



STATE OF NEVADA

Department of Conservation & Natural Resources

Brian Sandoval, Governor

Leo M. Drozdoff, P.E., Director

DIVISION OF ENVIRONMENTAL PROTECTION

Colleen Cripps, Ph.D., Administrator

FACTSHEET (pursuant to NAC 445A.236)

Permittee Name: CCWRD-LAUGHLIN TREATMENT FAC.
450 BRUCE WOODBURY DR.
LAUGHLIN, NV - 89029

Permit Number: NV0021563 - [Renewal]

Location: LAUGHLIN WATER RECLAMATION FACILITY, CLARK
450 BRUCE WOODBURY DRIVE, LAUGHLIN, NV - 89029
LATITUDE: 35.1675, LONGITUDE: -114.569722
TOWNSHIP: T32S, RANGE: R66E, SECTION: S13

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Outfall City	Outfall State	Outfall Zip	Outfall County	Latitude	Longitude	Receiving Water
001	COLORADO RIVER OUTFALL	External Outfall		LAUGHLIN	NV	89029	CLARK	35.1675	-114.569722	COLORADO RIVER
01D	DOWNSTREAM MONITORING	Receiving Water - Ambient		LAUGHLIN	NV	89029	CLARK	35.1675	-114.569722	COLORADO RIVER
01U	UPSTREAM MONITORING	Receiving Water - Ambient		LAUGHLIN	NV	89029	CLARK	35.1675	-114.569722	COLORADO RIVER
INF	INFLUENT	Influent Structure		LAUGHLIN	NV	89029	CLARK	35.1675	-114.569722	NA

General:

The Laughlin Water Reclamation Facility is an advanced wastewater treatment plant designed to treat domestic sewage, generated by residential and commercial users including nine hotel-casinos, an inn, RV parks, a marina, and park facilities within the service area, to meet secondary treatment standards. The present 8.0 MGD plant has been in operation since June, 1994. Wastewater has been discharged from the facility to the Colorado River since December 1, 1994. Treated effluent is also available for reuse via landscape irrigation at approved sites. The treatment plant process consists of screening and flow equalization, denitrification in an anoxic mixed liquor zone, followed by biological treatment in an activated sludge process in up to three oxidation ditches, followed by secondary clarification. Secondary effluent receives advanced treatment by alum addition to flocculating clarifiers, filtration on automatic backwashing sand filters, followed by chlorination for disinfection for discharges; effluent is dischlorinated prior to the Colorado River discharge. Solids are treated by dissolved air flotation (DAF) thickening, centrifugation with lime stabilization, and landfill disposal.

Discharge Characteristics:

Effluent and downstream river monitoring ensure that Colorado River standards are not impacted by the discharge of treated effluent. The effluent is generally of high quality and for the most part met the permit limits, and the downstream water quality was generally good during the previous 5 years. There were 7 permit limit exceedances identified during the previous 5 years. There was one exceedance downstream of unionized ammonia; the permit limit is 0.02 mg/l, and in Sept 2008 the maximum value was 0.024 mg/l. There were 6 exceedances of effluent permit limits: 4 exceedances of total phosphorus above the permit limit of 0.85 mg/l, with the highest maximum value of 2.2 mg/l; there have been no TP exceedances since April 2008; and 2 exceedances of total residual chlorine above the permit limit of 0.10 mg/l, with a maximum value of 0.37 mg/l; there have been no TRC exceedances since June 2008.

Receiving Water:

The receiving water is the Colorado River. The applicable standards are cited in NAC 445A.2146. Additional standards for toxic materials are cited in NAC 445A.1236.

Summary of Changes From Previous Permit:

The former TDS limit increase of 400 mg/l between 01U and 001 has been changed to monitor and report. The change is due to a waiver from the Colorado River Salinity Control Policy being granted by NDEP in July, 2012. Treatment of background TDS is not feasible or economically viable. No groundwater discharge is conducted, nor will be allowed under this permit; therefore, several outfalls for reuse and land application were removed from the permit, and groundwater monitoring is no longer required. In the future if reuse sites indicate interest in the treated effluent a separate groundwater discharge permit will be applied for and obtained prior to the effluent being reused. The nitrogen species monitoring has been removed and replaced with Total Nitrogen monitoring only. Total Organic Carbon (TOC) is now an approved analytical surrogate for BOD analyses; BOD will be calculated from the TOC analytical, and reported as BOD. The former permit set a TDS limit of 400 mg/l change between the outfall and the downstream monitoring location. Since then a waiver has been approved, eliminating the limit, but the Colorado River Salinity Forum goal of no more than 400 mg/l increase from upstream to downstream is applicable. Refer to Permit Section B.SC.1. The goal remains but a waiver from the previous permit 400 mg/l limit has been approved.

Proposed Effluent Limitations:

See tables below.

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

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	S a m p l e Type
Phosphorus, total (as P)	30 Day Average		<= 0.85 Milligrams per Liter (mg/L)	Effluent Gross	001	Three Per Week	COMPOS
Phosphorus, total (as P)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Three Per Week	COMPOS
Nitrogen, total	30 Day Average		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Weekly	COMPOS
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Weekly	COMPOS
Solids, total dissolved	Weekly Maximum	[4]	M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Weekly	COMPOS
Chlorine, total residual	7 Day Average		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Daily	DISCRT
Chlorine, total residual	Daily Maximum		<= 0.10 Milligrams per Liter (mg/L)	Effluent Gross	001	Daily	DISCRT
Flow rate	30 Day Average	<= 8 Million Gallons per Day (Mgal/d)		Effluent Gross	001	Continuous	CONTIN
Flow rate	Daily Maximum	<= 8 Million Gallons per Day (Mgal/d)		Effluent Gross	001	Continuous	CONTIN
BOD, 5-day, 20 deg. C ^[1]	30 Day Average		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Five Per Week	COMPOS

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

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
BOD, 5-day, 20 deg. C ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross	001	Five Per Week	COMPOS
BOD, carbonaceous, 05 day, 20 C ^[1]	30 Day Average		<= 15 Milligrams per Liter (mg/L)	Effluent Gross	001	Five Per Week	COMPOS
BOD, carbonaceous, 05 day, 20 C ^[1]	Daily Maximum		<= 30 Milligrams per Liter (mg/L)	Effluent Gross	001	Five Per Week	COMPOS
Solids, total suspended ^[1]	30 Day Average		<= 15 Milligrams per Liter (mg/L)	Effluent Gross	001	Five Per Week	COMPOS
Solids, total suspended ^[1]	Daily Maximum		<= 30 Milligrams per Liter (mg/L)	Effluent Gross	001	Five Per Week	COMPOS
pH, minimum	Weekly Minimum		>= 6 Standard Units (SU)	Effluent Gross	001	Weekly	DISCRT
pH, maximum	Weekly Maximum		<= 9 Standard Units (SU)	Effluent Gross	001	Weekly	DISCRT
Coliform, fecal general ^[2]	30 Day Average Geometric		<= 23 Most Probable Number per 100ml T (MPN/100m L) ^[3]	Effluent Gross	001	Weekdays	DISCRT
Coliform, fecal general ^[2]	Daily Maximum		<= 100 Most Probable Number per 100ml T (MPN/100m L) ^[3]	Effluent Gross	001	Weekdays	DISCRT
BOD, 5-day, percent removal ^[1]	Monthly Average Minimum		>= 85 Percent (%)	Effluent Gross	001	Five Per Week	CALCTD

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

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	S a m p l e Type
BOD, carb-5 day, 20 deg C, percent removal ^[1]	Monthly Average Minimum		>= 85 Percent (%)	Effluent Gross	001	Five Per Week	CALCTD
Solids, suspended percent removal ^[1]	Monthly Average Minimum		>= 85 Percent (%)	Effluent Gross	001	Five Per Week	CALCTD

Notes (Discharge Limitations Table):

1. BOD, CBOD and TSS samples shall be collected daily, Monday through Thursday, and once between Friday and Sunday, for a total of 5 samples/week. BOD samples may be collected as Total Organic Carbon samples as a BOD surrogate; BOD will be calculated from the TOC analytical data and reported as BOD data.
2. Samples shall be collected every weekday, Monday through Friday.
3. The discharge shall not exceed a log mean of 23 CFU/100 ml over a 30-day period, nor may more than 10 percent of the total samples collected exceed 100 CFU/100 ml.
4. TDS concentrations at the outfall shall be compared to TDS concentrations in the River below the outfall. There is no limit set, per waiver, but the Colorado River Salinity Forum has set a goal of no more than 400 mg/l increase from upstream to downstream, of any discharge outfall. Refer to Permit Section B.SC.1. The goal remains but a waiver from the previous permit 400 mg/l limit has been approved.

Discharge Limitations Table for Sample Location 01D (Receiving Water - Ambient) To Be Reported Monthly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	S a m p l e Type
Nitrogen, total	30 Day Average		<= 1.10 Milligrams per Liter (mg/L)	Downstream Monitoring	01D	Weekly	COMPOS
Nitrogen, total	Daily Maximum		<= 1.60 Milligrams per Liter (mg/L)	Downstream Monitoring	01D	Weekly	COMPOS
Temp. diff. between samp. & upstrm deg. C	30 Day Average		<= 2 Degrees Centigrade (deg C)	Downstream Monitoring	01D	Weekly	DISCRT
Oxygen, dissolved (DO)	30 Day Average		M&R Milligrams per Liter (mg/L)	Downstream Monitoring	01D	Weekly	DISCRT
Oxygen, dissolved (DO)	Daily Minimum		>= 5 Milligrams per Liter (mg/L)	Downstream Monitoring	01D	Weekly	DISCRT
Solids, total dissolved	Weekly Maximum	[1]	M&R Milligrams per Liter (mg/L)	Downstream Monitoring	01D	Weekly	DISCRT

Notes (Discharge Limitations Table):

1. TDS concentrations at the outfall shall be compared to TDS concentrations in the River below the outfall. There is no limit set, per waiver, but the Colorado River Salinity Forum has set a goal of no more than 400 mg/l increase from upstream to downstream, of any discharge outfall. Refer to Permit Section B.SC.1. The goal remains but a waiver from the previous permit 400 mg/l limit has been approved.

Discharge Limitations Table for Sample Location 01U (Receiving Water - Ambient) To Be Reported Monthly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	S a m p l e Type
Solids, total dissolved	Weekly Maximum	[1]	M&R Milligrams per Liter (mg/L)	Upstream Monitoring	01U	Weekly	COMPOS
Temp. diff. between samp. & upstrm deg. C	30 Day Average		<= 2 Degrees Centigrade (deg C)	Upstream Monitoring	01U	Weekly	COMPOS

Notes (Discharge Limitations Table):

1. TDS concentrations at the outfall shall be compared to TDS concentrations in the River below the outfall. There is no limit set, per waiver, but the Colorado River Salinity Forum has set a goal of no more than 400 mg/l increase from upstream to downstream, of any discharge outfall. Refer to Permit Section B.SC.1. The goal remains but a waiver from the previous permit 400 mg/l limit has been approved.

Discharge Limitations Table for Sample Location Inf (Influent Structure) To Be Reported Monthly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	S a m p l e Type
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Raw Sewage Influent	INF	Continuous	CONTIN
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		Raw Sewage Influent	INF	Continuous	CONTIN
BOD, 5-day, 20 deg. C ^[1]	30 Day Average		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	INF	Five Per Week	COMPOS
BOD, 5-day, 20 deg. C ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	INF	Five Per Week	COMPOS
BOD, carbonaceous, 05 day, 20 C ^[1]	30 Day Average		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	INF	Five Per Week	COMPOS
BOD, carbonaceous, 05 day, 20 C ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	INF	Five Per Week	COMPOS
Solids, total suspended ^[1]	30 Day Average		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	INF	Five Per Week	COMPOS
Solids, total suspended ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	INF	Five Per Week	COMPOS
Phosphorus, total (as P)	30 Day Average		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	INF	Three Per Week	COMPOS
Phosphorus, total (as P)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	INF	Three Per Week	COMPOS

Discharge Limitations Table for Sample Location Inf (Influent Structure) To Be Reported Monthly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Nitrogen, total	30 Day Average		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	INF	Weekly	COMPOS
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent	INF	Weekly	COMPOS

Notes (Discharge Limitations Table):

- BOD, CBOD and TSS samples shall be collected daily, Monday through Thursday, and once between Friday and Sunday, for a total of 5 samples/week. BOD samples may be collected as Total Organic Carbon samples as a BOD surrogate; BOD will be calculated from the TOC analytical data and reported as BOD data.

Proposed Technology Based Effluent Limitations:

NA

Proposed Water Quality-Based Effluent Limitations:

Monitoring is required to assess the level of treatment provided and to ensure that the river discharge meets water quality standards for the Colorado River NAC 445A.2146, that standards for reuse are met, and that groundwater quality is not degraded.

Waste Load Allocation:

NA

Total Residual Chlorine:

NA

WET Testing:

Acute WET testing is required quarterly.

Special Conditions:

Chlorine residual, liner leaks, and salinity control conditions/requirements are noted in the table below:

SA – Special Approvals / Conditions Table

Item #	Description
1	When processes are more frequently monitored in excess of the permit requirements, any short term excursions from permit limits resulting from minor instrument anomalies or short term events may be allowed provided the absolute value of 2.0 mg/l chlorine residual is not exceeded. The total time which the chlorine residual values are outside the required range shall not exceed 7 hours and 26 minutes in any calendar month and no individual excursion from the range of chlorine residual value shall exceed 60 minutes. Any such exceedance shall be noted on the DMR.
	WET ACUTE TESTING SCHEDULE (a) Routine Schedule: the Permittee shall conduct an acute toxicity test quarterly.

Item #	Description
2	<p>(b) Accelerated schedule: Whenever either B.WET.1.1 condition has occurred or a test results shows survival of the test organisms in undiluted effluent is less than 70 percent, the Permittee shall increase the frequency of acute toxicity testing to at least twice a month. When four (4) consecutive tests show greater than 70 percent survival of organisms exposed to undiluted effluent, the Permittee may resume its routine test schedule.</p> <p>(c) In addition to the Quarterly DMR submittals, the Permittee shall submit an annual summary which provides a review of the survival rates of both the control and the 100% effluent with the Fourth Quarter Report.</p>
3	Regarding industrial users and the pretreatment program, this facility has no industrial users, and does not anticipate any. Because of the >5 MGD permit limit the facility is automatically required to conduct annual pretreatment sampling and analyses. As long as the facility has no industrial users the requirements pertaining to significant and insignificant industrial users are waived. Also waived are the quarterly pretreatment sampling requirements. The annual sampling and analytical requirement for the pretreatment program remains in effect.

Reasonable Potential Analysis and Antidegradation Review:

NA

Flow:

8.0 MGD

Discharges From Future Outfalls:**Corrective Action Sites:**

There is one Bureau of Corrective Actions site within a 1-mile radius of the facility. The BCA case officer has stated there are no anticipated effects on the remediation system due to the continued discharge.

Wellhead Protection Program:

The facility is not within a wellhead protection area.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	Operations & Maintenance Manual (O&M)	7/1/2013

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly DMRs including Quarterly WET Testing Reports	Quarterly	7/28/2013
2	Annual report	Annually	1/28/2014
3	Biosolids Monitoring Report (BMR)	Annually	2/19/2014

4	Annual pretreatment report	Annually	9/30/2013
5	Salinity Annual Report	Annually	1/28/2014

Notes (Deliverable Schedule for Reports, Plans, and Other Submittals):

- Regarding industrial users and the pretreatment program, this facility has no industrial users, and does not anticipate any. Because of the >5 MGD permit limit the facility is automatically required to conduct annual pretreatment sampling and analyses. As long as the facility has no industrial users the requirements pertaining to significant and insignificant industrial users are waived. Also waived are the quarterly pretreatment sampling requirements. The annual sampling and analytical requirement for the pretreatment program remains in effect.

Procedures for Public Comment:

The Notice of the Division's intent to reissue a permit authorizing the facility to discharge to surface waters 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. **3/22/2013**, 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.650.

Proposed Determination:

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

Prepared by: **Jeryl Gardner**

Date: **6/24/2011**

Title: **P.E.**