



FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: SIENA GOLF CLUB
10575 SIENA MONTE AVENUE
LAS VEGAS, NV - 89135

Permit Number: NS2002519

Location: SIENA GOLF CLUB, CLARK
10575 SIENA MONTE AVENUE, LAS VEGAS, NV - 89135
LATITUDE: 36.10888890, LONGITUDE: -115.326388
TOWNSHIP: 21 S, RANGE: 59 E, SECTION: 24

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	89135	CLARK	36.10888890	-115.326388	GROUNDWATER

General:

The Siena Golf Club will continue to receive tertiary treated disinfected effluent for reuse irrigation supplied by the Desert Breeze Water Resource Center (DBWRC) [NS2001509] of the Clark County Water Reclamation District . The quality of the effluent supplied to the Siena Golf Club meets NAC 445A.276 reuse Category A. The golf course was constructed in a way that facilitates reuse irrigation. The DBWRC reclaimed water will be blended in Siena storage lake #9 with potable water provided and managed by the Las Vegas Valley Water District (LVVWD) to provide the course with the required volume of water. The blend of reclaimed and potable water will be about 50-50. The relative percentages of potable and reclaimed water will vary with the seasonal irrigation demand. All six Siena lakes have ultraviolet, ozonation disinfection and aeration systems installed to provide a minimum of twenty turnovers of each lake in a 24-hour period to maintain lake clarity and water quality. A total of approximately 147 acres are irrigated on the golf course with the reclaimed and potable water blend supply. The water blend will be used for spray irrigation of 74.5 acres of turf grasses on the tees, greens, fairways and roughs with the remaining water supply balance used for drip irrigation of landscape trees and shrubs. This golf course has 18 greens with tees, fairways, roughs, and the adjacent course landscaping.

Discharge Characteristics:

The DBWRC will be providing a high quality disinfected reclaim water to the golf course. The DBWRC reclaim water supply made available for reuse has a total nitrogen concentration ranging from 11 to 18 mg/l and is disinfected by ultraviolet and chlorine processes. The Total Coliform limitation is set at 2.2 CFU or MPN/100 ml, 30-day average, the NAC 445A.276 bacteriological water quality requirement for reuse Category A. Therefore, in accordance with NAC 445A.2762, control of public access is not required; however, to the fullest extent possible, irrigation is to be accomplished in a manner so that human contact with spray irrigation does not occur.

Receiving Water:

Groundwater in the vicinity of the course has an elevation of approximately 700-800 feet below ground surface with groundwater flow direction east to southeast. The deep aquifer meets drinking water standards.

Due to the depth to groundwater, monitoring wells at the course are not required.

Summary of Changes From Previous Permit:

Due to a new permit naming convention at NDEP, Bureau of Water Pollution Control, Siena Golf Course permit ID has been changed from NEV2002519 to NS2002519. This change does not reflect a change in the type of permit being issued. NEV and NS permits are for groundwater discharges to the State of Nevada. These are not to be confused with "NV" permits which are reserved for NPDES Permitting.

In order to remain consistent with current NDEP policy and requirements of similar reuse facilities, the following items have been removed from the re-use discharge limitations table:

1. Nitrogen, Ammonia total (as N)
2. Nitrogen, Total Kjeldahl (as N)
3. Nitrite plus Nitrate Total 1 det. (as N)

The Nitrogen species listed above are accounted for within the Total Nitrogen monitored.

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 (Land Application Site) To Be Reported Monthly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Coliform, total general ^[1]	Monthly Maximum		<= 23 Colony Forming Units per 100ml T (CFU/100mL) ^[2]	Prior to Reuse	001	Weekly	DISCRT
Coliform, total general ^[1]	Monthly Geometric Mean		<= 2.2 Colony Forming Units per 100ml T (CFU/100mL) ^[2]	Prior to Reuse	001	Weekly	DISCRT
Flow rate	Daily Maximum	<= 2.2 Million Gallons per Day (Mgal/d)		Prior to Reuse	001	Continuous	METER
Flow rate	30 Day Average	<= 1.2 Million Gallons per Day (Mgal/d)		Prior to Reuse	001	Continuous	METER
Nitrogen, total ^[1]	Value		M&R Milligrams per Liter (mg/L)	Prior to Reuse	001	Monthly	DISCRT

Notes (Re-use Discharge Limitations Table):

1. Reported sample results may be obtained from the DWBRC permit NS2001509.
2. CFU or MPN/100ml.

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

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

Notes (Re-use Discharge Limitations Table):

1. Nitrogen Application Rate (lb/ac/year).
2. Pounds per acre/year. The total nitrogen applied (lb/acre-year) shall not be greater than the maximum yearly nitrogen application defined in the Effluent Management Plan.

Rationale for Permit Requirements:

Reclaimed water monitoring is required to assess the level of treatment being provided by the DBWRC, to assess the quality of the water delivered to the course by the LVVWD, to assess the management of recycled water usage, and to protect the local groundwater quality. Total Coliform and Total Nitrogen are required for monitoring the quality of reclaimed water being applied, and for protection of human health and the environment.

Fecal Coliform:

Total Coliform concentrations meet Reuse Category A standards (NAC 445A.276):

- 2.2 CFU or MPN/100ml (30-day average)
- 23 CFU or MPN/100ml (Monthly maximum)

Special Conditions:

SA – Special Approvals / Conditions Table

There are no Special Approval / Condition items

Flow:

The permitted 30-day average flow is 1.20 MGD and the maximum daily flow is 2.20 MGD, which is the maximum anticipated amount during the hot summer months. Flows are measured at the Siena Golf Course with reclaimed and potable water metering vaults using six inch magnetic flow meters prior to entering Siena storage lake #9 where blending occurs for course irrigation use.

Corrective Action Sites:

There are no Bureau of Corrective Actions remediation sites located within a one-mile radius from the center-point of the property.

Wellhead Protection Program:

The Siena Golf Course is not located within a Drinking Water Protection Area or a Wellhead Protection Area.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	<p>The Permittee shall provide the Division with an updated Effluent Management Plan (EMP). The submitted EMP shall address any changes in the operations procedures, or equipment used at the permitted facility. The Permittee shall not reuse treated effluent prior to having an EMP, pursuant to NAC 445A.275. The EMP shall be prepared and stamped by a Nevada Registered Professional Engineer with comprehensive knowledge of the project.</p> <p>Alternatively, the Permittee may submit a letter to the Division indicating that there have been no changes to the EMP, and that the operations are still valid for the Permittee's managed reclaimed water use site.</p>	10/1/2015

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly DMR	Quarterly	10/28/2015
2	Annual Report	Annually	1/28/2016

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. **4/24/2015**, 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: **Felicia Nichols**

Date: **3/12/2015**

Title: **Staff Engineer**