



FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: CLARK COUNTY PARKS AND REC.
2601 E. SUNSET RD.
LAS VEGAS, NV - 89120

Permit Number: NS0087073

Location: THE CLUB AT SUNRISE, CLARK
5483 CLUB HOUSE DRIVE, LAS VEGAS, NV - 89142
LATITUDE: 36.1375, LONGITUDE: -115.048611
TOWNSHIP: 21 S, RANGE: 62 E, SECTION: 4, 9

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Outfall City	Outfall State	Outfall Zip	Outfall County	Latitude	Longitude	Receiving Water
001	GOLF COURSE	Land Application Site		LAS VEGAS	NV	89142	CLARK	36.142850	-115.056267	GROUNDWATER
002	MONITORING WELL 10G	Monitoring Well		LAS VEGAS	NV	89142	CLARK	36.142394	-115.052675	GROUNDWATER
003	MONITORING WELL 11G2	Monitoring Well		LAS VEGAS	NV	89142	CLARK	36.140578	-115.066275	GROUNDWATER
004	MONITORING WELL 13T	Monitoring Well		LAS VEGAS	NV	89142	CLARK	36.141369	-115.054564	GROUNDWATER

General:

The Club at Sunrise Golf Course uses Category B reclaimed water supplied by the Flamingo Water Resource Center - Permit NV0021261 - to irrigate approximately 133-acres of turf grasses and common area landscaping. The turf consists primarily of bermuda grass, over-seeded with rye grass in the winter. A separate potable water system supplied by the Las Vegas Valley Water District is used to irrigate greens.

Reclaimed water is delivered through an eight (8)-inch underground pipeline that discharges into a 6.0-million-gallon capacity storage pond, which subsequently supplies the reuse irrigation system. The pond is lined with a 40-mil High Density Polyethylene (HDPE) synthetic liner. Construction specifications indicate the pond also has the capacity to contain local runoff from a 100-year, 24-hour storm event.

Use of reclaimed water at the golf course has been authorized since 1993. Three (3) groundwater monitoring wells (10G, 11G2, and 13T) were installed to complement data collected from the on-site deep production well, P3. Irrigation using treated effluent is conducted in accordance with an Effluent Management Plan (EMP) submitted to, and approved by the Nevada Division of Environmental Protection, Bureau of Water Pollution Control (BWPC).

Discharge Characteristics:

The golf course is configured around the confluence of the Las Vegas Wash and the Flamingo Wash, which is located north-northwest of the course. The course meanders through residential areas, bounded

by South Nellis Boulevard to the east and Vegas Valley Drive along the most southeastern portion of the property. Irrigation is strictly limited to areas within golf course property boundaries and surface discharge to the Las Vegas Wash, the Flamingo Wash, or their tributaries is prohibited.

The 30-day average fecal coliform limit is set at 2.2 colony forming units (CFU), or the most probable number (MPN)/100 mL of fecal coliform. The daily maximum fecal coliform is 23 CFU/100 mL. This is Category B reclaimed water and, in accordance with NAC 445A.2764, public access to the area of use is controlled; and human contact with the reclaimed water cannot reasonably be expected to occur.

Receiving Water:

The receiving water is groundwater of the State via reclaimed water irrigation to groundwater. Groundwater is reportedly encountered at approximately 10-25 feet below grade surface (bgs). Groundwater at the golf course generally flows in an east-southeasterly direction toward the Las Vegas Wash and the Flamingo Wash.

Groundwater discharge limitations are based, in part, on primary drinking water standards in order to protect groundwater resources. Groundwater beneath the golf course has exhibited elevated concentrations of nitrate since monitoring under this permit began in 1993. It has been determined through groundwater studies and evaluation of discharge data that the elevated nitrogen concentrations are not likely the result of reuse irrigation. Monitoring of total nitrogen concentrations and reporting of nitrogen application (effluent and fertilizer) within the specifications of the BWPC-approved Effluent Management Plan (EMP) to ensure that groundwater is not further affected by golf course activities, will continue in the renewed permit. Groundwater monitoring will also continue.

Summary of Changes From Previous Permit:

Following is a summary of the changes from the previous permit:

NDEP has a revised permit numbering system so the permit number has been changed from NEV87073 to NS0087073. The type of permit has not changed due to this revised numbering system;

Specific nitrate sampling and reporting in the monitoring wells has been removed since the total nitrogen value reported includes nitrate. This is consistent with other reclaimed water discharge permits throughout the State; and

Monitoring Well P-3 has been removed from the permit since the well silted up after the flooding a couple years ago. Clark County Parks' Department believes that the other three monitoring well located strategically throughout the course will provide ample water quality data to determine whether the groundwater has been impaired though the use of reclaimed water. NDEP concurs with this conclusion.

Proposed Effluent Limitations:

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

Groundwater Monitoring Wells Table for Sample Location 003 (Monitoring Well 10G) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Water level relative to mean sea level ^[2]	Quarterly Maximum	M&R Feet (ft)		Groundwater	003	Quarterly	DISCRT
Depth to water level ft below landsurface ^[1]	Quarterly Maximum	M&R Feet (ft)		Groundwater	003	Quarterly	DISCRT
Chloride (as Cl)	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	003	Quarterly	DISCRT
Solids, total dissolved	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	003	Quarterly	DISCRT
Nitrogen, total	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	003	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Depth to Groundwater, ft.
2. Groundwater Elevation, feet (AMSL)

Groundwater Monitoring Wells Table for Sample Location 004 (Monitoring Well 11G2) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Depth to water level ft below landsurface ^[1]	Quarterly Maximum	M&R Feet (ft)		Groundwater	004	Quarterly	DISCRT
Chloride (as Cl)	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	004	Quarterly	DISCRT
Solids, total dissolved	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	004	Quarterly	DISCRT
Nitrogen, total	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	004	Quarterly	DISCRT
Water level relative to mean sea level ^[2]	Quarterly Maximum	M&R Feet (ft)		Groundwater	004	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Depth to Groundwater, ft.
2. Groundwater Elevation, feet (AMSL)

Groundwater Monitoring Wells Table for Sample Location 005 (Monitoring Well 13T) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Chloride (as Cl)	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	005	Quarterly	DISCRT
Solids, total dissolved	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	005	Quarterly	DISCRT
Nitrogen, total	Quarterly Maximum	<	M&R Milligrams per Liter (mg/L)	Groundwater	005	Quarterly	DISCRT
Depth to water level ft below landsurface ^[1]	Quarterly Maximum	M&R Feet (ft)		Groundwater	005	Quarterly	DISCRT
Water level relative to mean sea level ^[2]	Quarterly Maximum	M&R Feet (ft)		Groundwater	005	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Depth to Groundwater, ft.
2. Groundwater Elevation, feet (AMSL)

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

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Nitrogen, total ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Reuse	001	Daily	DISCRT
Nitrogen, total ^[1]	30 Day Average		M&R Milligrams per Liter (mg/L)	Prior to Reuse	001	Daily	DISCRT
Coliform, fecal, colony forming units ^[1]	Daily Maximum		<= 23 Colony Forming Units per 100ml T (CFU/100mL)	Prior to Reuse	001	Daily	DISCRT
Coliform, fecal, colony forming units ^[1]	30 Day Average		<= 2.2 Colony Forming Units per 100ml T (CFU/100mL)	Prior to Reuse	001	Daily	DISCRT
Flow rate	Daily Maximum	<= 1.5 Million Gallons per Day (Mgal/d)		Prior to Reuse	001	Continuous	METER
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse	001	Continuous	METER

Notes (Re-use Discharge Limitations Table):

1. Report the data from FWRC's DMRs.

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

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Nitrogen, total	Quarterly Total	<= 475 Pounds per Year (lb/yr)		Prior to Reuse	001	Quarterly	CALCTD ^[1]

Notes (Re-use Discharge Limitations Table):

- The total amount of nitrogen applied annually shall be reported in the Annual Report.

Rationale for Permit Requirements:

Monitoring is required to ensure that groundwaters of the State are not degraded. Monitoring is also required to assess the level of treatment being provided, and to determine compliance with discharge permit limits. The Permittee is in substantial compliance with its current discharge permit.

Fecal Coliform:

2.2 CFU MPN/100 mL Fecal Coliform - 30-Day Average
23 CFU MPN/100 mL Fecal Coliform - Monthly Maximum

Special Conditions:

SA – Special Approvals / Conditions Table

Item #	Description
1	The Permittee shall provide documentation in the Annual Report that it complies with the cross-connection control requirements of the local water purveyor.

Flow:

The permitted daily maximum flow is 1.5 million gallons per day.

Corrective Action Sites:

The facility is not within one mile of any Bureau of Corrective Actions (BCA) remediation site.

Wellhead Protection Program:

The Club at Sunrise is not located within a source water protection area.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee shall submit for NDEP's review and approval, a revised Effluent Management Plan (EMP) that complies with NDEP guidance document WTS-1B - <i>General Design Criteria for Preparing an Effluent Management Plan</i> . The EMP shall be prepared and stamped by a Nevada Registered Professional Engineer or other certified professional.	4/1/2017

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly DMRs	Quarterly	4/28/2017
2	Annual Report	Annually	1/1/2018

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 sent to 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. **12/15/2016**, 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.605.

Proposed Determination:

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

Prepared by: **Steve McGoff, P.E.**

Date: **6/25/2013**

Title: **Professional Engineer**