



# STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor

Leo M. Drozdoff, P.E., Director

Colleen Cripps, Ph.D., Administrator

## FACTSHEET (pursuant to NAC 445A.236)

**Permittee Name:** CLARK COUNTY WATER RECLAMATION DISTRICT  
5857 EAST FLAMINGO ROAD  
LAS VEGAS, NV - 89122

**Permit Number:** NS0050050

**Location:** BLUE DIAMOND WASTEWATER TREATMENT FACILITY, CLARK  
12451 BLUE DIAMOND ROAD, BLUE DIAMOND, NV - 89004  
LATITUDE: 36.047394, LONGITUDE: -115.386092  
TOWNSHIP: T22S, RANGE: R59E, SECTION: S8

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Outfall City	Outfall State	Outfall Zip	Outfall County	Latitude	Longitude	Receiving Water
001	INFLUENT METER	Influent Structure		BLUE DIAMOND	NV	89004	CLARK	36.047394	-115.386092	GROUNDWATER
002	SECONDARY EFFLUENT	External Outfall		BLUE DIAMOND	NV	89004	CLARK	36.047394	-115.386092	GROUNDWATER
MW1	WELL #1	Monitoring Well		BLUE DIAMOND	NV	89004	CLARK	36.04803333	-115.387255	GROUNDWATER
MW2	WELL #2	Monitoring Well		BLUE DIAMOND	NV	89004	CLARK	36.04663888	-115.384805	GROUNDWATER

### General:

The Permittee, Clark County Water Reclamation District (CCWRD), has applied for the renewal of Permit NS0050050 for the Blue Diamond Wastewater Treatment Facility (BDWWTF). The facility provides sewer service to local homes, businesses, schools, and churches in Blue Diamond, Nevada. BDWWTF also receives domestic wastewater from the nearby James Hardie Gypsum Plant. Flow is received via an 8-inch diameter sewer interceptor from Blue Diamond and 4-inch sewer line from the gypsum facility. The facility is serviced on a weekly basis. The headworks is equipped with a flow meter which measures the combined flow from Blue Diamond community and the gypsum plant. BDWWTF is located approximately 1.5 miles east of the Blue Diamond townsite and has a treatment capacity of 44,000 gallons per day. The facility has a 0.65-acre primary treatment pond, which is asphalt lined and aerated. The effluent from the primary treatment pond is discharged to a 1.45-acre rapid infiltration basin (RIB).

CCWRD has scheduled civil improvements for BDWWTF to begin in 2015 and to be completed by June 2016. The revised facility will consist of two lined treatment ponds and two RIBs. It will then have a treatment capacity of 200,000 gallons per day.

### Discharge Characteristics:

Discharge monitoring reports from January 2012 to December 2013 show the raw sewage influent average flow rate ranged between 0.012 and 0.018 MGD. The maximum flow was reported as 0.025 MGD. Below is a summary of secondary effluent characteristics reported by BDWWTF from January 2012 to December 2013:

- BOD (5-day, 20 degrees Celsius): quarterly average range was between 28.5 and 67.0 mg/L;
- TSS: quarterly average ranged between 33.0 and 217.0 mg/L; and

- pH: ranged between 7.44 and 9.11.

Two monitoring wells, MW1 and MW2, are located upgradient and downgradient of BDWWTF, respectively. Analysis of groundwater samples collected from MW1 provides background groundwater quality data. Analytical data obtained from groundwater samples collected from MW2 are to monitor for potential groundwater impacts from the BDWWTF. Below is a summary of groundwater data collected from MW1 between 2012 and 2013:

- Solids, total dissolved (TDS): quarterly average ranged between 492 and 554 mg/L;
- Chloride: quarterly average ranged between 8.68 and 11.2 mg/L; and
- Nitrogen, total: quarterly average ranged between 0.88 and 1.0 mg/L.

Below is a summary of groundwater data collected from MW2 between 2012 and 2013:

- Solids, total dissolved (TDS): quarterly average ranged between 512 and 602 mg/L;
- Chloride: quarterly average ranged between 14.0 and 36.9 mg/L; and
- Nitrogen, total: quarterly average ranged between 1.1 and 2.2 mg/L.

#### **Receiving Water:**

Groundwaters of the State via evaporation and percolation from treatment ponds at BDWWTF.

#### **Summary of Changes From Previous Permit:**

Due to a new permit naming convention at NDEP, Bureau of Water Pollution Control, the permit identification has been changed from NEV50050 to NS0050050. 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 maintain consistency with current NDEP policy and requirements of similar facilities, the following changes to this permit have been made from the previous permit:

- The effluent BOD<sub>5</sub> discharge limit of 116 lbs/day has been modified to effluent CBOD concentration limit of 40 mg/L (monthly average) and 60 mg/L (daily maximum);
- Monthly monitoring (M&R) has been added for total nitrogen-N concentration (mg/L) in raw sewage influent and secondary effluent;
- Measurement frequency for monitoring of raw sewage influent has been modified from quarterly to monthly;
- Measurement frequency for monitoring of secondary effluent has been modified from quarterly to monthly;
- Monitoring of nitrate-N has been removed; and
- Total nitrogen-N in MW2 has been modified from M&R to limit of 10 mg/L.

In addition, Reuse Flow (Outfall 2) has been removed from this permit. In the past, BDWWTF intended to apply treated effluent to vegetation and associated landscaping at the facility. At this time, BDWWTF has no future plans for reuse of treated effluent.

#### **Proposed Effluent Limitations:**

The discharge shall be limited and monitored by the Permittee as specified in the following tables:

### WWTP Discharge Limitations Table for Sample Location 001 (Influent Structure) To Be Reported Monthly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	Daily Maximum	<= 0.044 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	001	Continuous	METER
BOD, carbonaceous, 05 day, 20 C	Value		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	001	Monthly	DISCRT
Solids, total suspended	Value		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	001	Monthly	DISCRT
pH	Value		M&R Standard Units (SU)	Raw Sewage Influent	001	Monthly	DISCRT
Nitrogen, total	Value		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	001	Monthly	DISCRT

### WWTP Discharge Limitations Table for Sample Location 002 (External Outfall) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
BOD, carbonaceous, 05 day, 20 C	Daily Maximum <sup>[1]</sup>		<= 60.0 Milligrams per Liter (mg/L)	Effluent Gross	002	Monthly	DISCRT
BOD, carbonaceous, 05 day, 20 C	Monthly Average <sup>[1]</sup>		<= 40.0 Milligrams per Liter (mg/L)	Effluent Gross	002	Monthly	DISCRT
Solids, total suspended	Monthly Average <sup>[1]</sup>		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Monthly	DISCRT
pH, minimum	Monthly Minimum <sup>[2]</sup>		>= 6.0 Standard Units (SU)	Effluent Gross	002	Monthly	DISCRT
Solids, total suspended	Daily Maximum <sup>[1]</sup>		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Monthly	DISCRT
pH, maximum	Monthly Maximum <sup>[2]</sup>		<= 9.0 Standard Units (SU)	Effluent Gross	002	Monthly	DISCRT
Nitrogen, total	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	002	Monthly	DISCRT

#### Notes (WWTP Discharge Limitations Table):

1. If only one sample is taken during the monitoring period, enter the result as both the daily maximum and monthly average.
2. If only one sample is taken during the monitoring period, enter the result as both the monthly minimum and maximum.

### Groundwater Monitoring Wells Table for Sample Location Mw1 (Monitoring Well) To Be Reported Monthly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Depth to water level ft below landsurface	Value	M&R Feet (ft)		Groundwater	MW1	Quarterly	DISCRT
Water level relative to mean sea level	Value	M&R Feet (ft)		Groundwater	MW1	Quarterly	DISCRT
Chloride (as Cl)	Value		M&R Milligrams per Liter (mg/L)	Groundwater	MW1	Quarterly	DISCRT
Solids, total dissolved	Value		M&R Milligrams per Liter (mg/L)	Groundwater	MW1	Quarterly	DISCRT
Nitrogen, total	Value		M&R Milligrams per Liter (mg/L)	Groundwater	MW1	Quarterly	DISCRT

**Groundwater Monitoring Wells Table for Sample Location Mw2 (Monitoring Well) To Be Reported Monthly**

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Nitrogen, total	Value		<= 10.0 Milligrams per Liter (mg/L)	Groundwater	MW2	Quarterly	DISCRT
Depth to water level ft below landsurface	Value	M&R Feet (ft)		Groundwater	MW2	Quarterly	DISCRT
Water level relative to mean sea level	Value	M&R Feet (ft)		Groundwater	MW2	Quarterly	DISCRT
Chloride (as Cl)	Value		M&R Milligrams per Liter (mg/L)	Groundwater	MW2	Quarterly	DISCRT
Solids, total dissolved	Value		M&R Milligrams per Liter (mg/L)	Groundwater	MW2	Quarterly	DISCRT

**Rationale for Permit Requirements:**

Monitoring is required to ensure that the treatment plant capacity is not exceeded, to assess the quality of the effluent being discharged, and to monitor groundwater quality.

**Special Conditions:**

SA – Special Approvals / Conditions Table

Item #	Description
1	This permit is authorized by NDEP based on the following: the Final Civil Improvement Plans for BDWWTF are reviewed by NDEP by third quarter of 2015; and construction is completed by end of 2016.
2	The Permittee has requested to have the option to apply for an increase in flow rate during the 5-year permit cycle. A letter shall be submitted to the Division for review at least 30 days prior to the increase in flow. Along with the letter, the Permittee shall send the appropriate additional payment. The increase in flow rate shall constitute a minor modification to the permit and will not require public notice.
3	This permit, any subsequent modifications, the O&M Manual, and operations logbook, shall be maintained and kept at permitted facility (site) or readily available upon request by NDEP and other local agencies [Sections A.10, B.TF.7, B.PB.7.2, and B.PB.9.4].
4	Laboratory reports for quantitative analyses conducted by State of Nevada certified laboratories must accompany DMR submittals or be readily available upon request by NDEP and other local agencies [Section A.4.4].
5	Disregard Section B.PB.13 - Double Lined Leak Detection Systems.

**Flow:**

Currently, the 30-day average operational flow of the facility is approximately 0.013 MGD. The facility is designed to treat a maximum flow rate of 0.044 MGD. The Permittee has requested no change to the 30-day average flow and maximum daily flow limits of 0.044 MGD at this time. Therefore, the renewed permit will remain at the 30-day average and maximum daily flow rate of 0.044 MGD. However, the revised facility which is scheduled to be completed by June 2016 will have the capacity to treat 0.200 MGD. The Permittee has requested to have the option to apply for an increase in flow rate during the 5-year permit cycle. The increase in flow rate shall constitute a minor modification to the permit and will not require public notice.

**Corrective Action Sites:**

There are no NDEP Bureau of Corrective Actions remediation sites within a one-mile radius of this facility.

**Wellhead Protection Program:**

This facility is located within 3,000 feet of one community public water system well. A wellhead protection area has not been established for this area.

**Schedule of Compliance:**

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee shall submit two copies of an updated O&M (Operation and Maintenance) Manual for review by the Division. The O&M Manual shall be prepared by a Nevada Registered Professional Engineer or other Division-approved qualified person. <sup>[1]</sup>	10/1/2016

Notes (Schedule of Compliance Table):

- O&M Manuals prepared by a Nevada Registered Professional Engineer must be signed and stamped in accordance with NAC 625.610.

**Deliverable Schedule:**

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

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly Discharge Monitoring Reports	Quarterly	1/28/2015
2	Annual Report	Annually	1/28/2015

**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. **11/10/2014**, 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: **Kenneth Greene**

Date: **10/3/2014**

Title: **P.E.**