**" measurement frequency, and a "**Calctd**" sample type.

Along with the footnotes:

To be reported as pounds per acre per year (lbs/acre/year), refer to Page 20 of WTS1B: General Criteria for Preparing a Reclaimed Water Management Plan. This formula is below:
Effluent N Applied = (MGD Applied x Effluent N Conc. (mg/L) x 8.34 x #days/mo.) ÷ # Acres.

2. Report the percentage of nitrogen uptake. Refer to Technical Sheets WTS1B: General Criteria for

Preparing a Reclaimed Water Management Plan and WTS1C Nutrient Management for Reuse & Biosolids Sites.

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 establishes the requirement to report the total nitrogen applied to ensure groundwater of the State is not being degraded.

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

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
See the Special Approvals/Conditions table below:

SA – Special Approvals / Conditions Table

There are no Special Approval / Condition items

Discharges From Future Outfalls/ Planned Facility Changes
The Permittee does not anticipate the need for future outfalls or changes to the facility.

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

Wellhead Protection Program

This facility is not located within a Drinking Water Protection Area or a Wellhead Protection Area established for any well sources.

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 WTS1B: General Design Criteria for Preparing a Reclaimed Water Management Plan.	8/1/2025

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Discharge Monitoring Reports	Quarterly	7/28/2025
2	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. **4/11/2025,** 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: **Melissa Hanson**
Date: **3/6/2025**
Title: **Staff II Engineer**