ATTACHMENT F – FACT SHEET

Contents

Tables

As described in Section II.D of this Order, the Colorado River Basin Water Board incorporates this Fact Sheet as findings of the Colorado River Basin Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	7A 33 0122 021
Discharger	Valley Sanitary District
Name of Facility	Valley Sanitary District Wastewater Treatment Plant
Facility Address	45500 Van Buren St. Indio, CA 92201 Riverside County
Legally Responsible Official	Beverli Marshall, General Manager (760) 238-5400, bmarshall@valley-saitary.org
Facility Contact, Title and Phone	Ian Wilson, Chief Plant Operator (760) 238-5418, iwilson@valley-sanitary.org
Authorized Person to Sign and Submit Reports	Ian Wilson, Chief Plan Operator, (760) 238-5418 iwilson@valley-sanitary.org Anna Bell, Laboratory Supervisor, (760) 238-5402 abell@valley-sanitary.org
Mailing Address	45500 Van Buren St., Indio CA 92201
Billing Address	SAME
Type of Facility	POTW
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	N
Recycling Requirements	User
Facility Permitted Flow	13.5 million gallons per day (MGD)
Facility Design Flow	13.5 MGD
Watershed	Coachella Subunit of the Whitewater Hydrologic Unit

Receiving Water	Coachella Valley Storm Water Channel
Receiving Water Type	Storm Water Channel

Valley Sanitary District (Discharger) is the owner and operator of the Valley Sanitary District Wastewater Treatment Plant (Facility), a Publicly-Owned Treatment Works (POTW). For the purposes of this Order, references to the "Discharger" or "Permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

The Facility discharges wastewater to Coachella Valley Storm Water Channel, a water of the United States. The Discharger was previously regulated by Order R7-2015-0002 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0104477, which was adopted on May 13, 2015.

Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

The Discharger filed a report of waste discharge and submitted an application for reissuance of its WDRs and NPDES permit on October 11, 2019. The application was deemed complete on January 22, 2020.

II. FACILITY DESCRIPTION

The Discharger owns and operates a wastewater collection, treatment, and disposal system (Facility) and provides service to a population of approximately 76,000 located in the City of Indio as well as portions of the City of Coachella and unincorporated communities in Riverside County. The wastewater treatment plant has a treatment capacity of 13.5 MGD and is located in Section 19, T5S, R8E, SBB&M.

A. Description of Wastewater Treatment System

The wastewater treatment plant primarily consists of two separate treatment systems: (1) an activated sludge treatment system and (2) an oxidation pond treatment system. The Facility historically also used a wetlands system, which was decommissioned in 2017. The current total design capacity of the wastewater treatment plant is 13.5 MGD.

Influent enters the main influent pumping station and is screened through mechanical bar screens. Screened influent flow can be directed to the grit chamber or directed to the primary clarifiers. Flow is then apportioned between the activated sludge treatment system and the oxidation pond treatment system.

The design capacity of the activated sludge treatment system is 10 MGD. The activated sludge treatment system consists of anoxic selectors, aeration basins, secondary clarifiers, and a chlorine contact chamber.

The design capacity of the oxidation pond system is 3.5 MGD. The oxidation pond system consists of two oxidation ponds (Ponds 2 and 3 shown in Attachment B), and two smaller cells (North and South). The flow pattern through the pond system usually begins in a series starting with Pond 2 then into the two cells then into Pond 3. However, when the two cells are being used for

collection and treatment of waste activated sludge, the two cells commonly are isolated and flow runs from Pond 2 directly to Pond 3.

Treated effluent from each treatment system (i.e., activated sludge and oxidation ponds treatment systems) is chlorinated in separate chlorine contact tanks. The chlorinated effluent from each chlorine contact tank is then combined and dechlorinated with the addition of sodium bisulfite prior to discharge from Discharge Point 001C to the Coachella Valley Storm Water Channel.

Screenings and grit removal from the influent wastewater is achieved through the use of mechanical bar screens located after the influent pumping station are sent to a grinder, washed, and then compacted and collected in a transportable dumpster prior to final disposal. Following screening, grit is removed from the influent wastewater, dewatered, air-dried and placed in a transportable dumpster with screenings. Screenings and grit collected in the dumpster are hauled to a landfill approximately every two weeks.

Excess solids from the activated sludge treatment system are pumped to either one of the two (oxidation system) cells or oxidation Pond 2 for stabilization. Primary sludge from the primary clarifiers is pumped to the anaerobic digester. Solids from the digester and oxidation pond system are pumped to the belt presses for dewatering. Dewatered solids are then placed in the onsite storage/drying beds for further moisture reduction prior to final disposal. Sludge is typically removed from the Facility site every 12 to 18 months, typically meets Class A or Class B biosolids quality, and is transported to Arizona for land application by a contracted sludge disposal company.

B. Discharge Points and Receiving Waters

Final effluent is discharged through Discharge Point 001 at Latitude 33º 42’ 59” North and Longitude 116º 11’ 43” West, to the Coachella Valley Storm Water Channel. The permitted maximum daily flow limitation is equal to the design capacity of the wastewater treatment plant, which is 13.5 MGD. The discharge consists of disinfected secondary treated wastewater.

C. Summary of Historic Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in Order R7-2015-0002 for discharges from Discharge Point 001 (Monitoring Location EFF-001A) and representative monitoring data from the term of the previous Order are as follows in Table F-2:

Table F-2. Historic Effluent Limitations and Monitoring Data (Activated Sludge)

Parameter	Units	Avg. Monthly Limit	Avg. Weekly Limit	Max. Daily Limit	Highest Avg. Monthly Discharge (June 2015–August 2019)	Highest Avg. Weekly Discharge (June 2015–August 2019)	Highest Daily Discharge (June 2015-August 2019)
Flow	MGD	10	--	--	--	--	6.37
Carbonaceous Biochemical Oxygen Demand	mg/L	25	40	--	21.68	30.9	--

(CBOD) (5 Day @ 20 Degrees Celsius)							
	lbs/day	2,085	3,336	--	855	1,292	1,292
CBOD Percent Removal	%	≥85	--	--	90.9	--	--
Total Suspended Solids (TSS)	mg/L	30	45	--	6.25	10.1	10.1
	lbs/day	2,502	3,753	--	246	424	424
TSS Percent Removal	%	≥85	--	--	97	--	--

Effluent limitations contained in Order R7-2015-0002 for discharges from Discharge Point 001 (Monitoring Location EFF-001B) and representative monitoring data from the term of the previous Order are as follows in Table F-3:

Table F-3. Historic Effluent Limitations and Monitoring Data (Oxidation Ponds)

Parameter	Units	Avg. Monthly Limit	Avg. Weekly Limit	Max. Daily Limit	Highest Avg. Monthly Discharge (June 2015-August 2019)	Highest Avg. Weekly Discharge (June 2015-August 2019)	Highest Daily Discharge (June 2015-2019)
Flow	MGD	3.5	--	--	1.843	--	2.28
Carbonaceous Biochemical Oxygen Demand (CBOD) (5 Day @ 20 Degrees Celsius)	mg/L	40	60	--	47.2[1]	95[2]	--
	lbs/day	1,168	1,751	--	638	1,328	1,328
CBOD Percent Removal	%	≥65	--	--	82.4	--	--
Total Suspended Solids	mg/L	61	91	--	52.6	78	--
	lbs/day	1,780	2,656	--	604	1,013	1,013
TSS Percent Removal	%	≥65	--	--	80.1	--	--

[1] This value (September 22, 2018) represents a reported exceedance of the average monthly effluent limitation. The Discharger reported exceeding this effluent limitation one time during 2015-2019.

[2] This value (September 22, 2018) represents a reported exceedance of the average weekly effluent limitation. The Discharger reported exceeding this effluent limitation 3 times during the permit term; reported values greater than the effluent limitation ranged from 67.4 mg/L to 95 mg/L.

Effluent limitations contained in Order R7-2015-0002 for discharges from Discharge Point 001 (Monitoring Location EFF-001C) and representative monitoring data from the term of the previous Order are as follows in Table F-4:

Table F-4. Historic Effluent Limitations and Monitoring Data (Combined

Parameter	Units	Avg. Monthly Limit	Avg. Weekly Limit	Max. Daily Limit	Highest Avg. Monthly Discharge (June 2015-August 2019)	Highest Avg. Weekly Discharge (June 2015-August 2019)	Highest Daily Discharge (June 2015 - August 2019)
pH	Standard Units	--	--	6.0 -9.0[1]	--	--	6.7-8.0
Oil and Grease	mg/L	--	--	25	--	--	5
	lbs/day	--	--	2,815	--	--	2,815
Copper	µg/L	10.1	--	17.4	8	--	12
	lbs/day	1.1	--	2.0	0.41	--	0.629
Heptachlor	µg/L	0.00021	--	0.00042	<0.003	--	<0.003
	lbs/day	0.000024	--	0.000047	--	--	--
Residual Chlorine	mg/L	0.01	--	0.02[2]	0.006	--	2.5
	lbs/day	1.1	--	--	0.26	--	--

[1] This range represents the instantaneous minimum and maximum pH limitations, respectively.

[2] This value is expressed an instantaneous maximum value.

The ROWD described the existing discharge as follows:

Annual Average Effluent Flow – 5.72 MGD

Maximum Daily Effluent Flow 6.98 MGD

Average Daily Effluent Flow – 5.94 MGD

Table F-5 presents the effluent characteristics reported in the ROWD and USEPA Form 2E.

Table F-5. Effluent Characteristics

Parameter	Units	Maximum Daily	Average Daily
Activated Sludge Treatment System – EFF-001A			
TSS	mg/L	10.10	4.0
$CBOD_5$	mg/L	30.90	12.30
Oxidation Ponds Treatment System - EFF-001B			
$CBOD_5$	mg/L	95.00	21.60
TSS	mg/L	78	33.00
Combined Discharges from Activated Sludge and Oxidation Ponds Treatment Systems - 001C			
pH (Minimum)	s.u.	6.70	---

Parameter	Units	Maximum Daily	Average Daily
pH (Maximum)	s.u.	8.00	---
Temperature (Winter)	°F	87.80	74.90
Temperature (Summer)	°F	96.10	84.20
Ammonia, as N	mg/L	69.00	30.00
Chlorine, Total Residual	mg/L	2.50	0.00
Nitrate plus Nitrite Nitrogen	mg/L	12.00	3.10
Oil and Grease	mg/L	5.00	1.60
Phosphorus	mg/L	10.00	4.50
Total Dissolved Solids (TDS)	mg/L	520.00	438.00

D. Past Compliance Summary

The available effluent monitoring data indicates that the Facility has had several reported effluent limitation violations for $CBOD_5$, residual chlorine, *E. coli*, and fecal coliform, summarized below:

Table F-6. Violations Report Summary (June 2015 – August 2019)

Date of Exceedance	Parameter	Limit Basis	Permit Limitation	Reported Value	Units
6/6/2019	Carbonaceous Biochemical Oxygen Demand (CBOD) (5 day @ 20 degrees Celsius)	Weekly Average	60 (EFF-001B)	67.4	mg/L
9/30/2018	CBOD	Average Monthly	40 (EFF-001B)	47.2	mg/L
9/20/2018	CBOD	Weekly Average	60 (EFF-001B)	95	mg/L
1/10/2019	CBOD	Weekly Average	60 (EFF-001B)	88	mg/L
3/3/2016	Residual Chlorine	Instantaneous Maximum	0.02	2.50	µg/L
7/17/2018	*E. coli*	Daily Maximum	400	1046.2	MPN/100
7/31/2018	Fecal Coliform	10 percent for 30 days	400	1119.9	MPN/100

The Colorado River Basin Water Board issued a Notice of Violation on June 6, 2019 to notify the Facility of effluent limitation violations and potential settlement options. The Facility accepted the settlement and paid the Mandatory Minimum

Penalty on June 12, 2019.

E. Planned Changes

The Discharger indicated in the ROWD that the Facility will undergo plant upgrades as they relate to the solids handling processes. The changes are expected to take place in two phases: Phase 2b and Phase 2C.

Phase 2b is scheduled to start in the Spring of 2020 and consists of:

- Installing a 22-foot diameter grit chamber with biofilter;
- Construction of a thicker building (2 gravity belt thickeners (GBTs)) with biofilter;
- Construction of a digester;
- Installation of a sludge holding tank; and
- Redirection of drain water going to Pond 2 to sewer main (influent).

Design work for Phase 2c will start once construction for Phase 2b has begun. Phase 2c will consist of:

- Drain free water from Pond 2 and Pond 3 through Chlorine Contact Tank 2 (CCT2) to the Coachella Valley Stormwater Channel;
- Dredging sludge out of Pond 2 into Pond 3 for solar drying;
- Constructing a sludge drying bed extension;
- Installing digester gas holding facility (optional); and
- Implementing cogeneration with digester gas (optional).

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this Section.

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this Facility to surface waters.

B. California Environmental Quality Act (CEQA)

This Order serves as both an NPDES permit for discharges subject to the Clean Water Act and as WDRs for discharges subject to the California Water Code. Pursuant to Water Code section 13389, this action to adopt an NPDES permit is exempt from CEQA (Public Resources Code section 21000 et seq.). Under California Code of Regulations, title 14, section 15301, the Colorado River Basin Water Board's action in approving those parts of the Order that implement state

law is also exempt from CEQA, because the Facility is an existing facility with negligible or no expansion of existing use.

C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The Water Quality Control Plan for the Colorado River Basin Region (Basin Plan), which was adopted on November 17, 1993 and amended on March 7, 2017, designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The requirements in this Order implement the Basin Plan and protect existing and potential beneficial uses of the receiving water, which are described in Table F-7:

Table F-7. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Coachella Valley Storm Water Channel[1]	Existing: Fresh Water Replenishment (FRSH); Water Contact Recreation (REC-I)[2]; Non-Contact Water Recreation (REC-II)[2]; Warm Freshwater Habitat (WARM); Wildlife Habitat (WILD); and Support of Rare, Threatened, or Endangered Species (RARE).[3]

[1] Section of perennial flow from approximately Indio to the Salton Sea.
[2] Unauthorized use.
[3] Rare, endangered, or threatened wildlife exists in or utilizes some of these waterway(s). If the RARE beneficial use may be affected by a water quality control decision, responsibility for substantiation of the existence of rare, endangered, or threatened species on a case-by-case basis is upon the California Department of Fish and Wildlife on its own initiative and/or at the request of the Colorado River Basin Water Board. Such substantiation must be provided within a reasonable time frame as approved by the Colorado River Basin Water Board.

2. **Thermal Plan**. The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on January 7, 1971 and amended this plan on September 18, 1975. The plan contains temperature objectives for surface waters.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously-adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.

4. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation

Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Colorado River Basin Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

5. **Emergency Planning and Community Right to Know Act.** Water Code section 13263.6(a) requires that the Colorado River Basin Water Board prescribe effluent limitations for POTWs for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. § 11023) indicate as discharged into the POTW, for which the State Water Board or the Colorado River Basin Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective.

6. **Stormwater Requirements.** USEPA promulgated federal regulations for stormwater on November 16, 1990 in 40 C.F.R. parts 122, 123, and 124. The NPDES Industrial Stormwater Program regulates stormwater discharges from wastewater treatment facilities. Wastewater treatment plants are applicable industries under the stormwater program and are obligated to comply with the federal regulations.

7. **Endangered Species Act Requirements**. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the federal Endangered Species Act (16 U.S.C. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

8. **Sewage Sludge and Biosolids.** This Order does not authorize any act that results in violation of requirements administered by USEPA to implement 40 C.F.R. part 503, Standards for the Use or Disposal of Sewage Sludge. These standards regulate the final use or disposal of sewage sludge that is generated during the treatment of domestic sewage in a municipal wastewater treatment facility. The Discharger is responsible for meeting all applicable requirements of 40 C.F.R. part 503 that are under USEPA's enforcement authority.

9. **Antidegradation Policy.** 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality of high quality waters be maintained unless degradation is justified based on specific findings. The Colorado River Basin Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.

10. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the Clean Water Act and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

D. Impaired Water Bodies on Clean Water Act 303(d) List

Section 303(d) of the federal Clean Water Act requires states to identify waterbodies that do not meet water quality standards and are not supporting their beneficial uses after implementation of technology-based effluent limitations on point sources. Each state must submit an updated list, the 303(d) List of Impaired Waterbodies (303(d) List) every 2 years. In addition to identifying the waterbodies that are not supporting beneficial uses, the 303(d) List also identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. On July 15, 2015, the USEPA gave final approval to California's 202 303(d) List, which included waters in the Colorado River Basin Region.

Coachella Valley Storm Water Channel. The 303(d) List classifies the Coachella Valley Storm Water Channel as impaired by DDT (Dichlorodiphenyltrichloroethane), dieldrin, PCBs (Polychlorinated biphenyls), pathogens, nitrogen-ammonia (total ammonia), toxaphene, and toxicity. A TMDL has not yet been developed for DDT, dieldrin, PCBs, nitrogen-ammonia (total ammonia), toxaphene, and toxicity. The Colorado River Basin Water Board developed a TMDL for bacterial indicators for the Coachella Valley Storm Water Channel on May 16, 2007, which was revised on June 17, 2010. The TMDL sets numeric targets for *E. coli* and establishes a two-phase implementation plan. Effluent limitations established in the permit reflect the wasteload allocation (WLA) for the Facility contained in the TDML.

The Salton Sea. The Coachella Valley Stormwater Channel is tributary to the Salton Sea. The 303(d) List classifies the Salton Sea as impaired by arsenic, chloride, chlorpyrifos, DDT, enterococcus, low dissolved oxygen, nitrogen-ammonia (total ammonia), nutrients, salinity, and toxicity. The Colorado River

Basin Water Board has not developed TMDLs addressing these impairments to date. Tributaries to the Salton Sea, including the receiving water, may be affected by the development of TMDLs for the Salton Sea.

E. Other Plans, Policies, and Regulations

1. **Stormwater Management.** For the control of stormwater discharged from the site of the wastewater treatment facilities, dischargers typically must seek authorization to discharge under and meet the requirements of the State Water Board's Order 2014-0057-DWQ, NPDES General Permit No. CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities*. At this time, the Facility is enrolled in the Industrial General Permit.

2. **Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (State Water Board Order No. 2006-0003-DWQ).** The Sanitary Sewer Order, adopted on May 2, 2006, is applicable to all "federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California." The purpose of the Sanitary Sewer Order is to promote the proper and efficient management, operation, and maintenance of sanitary sewer systems and to minimize the occurrences and impacts of sanitary sewer overflows. The Discharger has obtained coverage under the Sanitary Sewer Order, and the Discharger's WDID number is 7SSO10140.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The Clean Water Act requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) may be established: (1) using USEPA criteria guidance under Clean Water Act section 304(a), supplemented where necessary by other relevant information; (2) on an indicator parameter for the pollutant of concern; or (3) using a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 C.F.R. section 122.44(d)(1)(vi).

Effluent and receiving water limitations in this Order are based on the federal Clean Water Act, the Basin Plan, the State Water Board's plans and policies, USEPA

guidance and regulations, and best practicable waste treatment technology. While developing effluent limitations and receiving water limitations, monitoring requirements, and special conditions for the draft permit, the following information sources were used:

1. NPDES Application Forms: California Form 200, USEPA Forms 1, 2A, and 2S dated October 7, 2019.
2. Title 40 of the Code of Federal Regulations.
3. The Basin Plan, as adopted on November 17, 1993 and last amended on January 8, 2019.
4. Colorado River Basin Water Board files related to the Valley Sanitary District, Valley Sanitary District Wastewater Treatment Plant, NPDES permit No. CA0104477.

A. Discharge Prohibitions

1. Discharge Prohibition III.A. (The discharge of waste to land is prohibited unless authorized in a separate waste discharge permit.)

This prohibition has been retained from Order R7-2015-0002. The limitations and conditions established by the Order are based on specific information provided by the Discharger (including through the ROWD) and gained by the Colorado River Basin Water Board through site visits, monitoring reports, and by other means. Discharges of a character not contemplated by this Order, such as discharges to land, are inconsistent with Clean Water Act section 402's prohibition against discharges of pollutants except in compliance with the Act's permit requirements, effluent limitations, and other enumerated provisions. This prohibition is also based on the Basin Plan to protect the beneficial uses of the receiving water from unpermitted discharges, and it is in keeping with the intent and requirements of Water Code sections 13260 through 13264.

2. Discharge Prohibition III.B. (The discharge of treated wastewater from the Facility at a location or in a manner different from that described in this Order is prohibited.)

This prohibition has been retained from Order R7-2015-0002. The limitations and conditions established by the Order are based on specific information provided by the Discharger (including through the ROWD) and gained by the Colorado River Basin Water Board through site visits, monitoring reports, and by other means. Discharges to surface waters at locations not contemplated by this Order, or discharges of a character not contemplated by this Order, are inconsistent with Clean Water Act section 402's prohibition against discharges of pollutants except in compliance with the Act's permit requirements, effluent limitations, and other enumerated provisions. This prohibition is also based on the Basin Plan to protect the beneficial uses of the receiving water from unpermitted discharges, and it is in keeping with the intent and requirements of Water Code sections 13260 through 13264.

3. **Discharge Prohibition III.C.** (The discharge of trash to the Coachella Valley Stormwater Channel is prohibited.)

   This prohibition has been retained from Order R7-2015-0002. The Basin Plan prohibits conditions that create a nuisance.

4. **Discharge Prohibition III.D**. (The bypass or overflow of untreated or partially-treated wastewater or wastes to the Coachella Valley Stormwater Channel is prohibited, except as allowed under Sections I.G (Bypass) and I.H (Upset) of Attachment D, Standard Provisions.)

   This prohibition has been retained from Order R7-2015-0002, with minor modifications. The discharge of untreated or partially-treated wastewater from the Discharger's collection, treatment, or disposal facility represents an unauthorized bypass pursuant to 40 C.F.R. section 122.41(m) or an unauthorized discharge which poses a threat to human health and/or aquatic life, and therefore is explicitly prohibited by this Order.

5. **Discharge Prohibition III.E.** (The discharge of waste in excess of the design treatment or disposal capacity of the system, 13.5 MGD, is prohibited.)

   This prohibition has been retained from Order R7-2015-0002 and is based on the design capacity of the Facility. Exceedance of this capacity may result in effluent violations and/or the need to bypass untreated effluent blended with treated effluent, which is prohibited by this Order.

6. **Discharge Prohibition III.F.** (The discharge of waste that causes contamination, pollution, or nuisance as defined in Water Code section 13050, subdivisions (k), (l), and (m), respectively, is prohibited.)

   This prohibition has been retained from Order R7-2015-0002, with minor modifications, and is based on section 13050 of the Water Code. The Basin Plan also prohibits conditions that create a nuisance or cause contamination or pollution.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the Clean Water Act and implementing USEPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on secondary treatment standards or equivalent-to-secondary treatment standards in 40 C.F.R. part 133.

a. **Secondary Treatment Standards.** In 40 C.F.R. part 133, USEPA published secondary treatment standards based on an evaluation of performance data for POTWs practicing a combination of physical and biological treatment to remove biodegradable organics and suspended

solids. The regulation applies to all POTWs and identifies the technology-based performance standards achievable based on secondary treatment for BOD_5, TSS, and pH. Specifically, section 133.102 allows concentrations of up to 30 mg/L (monthly average) and up to 45 mg/L (weekly average) for BOD_5 and TSS. (40 C.F.R. § 133.102(a)-(b).) Alternatively, concentrations not to exceed 25 mg/L (monthly average) and 40 mg/L (weekly average) of $CBOB_5$ may be used in lieu of effluent limitations for BOD_5. (*Id.* § 133.102(a).) The 30-day average percent removal of BOD_5/$CBOD_5$ and TSS must not be less than 85 percent. (*Id.* § 133.102(a)-(b).) The effluent values for pH must be maintained within the limits of 6.0 to 9.0. (*Id.* § 133.102(c).)

b. Equivalent-to-Secondary Treatment Standards. Some biological treatment technologies, such as trickling filters or waste stabilization ponds, are capable of achieving significant reductions in BOD_5 and TSS, but might not consistently achieve the secondary treatment standards for these parameters. Congress recognized that unless alternate limitations were set for facilities with trickling filters or waste stabilization ponds, which often are in small communities, such facilities could be required to construct costly new treatment systems to meet the secondary treatment standards even though their existing treatment technologies could achieve significant biological treatment. Congress included provisions in the 1981 amendments to the Clean Water Act Construction Grants program (Public Law 97-147, Section 23) that required USEPA to make allowances for alternative biological treatment technologies, such as a trickling filters or waste stabilization ponds. In response to that requirement, in 1984, USEPA promulgated regulations at 40 C.F.R. section 133.105 that include alternative standards that apply to facilities using "equivalent to secondary treatment."

In order to be eligible for equivalent-to-secondary limitations, a POTW must meet all of the following criteria (40 C.F.R. § 133.101(g)):

i. The principal treatment process must be either a trickling filter or waste stabilization pond.

ii. The effluent quality consistently achieved, despite proper operations and maintenance, is in excess of the secondary treatment effluent limits for BOD_5 and TSS.

iii. The treatment works provide significant biological treatment (defined as consistently achieving a 30-day average of at least 65 percent removal of BOD_5) of municipal wastewater.

The "equivalent to secondary treatment" standards allow concentrations of up to 45 mg/L (monthly average) and up to 65 mg/L (weekly average) for BOD_5 and TSS. (40 C.F.R. § 133.105(a)-(b).) Alternatively, concentrations not to exceed 40 mg/L (monthly average) and 60 mg/L (weekly average) of $CBOB_5$ may be used in lieu of

effluent limitations for BOD_5. (*Id.* § 133.105(e).) The 30-day average percent removal of BOD_5/$CBOD_5$ and TSS must not be less than 65 percent. (*Id.* § 133.105(a)-(b), (e).) There is no change allowed to secondary treatment standards in 40 C.F.R. section 133.102(c) for pH. (*Id.* § 133.105(c).)

c. Adjusted TSS Requirements for Waste Stabilization Ponds. POTWs that use waste stabilization ponds, identified in 40 C.F.R. section 133.103, as the principal process for secondary treatment and whose operation and maintenance data indicate that the TSS values specified in the equivalent-to-secondary regulations cannot be achieved, can qualify to have their minimum levels of effluent quality for TSS adjusted upwards.

Pursuant to 40 C.F.R. section 133.103(c), the TSS concentrations achievable with waste stabilization ponds are determined as the effluent concentration achieved 90 percent of the time within a state or appropriate contiguous geographical area by waste stabilization ponds that are achieving the levels of effluent quality for BOD_5 specified in section 133.105(a)(1) (45 milligrams per liter [mg/L] as a 30-day average). In 1984, USEPA published alternate TSS requirements in 49 Federal Register (FR) 37005, which sets the maximum TSS value for California for lagoon effluent at 95 mg/L. This value corresponds to a 30-day consecutive average or an average duration of less than 30 days. In no case, however, can effluent limitations be set for an existing facility that are less stringent than the 30-day average and 7-day average BOD_5 and TSS effluent values that could be achievable through proper operation and maintenance of the POTW, based on an analysis of the past performance of the POTW. (40 C.F.R. § 133.105(f)(1).)

2. Applicable Technology-Based Effluent Limitations

a. TBELs for Activated Sludge Treatment System. The activated sludge treatment system meets the technology-based regulations for the minimum level of effluent quality attainable through secondary treatment in terms of $CBOD_5$ and TSS, removal efficiency for $CBOD_5$ and TSS, and pH as summarized in Table F-8, below. This Order carries forward effluent limitations from previous Orders R7-2015-0002

and Order R7-2010-0019. Further, mass-based effluent limitations are based on a system design flow rate of 10 MGD.

Table F-8. Summary of Applicable TBELs for Activated Sludge Treatment System

Parameter	Units	Avg. Monthly Limit	Max. Daily Limit	Instant. Min. Limit	Instant. Max. Limit
Flow	s.u.	10	--	--	--
$CBOD_5$	mg/L	25.0	40	--	--
	lbs/day	2,085	3,336	--	--
Removal Efficiency for $CBOD_5$ and TSS	Percent	85	--	--	--
pH	s.u.	--	--	6.0	9.0
TSS	mg/L	30	45	--	--
	lbs/day[1]	2,502	3,753	--	--

[1] Mass-based effluent limitations are based upon a maximum flow of 10 MGD.

Table F-9. Basis for Limitations for Activated Sludge Treatment System

Parameter	Basis for Limitations
Flow	BPJ at 40 C.F.R. § 125.3
$CBOD_5$	40 C.F.R. § 133.102(a)
Removal Efficiency for $CBOD_5$ and TSS	40 C.F.R. § 133.102(a)-(b)
pH	40 C.F.R. § 133.102(c)
TSS	40 C.F.R. § 133.102(b)

b. TBELs for Oxidation Ponds Treatment System. The oxidation ponds treatment system meets the technology-based regulations for the minimum level of effluent quality attainable by equivalent-to-secondary treatment in terms of $CBOD_5$ and TSS, removal efficiency for $CBOD_5$ and TSS, and pH. Previous Orders R7-2015-0002 and Order R7-2010-0019 required applicable equivalent-to-secondary treatment (with adjustments to TSS under 40 C.F.R. § 133.103(c)) for $CBOD_5$ and TSS, removal efficiency for $CBOD_5$, and pH.

The technology-based effluent limitations in this Order have been revised based on an evaluation of performance data for the period from August 2016 through August 2019. Federal regulations at 40 C.F.R. section 133.101(f) define the effluent concentrations consistently achievable through proper operation and maintenance as: (1) the 95th percentile value of the 30-day average effluent quality achieved in a period of at least two years, excluding values attributable

to upsets, bypasses, operational errors, or other unusual conditions; and (2) a 7-day average value equal to 1.5 times the value derived for the 95th percentile value of the 30-day average. According to analysis of TSS data collected for the period from August 2016 through August 2019, the 95th percentile value of the 30-day average concentrations is 49 mg/L. The 7-day average is therefore 74 mg/L (1.5 times 49 mg/L). Further, mass-based effluent limitations are based on a design flow rate of 3.5 MGD.

Table F-10. Summary of Applicable TBELs for Oxidation Ponds Treatment System

Parameter	Units	Avg. Monthly Limit	Max. Daily Limit	Instant. Min. Limit	Instant. Max. Limit
Flow	s.u.	2.5	--	--	--
$CBOD_5$	mg/L	40	60	--	--
	lbs/day	1,168	1,751	--	--
Removal Efficiency for $CBOD_5$ and TSS	Percent	65	--	--	--
pH	s.u.	--	--	6.0	9.0
TSS	mg/L	49	74	--	--
	lbs/day[1]	1,431	2,160	--	--

[1] Mass-based effluent limitations are based upon a maximum flow of 3.5 MGD.

Table F-11. Basis for Limitations for Oxidation Ponds Treatment System

Parameter	Basis for Limitations
Flow	BPJ at 40 C.F.R. § 125.3
$CBOD_5$	40 C.F.R. § 133.105(e)
Removal Efficiency for $CBOD_5$ and TSS	40 C.F.R. § 133.105(b), (e)
pH	40 C.F.R. § 133.105(c)
TSS	40 C.F.R. §§ 133.103(c), 133.105(f)

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Clean Water Act section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

40 C.F.R. section 122.44(d)(1)(i) requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water

quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under Clean Water Act section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

Table F-12 summarizes the applicable water quality criteria/objectives for priority pollutants reported in detectable concentrations in the effluent or receiving water (upstream) as well as those pollutants for which effluent limitations existed in Order R7-2015-0002. Due to the absence of receiving water data, the lowest effluent hardness value was used for calculating hardness-dependent criteria. The hardness value used to conduct the Reasonable Potential Analysis (RPA) was 110 mg/L and pH of 6.70. These criteria were used in conducting the RPA for this Order.

Table F-12. Applicable Beneficial Uses and Water Quality Criteria and Objectives

CTR No.	Parameter	Most Stringent Criteria	Acute (Freshwater)	Chronic (Freshwater)	Organisms Only (Human Health)
		µg/L	µg/L	µg/L	µg/L
1	Antimony	4,300	--	--	4,300
2	Arsenic	150	340	150	--
5a	Chromium (III)	223.79	1,877.49	223.79	Narrative
6	Copper	10.12	15.31	10.12	--
7	Lead	3.59	92.18	3.59	Narrative
8	Mercury	0.051	--	--	0.051
9	Nickel	56.54	508.57	56.54	4,600
10	Selenium	5.00	20	5.00	Narrative
13	Zinc	129.89	129.89	129.89	--
14	Cyanide	5.20	22.00	5.20	220,000

CTR No.	Parameter	Most Stringent Criteria	Acute (Freshwater)	Chronic (Freshwater)	Organisms Only (Human Health)
		µg/L	µg/L	µg/L	µg/L
16	2,3,7,8 TCDD	0.000000014	--	--	0.000000014
26	Chloroform	--	--	--	--
39	Toluene	200,000	--	--	200,000
68	Bis (2-Ethylhexyl) Phthalate	5.90	--	--	5.90
94	Naphthalene	--	--	--	--
117	Heptachlor	0.00021	0.52	0.0038	0.00021

"--" No water quality criteria available

3. Determining the Need for WQBELs for Priority Pollutants

NPDES regulations at 40 C.F.R. 122.44(d) require effluent limitations to control all pollutants which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard.

The SIP, a statewide policy that became effective on May 22, 2000, establishes procedures to implement water quality criteria from the NTR and CTR and for priority, toxic pollutant objectives established in the Basin Plan. The implementation procedures of the SIP include methods to determine reasonable potential (for pollutants to cause or contribute to excursions above state water quality standards) and to establish numeric effluent limitations, if necessary, for those pollutants that show reasonable potential.

Section 1.3 of the SIP requires the Colorado River Basin Water Board to use all available, valid, relevant, and representative receiving water and effluent data and information to conduct a reasonable potential analysis. The reasonable potential analysis was performed based on available priority pollutant monitoring data collected by the Discharger from analyses of annual samples collected during the period from October 2015 through October 2018 for priority pollutants and certain priority pollutants (e.g., copper and heptachlor) through August 2019.

Some freshwater water quality criteria for metals are hardness dependent; i.e., as hardness decreases, the toxicity of certain metals increases and the applicable water quality criteria become correspondingly more stringent. The hardness value used to conduct the reasonable potential analysis (RPA) was 110 mg/L as $CaCO_3$.

To conduct the reasonable potential analysis, the Colorado River Basin Water Board identified the maximum observed effluent (MEC) and background (B) concentrations for each priority pollutant from receiving water and effluent data provided by the Discharger and compared this data to the most stringent

applicable water quality criterion (C) for each pollutant from the NTR, CTR, and Basin Plan. Section 1.3 of the SIP establishes three triggers for a finding of reasonable potential:

a. Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limit is needed

b. Trigger 2 – If background water quality (B) > C and the pollutant is detected in the effluent; a limit is needed.

c. Trigger 3 – If other related information, such as a 303(d) listing for a pollutant, discharge type, compliance history, etc., indicates that a WQBEL is required.

Based on the RPA, the discharge demonstrates reasonable potential to cause or contribute to an excursion above the water quality objectives for copper, cyanide, and bis(2-Ethylhexyl) phthalate. Data evaluated in the RPA for priority pollutants reported in detectable concentrations in the effluent as well as those pollutants for which effluent limitations existed in Order R7-2015-0002, are summarized in Table F-11.

Table F-13. Summary of Reasonable Potential Analysis for Priority Pollutants

CTR No.	Priority Pollutant	Applicable Water Quality Criteria (C)	Max. Effluent Concentration (MEC)	Max. Detected Receiving Water Concentration (B)	RPA Result: Limit Required?	Reason
		µg/L	µg/L	µg/L		
1	Antimony	4,300	0.50	--	No	MEC < C & no B
2	Arsenic	150	0.90	--	No	MEC < C & no B
5a	Chromium (III)	223.79	3.00	--	No	MEC < C & no B
6	Copper	10.12	12.00	--	Yes	MEC > C
7	Lead	3.59	0.30	--	No	MEC < C & no B
8	Mercury	0.051	0.01	--	No	MEC < C & no B
9	Nickel	56.54	2.60	--	No	MEC < C & no B
10	Selenium	5.00	1.30	--	No	MEC < C & no B
13	Zinc	129.89	10.00	--	No	MEC < C & no B
14	Cyanide	5.20	20.00	--	Yes	MEC > C
26	Chloroform	NC	0.69	--	No	MEC < C & no B

CTR No.	Priority Pollutant	Applicable Water Quality Criteria (C)	Max. Effluent Concentration (MEC)	Max. Detected Receiving Water Concentration (B)	RPA Result: Limit Required?	Reason
		µg/L	µg/L	µg/L		
39	Toluene	200,000	0.75	--	No	MEC < C & no B
68	Bis(2-Ethythexyl) Phthalate	5.90	5.90	--	Yes	MEC = C
94	Naphthalene	NC	0.01	--	No	MEC < C & no B
117	Heptachlor	0.00021	<0.003	--	No	MEC < C & no B

"--" Data not available.

4. WQBEL Calculations for Priority Pollutants

Final WQBELs for priority pollutants are based on monitoring results and following the calculation process outlined in section 1.4 of the SIP. A table providing the calculations for all applicable WQBELs for this Order is provided in Attachment G of this Order.

c. WQBELs Calculation Example

Using cyanide as an example, the following demonstrates how WQBELs based on an aquatic life criterion were established for Order R7-2020-0007. The process for developing these limits is in accordance with section 1.4 of the SIP. Attachment G summarizes the development and calculation of all WQBELs for this Order using the process described below.

Step 1: For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective. For each criterion determine the effluent concentration allowance (ECA) using the following steady state equation:

$ECA = C + D(C-B)$ when $C > B$, and

$ECA = C$ when $C \leq B$,

Where C The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. In this Order an upstream receiving water hardness value of 110 mg/L (as $CaCO_3$) was used for development of hardness-dependent criteria, and a pH of 6.70 was used for pH-dependent criteria.

D The dilution credit, and

B The ambient background concentration

For this Order, dilution was not allowed due to the nature of the receiving water and quantity of the effluent; therefore:

ECA = C

For cyanide, the applicable water quality criteria are:

ECA_{acute} = 22 µg/L

$ECA_{chronic}$ = 5.2 µg/L

$ECA_{human\ health}$ = 220,000 µg/L

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 3 of the SIP and will not be repeated here.

$LTA_{acute} = ECA_{acute} \times Multiplier_{acute}$

$LTA_{chronic} = ECA_{chronic} \times Multiplier_{chronic}$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6.

For cyanide, the following data was used to develop the acute and chronic LTA using Table 1 of the SIP:

No. of Samples Available	CV	$Multiplier_{acute}$	$Multiplier_{chronic}$
4	0.6	0.32	0.53

LTA_{acute} = 22 µg/L x 0.32 = 7.06 µg/L

$LTA_{chronic}$ = 5.2 µg/L x 0.53 = 2.74 µg/L

Step 3: Select the most limiting (lowest) of the LTA.

LTA = most limiting of LTA_{acute} or $LTA_{chronic}$

For cyanide, the most limiting LTA was the LTA_{acute}

LTA = 2.74 µg/L

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as Average Monthly Effluent Limitations (AMEL) and Maximum Daily Effluent Limitations (MDEL). The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the coefficient of variation (CV) of the data set, the number of samples (for AMEL) and whether it is monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 5 of the SIP and will not be repeated here.

$AMEL_{aquatic\ life}$ = LTA x $AMEL_{multiplier}$

$MDEL_{aquatic\ life}$ = LTA x $MDEL_{multiplier}$

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

For cyanide, the following data was used to develop the AMEL and MDEL for aquatic life using Table 2 of the SIP:

No. of Samples per Month	CV	$Multiplier_{MDEL}$	$Multiplier_{AMEL}$	Ratio
4	0.6	3.11	1.55	2.01

$AMEL_{aquatic\ life}$ = 2.74 x 1.55 = 4.30 µg/L

$MDEL_{aquatic\ life}$ = 2.74 x 3.11 = 8.54 µg/L

Step 5: For the ECA based on human health, set the AMEL equal to the

$ECA_{human\ health}$

For cyanide:

$AMEL_{human\ health}$ = 220,000 µg/L

Step 6: Calculate the MDEL for human health by multiplying the AMEL by the ratio of the $Multiplier_{MDEL}$ to the $Multiplier_{AMEL}$. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the

CV and the number of samples.

$$MDEL_{human\ health} = AMEL_{human\ health} \times (Multiplier_{MDEL} / Multiplier_{AMEL})$$

For cyanide, the following data were used to develop the MDELhuman health:

No. of Samples per Month	CV	$Multiplier_{MDEL}$	$Multiplier_{AMEL}$	Ratio
4	0.6	3.11	1.55	2.01

$MDEL_{human\ health}$ = 220,000 µg/L x 2.01 = 441,362 µg/L

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health as the water-quality based effluent limit for the Order.

$AMEL_{aquatic\ life}$	$MDEL_{aquatic\ life}$	$AMEL_{human\ health}$	$MDEL_{human\ health}$
4.3 µg/L	8.5 µg/L	220,000 µg/L	441,362 µg/L

The lowest (most restrictive) effluent limits for cyanide are based on aquatic life and were incorporated into this Order.

5. WQBELs for Non-Priority Pollutants

Pursuant to 40 C.F.R. section 122.44(d), the Colorado River Basin Water Board must establish effluent limitations to control non-priority pollutants that have the reasonable potential to cause or contribute to an excursion above any state water quality standard.

a. Bacteria

Chapter 3, Section III.E of the Basin Plan prescribes site-specific surface water objectives for *E. coli* for the Coachella Valley Storm Water Channel in the part of the channel that begins at the Valley Sanitary District Wastewater Treatment Plant and extends to the south for approximately 17 miles. The Basin Plan states that the Coachella Valley Storm Water Channel, which has a REC-1 designated use, shall not have bacterial densities in excess of the following:

> ***E. Coli.*** The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a Most Probable Number (MPN) of 126 per 100 milliliters, nor shall any single sample exceed the maximum allowable bacterial density of a MPN of 400 per 100 milliliters.

Additionally, the TDML adopted for bacterial indicators in the Coachella Valley Stormwater Channel sets the wasteload allocations (WLAs) for all point source discharges to the channel at the same level as the site-specific water quality objective. This Order incorporates effluent limitations for *E. coli* consistent with the applicable WLA and the site-specific water quality objective. The bacterial indicator of *E. coli* is used to estimate the presence of pathogens in the wastewater effluent discharged to Discharge

Point 001.

b. Chlorine

Chapter 3 of the Basin Plan contains a narrative water quality objective for surface water that states, “No individual chemical or combination of chemicals shall be present in concentrations that adversely affect beneficial uses.” This narrative objective applies to the chemical chlorine.

Because the wastewater treatment process involves chlorination, the discharge demonstrates a reasonable potential to cause or contribute to an excursion in the receiving water above the water quality objective. As described above, chlorination is used as an oxidizing biocide.

This Order carries forward the effluent limitations from the previous Order based on USEPA’s *National Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life* (NAWQC) recommend 4-day average (chronic) and 1-hour average (acute) criteria for chlorine of 0.011 mg/L and 0.019 mg/L, respectively. The Colorado River Basin Water Board calculates effluent limitations for CTR and non-CTR parameters using the procedures outlined in the SIP and the USEPA *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001), which contain statistical methods for converting chronic (4-day) and acute (1-hour) aquatic life criteria to average monthly and instantaneous maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring.

The effluent limitations for total chlorine residual are based on the Basin Plan’s narrative toxicity objective and USEPA’s *NAWQC* with modification (rounded significant figures of two) of 0.01 mg/L as the average monthly maximum and 0.02 mg/L as the instantaneous maximum.

c. Oil and Grease

The Basin Plan contains narrative water quality objectives for oil and grease and floating material in surface waters, which state: “All waters shall be free from substances attributable to wastewater of domestic or industrial origin or other discharges which adversely affect beneficial uses not limited to: floating as debris, scum, grease, oil, wax, or other matter that may cause nuisance.”

Oil and grease and floating material are pollutants that generally may be found in sanitary waste from households, businesses, and industries, and POTWs typically are designed to remove these constituents. Oil and grease and floating material removal is typically achieved during primary treatment. Based on information included in self-monitoring reports submitted by the Discharger, annual effluent samples for oil and grease indicate their presence in the effluent (7 detectable concentrations ranging from 1.3 mg/L to 5 mg/L). Therefore, the discharge demonstrates a reasonable potential to cause or contribute to a receiving water excursion

above the Basin Plan's narrative objective for oil and grease and floating material.

This Order carries forward the effluent limitation for oil and grease from the previous Order R7-2015-0002 and establishes a maximum daily effluent limitation (MDEL) for oil and grease to implement the narrative water quality objective contained in the Basin Plan and protect the beneficial uses of the Coachella Valley Storm Water Channel. The effluent limitation for oil and grease is based on the numeric limitation (MDEL) included in the adopted General Order R7-2015-0006, *NPDES Permit for Low Threat Discharges to Surface Waters Within the Colorado River Basin Region*.

d. Whole Effluent Toxicity (WET)

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to aquatic organisms or that produce other detrimental response(s) in aquatic organisms. A detrimental response includes, but is not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota.

The SIP requires the use of short-term chronic toxicity tests to determine compliance with the narrative toxicity objectives for aquatic life in the Basin Plan. The SIP requires that the Discharger demonstrate the presence or absence of chronic toxicity using tests on the fathead minnow, *Pimephales promelas*, the water flea, *Ceriodaphnia dubia*, and the freshwater alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*). The MRP (Attachment E of this Order) requires toxicity monitoring four times a year to demonstrate compliance with the narrative toxicity objective.

The previous Order contained narrative toxicity language and triggers and established routine monitoring requirements. During the past permit term, the Discharger did not exceed any toxicity triggers during chronic toxicity testing. The Discharger will increase toxicity testing from twice a year to four times a year. In addition, this Order establishes thresholds that, when exceeded, require the Discharger to conduct accelerated toxicity testing and/or conduct Toxicity Reduction Evaluation (TRE) studies.

Numeric chronic toxicity effluent limitations have not been included in the Order for consistency with the SIP, which implements narrative toxicity objectives in basin plans and specifies use of a numeric trigger for accelerated monitoring and implementation of a Toxicity Reduction Evaluation (TRE) study in the event that persistent toxicity is detected.

6. Summary of Water Quality-based Effluent Limitations

Parameter	Units	Avg. Monthly Limit	Avg. Weekly Limit	Max. Daily Limit	Instant. Min. Limit	Instant. Max. Limit
Escherichia Coli (*E. Coli*)	MPN/100 ml	126[1]	--	400[2]	--	--
Copper	µg/L	9.0	--	15.9	--	--
	lbs/day[3]	1.02	--	1.79	--	--
Cyanide	µg/L	4.3	--	8.5	--	--
	lbs/day[3]	0.48	--	0.96	--	--
Bis(2-Ethylhexyl) Phthalate	µg/L	5.9	--	11.8	--	--
	lbs/day[3]	0.66	--	1.33	--	--
Oil and grease, Total	mg/L	--	--	25	--	--
	lbs/day[3]	--	--	2,815	--	--
Total Residual Chlorine	mg/L	0.01	--	--	--	0.02
	lbs/day[3]	1.1	--	--	--	--

[1] This effluent limitation is expressed as a geometric (or log) mean, based on a minimum of not less than five equally spaced samples collected for any 30-day period.
[2] This effluent limitation is expressed as a maximum single sample value.
[3] The mass-based effluent limitations are based on a design capacity of 13.5 MGD.

D. Final Effluent Limitation Considerations

1. Anti-Backsliding Requirements

The Clean Water Act specifies that a revised permit may not include effluent limitations that are less stringent than the previous permit, unless a less stringent limitation is justified based on exceptions to the anti-backsliding provisions contained in Clean Water Act sections 402(o) or 303(d)(4), or, where applicable, 40 C.F.R. section 122.44(i).

The effluent limitations for priority pollutants in this Order are at least as stringent as the effluent limitations in the previous Order, except for heptachlor. The effluent limitation for this pollutant is discontinued in this Order based on the consideration of new information pursuant to Clean Water Act section 402(o)(2)(B)(ii); specifically, the less stringent limit is based on a newly-performed RPA that uses current discharge monitoring data.

The effluent limitation for fecal coliform in the previous Order was based on the water quality objectives contained in the Basin Plan. However, the Coachella Valley Storm Water Channel Bacterial Indicators TMDL contains a WLA for *E. coli*, and the site-specific objective for the channel in the Basin

Plan for bacterial indicators only includes *E. coli*. The fecal coliform effluent limitations are discontinued based on implementation of the TMDL. The removal of this effluent limitation complies with Clean Water Act section 303(d)(4)(A).

The narrative TDS effluent limitation in the previous Order was couched as a receiving water limitation and compliance was measured as the discharge not causing the concentration of TDS in the receiving water to exceed an annual average concentration of 2,000 mg/L or a maximum daily concentration of 2,500 mg/L. This Order retains the very same receiving water requirements in Section V.A.13. Namely, this Order still requires, as before, that the discharge shall not cause the concentration of TDS in the Coachella Valley Storm Water Channel to exceed an annual average concentration of 2,000 mg/L or a maximum daily concentration of 2,500 mg/L. As such, the anti-backsliding requirements do not apply to the removal of the narrative TDS effluent limitation, because the removal of the TDS narrative effluent limit has not resulted in any less stringent requirements in the permit.

The above-described relaxations of effluent limitations are consistent with the anti-backsliding requirements of the Clean Water Act and federal regulations.

2. Antidegradation Policies

The permitted surface water discharge is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16.

The source water for the Facility is groundwater. Average annual precipitation in the Coachella Valley is insignificant (less than 3 inches/year). Runoff resulting from rains and snowmelt at the higher elevations is the major source of groundwater replenishment. The Whitewater River is the major drainage course in the Coachella Valley. There is perennial flow in the mountains, but because of diversions and percolation into the basin, the Whitewater River becomes dry further downstream. The constructed downstream extension of the Whitewater River channel known as the Coachella Valley Storm Water Channel, serves as drainage way for irrigation return flows, treated community wastewater, and storm runoff.

The Coachella Valley Storm Water Channel is a constructed channel, typically with no flows immediately upstream from the discharge point. It also carries discharges from WWTPs, irrigation return flows, rising groundwater and storm water runoff. Consequently, “background” water quality in Coachella Valley Storm Water Channel is difficult to establish for the purpose of conducting a typical antidegradation analysis. Flows that drain to the channel may contain pollutants at concentrations that violate certain Basin Plan water quality objectives for those pollutants, in particular, pesticides, silt/sediment, and selenium. Flows to the Coachella Valley Storm Water Channel also contain nutrients (e.g., phosphorus) at concentrations that contribute to the nutrient impairment of the Salton Sea. Agricultural return flows to the channel are essentially free of $CBOD_5$ and bacteria and have pH

well within the receiving water quality objective of 6.0 to 9.0 pH units.

The discharge from the Facility contains conventional pollutants ($CBOD_5$, TSS, oil and grease, and pH) that are controlled through best practicable control technology currently available (BPT) and best available technology economically achievable (BCT) to prevent exceedances of the receiving water quality objectives for those pollutants and prevent adverse impacts on the REC-I and REC-II beneficial uses of the Coachella Valley Storm Water Channel. Additionally, the bacterial indicator effluent limitations are in compliance with the WLA established in the Bacterial Indicators TMDL and are protective of beneficial uses. The discharge also contains TDS, but at concentrations significantly below the 2,000 mg/L TDS water quality objective for the receiving water. Several priority pollutants such as copper, cyanide, and bis(2-ethylhexyl)phthalate have been measured in the effluent; however, this Order establishes WQBELs for these pollutants based on the water quality criteria established in the CTR and through an RPA.

This Order removes effluent limitations for fecal coliform based on implementation of the TMDL for Bacterial Indicators in the Coachella Valley Storm Water Channel. The removal of WQBELs for these parameters will not result in an increase in pollutants concentration or loading, a decrease in the level of treatment or control, or a reduction of water quality. Therefore, the Colorado River Basin Water Board finds that the removal of the effluent limitations does not result in an increase in pollutants or any additional degradation of the receiving water. Thus, the removal of effluent limitations is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16.

Similarly, the removal of the heptachlor effluent limitation will not affect the quality of the discharge or degrade the receiving waters. Current discharge monitoring data and the RPA demonstrated that there is no reasonable potential for heptachlor in the effluent to cause an exceedance of water quality objectives in the receiving water. Thus, the removal of the effluent limitation for this pollutant is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.

The addition of several pollutants from the discharge are likely to lower water quality in the receiving water (i.e., cause some degradation). However, the Colorado River Basin Water Board has determined that some limited degradation of receiving water from the Facility discharge is consistent with the federal and state antidegradation policies, because any limited degradation: (a) is confined to a reasonable area; (b) is minimized by means of full implementation, regular maintenance, and optimal operation of best practicable treatment and control measures by the Discharger; (c) is primarily limited to waste constituents typically encountered in similar domestic wastewater; (d) does not unreasonably effect any present or anticipated beneficial uses of surface water prescribed in the Basin Plan, and will not result in the violation of any water quality objective; and (e) is consistent with

the maximum benefit to the people of the state.

The discharge from the Facility as permitted herein reflects best practicable treatment and control (BPTC) for the subject wastewater. The control is intended to ensure that the discharge does not create a condition of pollution or nuisance and that the highest background water quality will be maintained. The Facility incorporates:

a. Technology for secondary treated domestic wastewater;
b. Effluent disinfection;
c. An operation and maintenance manual; and
d. Staffing to assure proper operation and maintenance.

Degradation of surface water by some of the typical waste constituents associated with wastewater from POTWs is consistent with the maximum benefit to the people of the state. The discharge is necessary to accommodate essential public services for several areal cities and communities by providing wastewater treatment to local businesses and residents, which is an important benefit to the state. The Discharger also supports the economic prosperity of the community by the employment of full-time and part-time personnel at plant.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on flow, $CBOD_5$, TSS, percent removal, and pH are specified in federal regulations in 40 C.F.R. part 133. The permit's technology-based pollutant restrictions are no more stringent than those typically required by the Clean Water Act. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The scientific procedures for calculating the individual WQBELs for toxic pollutants are based on the CTR-SIP, which was approved by the USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA. Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the Clean Water Act.

The Colorado River Basin Water Board has considered the factors in Water Code section 13263, including the provisions of Water Code section 13241, in establishing these requirements.

E. Interim Effluent Limitations–Not Applicable

F. Final Effluent Limitations

Tables F-15 through F-17, below, summarize the proposed effluent limitations for the discharge from the Facility through Discharge Point 001. Proposed effluent limitations are based on secondary treatment standards, equivalent-to-secondary standards, the California Toxics Rule, and Colorado River Basin Plan water quality standards.

The previous Order (R7-2015-0002) established TBELs for the discharge from the oxidation ponds treatment system for pH, TSS, $CBOD_5$, and $CBOD_5$ and TSS percent removal, based on equivalent-to-secondary treatment standards with adjustments under 40 C.F.R. section 133.103 for TSS. These effluent limitations have been carried over from the prior Order, with adjustments to the effluent limitation for TSS as discussed in Section IV.B.2.b. The previous order also established TBELs for the discharge from the activated sludge treatment system for pH, TSS, $CBOD_5$, and percent removal, based on secondary treatment standards; this order carries forward those same limitations.

The previous Order also contained WQBELs for *E. coli*, copper, heptachlor, and oil and grease. Limitations for all of these constituents except heptachlor are retained in this Order. This Order revises the effluent limitation for copper based on the results of the RPA. Further, new effluent limitations for cyanide and bis(2-ethythexyl) phthalate are established based on the results of the RPA in accordance with requirements of the CTR and SIP.

1. Mass-based Effluent Limitations

40 C.F.R. section 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and section 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in section 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

Mass-based effluent limitations are established using the following formula:

Mass (lbs/day) = flow rate (MGD) x 8.34 x effluent limitation (mg/L)

Where: Mass = mass limitation for a pollutant (lbs/day)

Effluent limitation = concentration limit for a pollutant (mg/L)

Flow rate = discharge flow rate (MGD)

2. Final Effluent Limitations

The Discharger shall maintain compliance with the following effluent limitations for discharges from the activated sludge treatment system at

Discharge Point 001, with compliance measured at Monitoring Location EFF-001A, as described in the MRP.

Table F-15. Summary of Final Effluent Limitations (Activated Sludge - EFF-001A)

Parameter	Units	Avg. Monthly Limit	Max. Daily Limit	Instant. Min. Limit	Instant. Max. Limit	Basis
Flow	MGD	10	--	--	--	BPJ
Carbonaceous Biochemical Oxygen Demand (CBOD) (5 day at 20 Degrees C)	mg/L	25	40	--	--	40 C.F.R. 133
	lbs/day[1]	2,085	3,336	--	--	
Suspended Solids, Total (TSS)	mg/L	30	49	--	--	40 C.F.R. 133
	lbs/day	2,502	3,753	--	--	

[1] The mass-based effluent limitations are based on a design capacity of 10.0 MGD.

i. **Percent Removal**: The average monthly percent removal of CBOD 5-day 20º C and TSS shall not be less than 85 percent.

a. The Discharger shall maintain compliance with the following effluent limitations for discharges from the oxidation ponds treatment system at Discharge Point 001, with compliance measured at Monitoring Location EFF-001B, as described in the MRP.

Table F-16. Summary of Final Effluent Limitations (Oxidation Ponds - EFF-001B)

Parameter	Units	Avg. Monthly Limit	Max. Daily Limit	Instant. Min. Limit	Instant. Max. Limit	Basis
Flow	MGD	2.5	--	--	--	BPJ
Carbonaceous Biochemical Oxygen Demand (CBOD) (5 day at 20 Degrees. C)	mg/L	40	60	--	--	40 C.F.R. 133
	lbs/day	1,168	1,751	--	--	
Total Suspended Solids (TSS)	mg/L	49	74	--	--	40 C.F.R. 133
	lbs/day	1,431	2,160	--	--	

[1] The mass-based effluent limitations are based on a design capacity of 3.5 MGD.

i. **Percent Removal**: The average monthly percent removal of CBOD 5-day 20º C and TSS shall not be less than 65 percent.

b. The Discharger shall maintain compliance with the following effluent limitations for the combined discharges from the activated sludge treatment system and oxidation ponds treatment system at Discharge Point 001, with

compliance measured at Monitoring Location EFF-001C, as described in the MRP.

Table F-17. Summary of Final Effluent Limitations (Combined - EFF-001C)

Parameter	Units	Avg. Monthly Limit	Max. Daily Limit	Instant. Min. Limit	Instant. Max. Limit	Basis
pH	Standard Units	--	--	6.0	9.0	40 C.F.R. 133
Oil and Grease	mg/L	--	--	25	--	Basin Plan
	lbs/day	--	--	2,815	--	
Copper	µg/L	9.0	15.9	--	--	CTR, SIP
	lbs/day[1]	1.02	1.79	--	--	
Cyanide	µg/L	4.3	8.5	--	--	CTR, SIP
	lbs/day[1]	0.48	0.96	--	--	
Bis (2-Ethylhexyl) Phthalate	µg/L	5.9	11.8	--	--	CTR, SIP
	lbs/day[1]	0.66	1.33	--	--	
Residual Chlorine	mg/L	0.01	--	--	0.02	Basin Plan
	Lbs/day[1]	1.1	--	--	--	

[1] The mass-based effluent limitations are based on a design capacity of 13.5 MGD.

a. Toxicity: There shall be no toxicity in the treatment plant effluent. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, or toxicity tests of appropriate duration or other appropriate methods specified by the Colorado River Basin Water Board in the MRP, Attachment E.

b. Bacteria: The bacteria concentrations in the wastewater effluent discharged to the Coachella Valley Storm Water Channel shall not exceed the following concentrations, as measures by the following bacterial indicators:

(a) *E. Coli*. The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a MPN of 126 per 100 milliliters, nor shall any sample exceed the maximum allowable bacterial density of a MPN of 400 per 100 milliliters.

G. Land Discharge Specifications–Not Applicable

H. Recycling Specifications–Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

Clean Water Act section 303, subdivisions (a) through (c), require states to adopt

water quality standards, including water quality criteria where necessary to protect beneficial uses. The Colorado River Basin Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains receiving surface water limitations based on the Basin Plan numerical and narrative water quality objectives for biostimulatory substances, color, chemical constituents, dissolved oxygen, oil, grease and floating material, pH, pesticides, settleable substances, tastes and odors, temperature, toxicity, and turbidity.

B. Groundwater–Not Applicable

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

The Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 C.F.R. section 122.42.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 C.F.R. section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2), because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

This section is based on 40 C.F.R. parts 122 through 124. The Colorado River Basin Water Board may reopen the permit to modify permit conditions and requirements. Causes for modification include, but are not limited to, the promulgation of new regulations, modification in the Discharger's disposal practices, or the adoption of new regulations by the State Water Board or Colorado River Basin Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

a. TRE Work Plan. This provision is based on the SIP, section 4, Toxicity Control Provisions.

b. Optional Translator Study. This provision is based on the SIP and allows the Discharger to conduct an optional translator study, based on

the SIP and at the Discharger's discretion. This provision is based on the need to gather site-specific information in order to apply a different translator from the default translator specified in the CTR and SIP. Without site-specific data, the default translators are used with the CTR criteria.

c. **Ammonia Study.** This provision requires the Discharger to conduct a special study for determining how to reduce ammonia discharges into the receiving water. Ammonia is on the 303(d) List of impairing pollutants for the Coachella Valley Stormwater Channel and is present in the Facility's discharge. Based on the study findings, the Discharger shall submit a technical report summarizing the study and propose a pollution prevention plan for reducing ammonia discharges.

d. **DMR-QA Study.** This provision is based on section 308 of the Clean Water Act (33 U.S.C. § 1318). USEPA requires major and selected minor dischargers under the NPDES Program to participate in the annual DMR-QA Study Program. See Section VII.E.1 below.

3. **Best Management Practices and Pollution Prevention**

a. **Pollutant Minimization Program.** This provision is based on the requirements of section 2.4.5 of the SIP.

b. **Spill Response Plan.**

This provision is based on the requirements of 40 C.F.R. section 122.41(e) and the previous Order.

c. **Stormwater.**

This provision is based on State Water Board Order 2014-0057-DWQ, NPDES Permit No. CAS000001, *General Permit for Storm Water Discharges Associated with Industrial Activities*.

4. **Construction, Operation, and Maintenance Specifications**

a. **Treatment Basins.** These provisions are included to ensure compliance with requirements established in this Order, and are based on the Clean Water Act, USEPA regulations, the Water Code, and Colorado River Basin Water Board plans and policies.

b. **Facility and Treatment Operation.** This provision is based on the requirements of 40 C.F.R. section 122.41(e) and the previous Order.

c. **Operations Plan for Proposed Plant Modification.** This provision is based on Water Code section 13385(j)(1)(D) in which the Discharger may adjust and test the expansion to the treatment system. This provision requires the Discharger to submit an Operations Plan describing the actions the Discharger will take during the period of adjusting or testing, including steps to prevent violations

5. **Special Provisions for Municipal Facilities (POTWs Only)**

a. **Pretreatment Program Requirements**. Requirements are based on the

previous Order and 40 C.F.R. part 403. The Clean Water Act requires a discharger to implement a pretreatment program if the facility has a treatment capacity greater than 5 MGD and receives industrial users' pollutants which pass through or Interfere with the operation of the POTW. The Discharger has been proactive in initiating a formal industrial waste survey to identify all possible industrial users and progress continued into 2015. As of the 2015 update, over 1,350 reviews had been completed. No industrial dischargers were identified. Furthermore, the Colorado River Basin Water Board conducted pretreatment compliance inspections in 2011, 2013, 2015 and 2019. During the inspections, staff confirmed that the Facility has adequate ordinances to prohibit discharges of industrial wastes and procedures to ensure that it is aware of any nondomestic dischargers that connect to its collection system.

b. Collection Systems. The State Water Board issued *General Waste Discharge Requirements for Sanitary Sewer Systems*, Water Quality Order 2006-0003-DWQ (Sanitary Sewer Order) on May 2, 2006. The Monitoring and Reporting Requirements for the Sanitary Sewer Order were amended by Water Quality Order WQ 2008-0002-EXEC on February 20, 2008. The Sanitary Sewer Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the order. The Sanitary Sewer Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

Further, the Sanitary Sewer Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. Inasmuch that the Discharger's collection system is part of the system that is subject to this Order, certain standard provisions are applicable as specified in Provisions, Section VI.C.5. The Discharger must comply with both the Sanitary Sewer Order and this Order. The Discharger is enrolled under the Sanitary Sewer Order, and the Discharger's WDID number is 7SSO10540.

c. Sewage Sludge and Biosolids. Requirements are based on 40 C.F.R. part 503, 257, and 258.

6. Other Special Provisions

Special Provisions VI.C.6.a and VI.C.6.b are included to ensure compliance with requirements established in this Order R7-2020-0005, and are based on the previous Order, the Clean Water Act, USEPA regulations, the California Water Code, and Colorado River Basin Water Board plans and policies.

7. Special Provisions Reporting Schedules

The reporting schedules specify the deliverables and due dates for the Spill Response Plan, TRE Workplan, Ammonia Study, and PMP.

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Clean Water Act section 308 and 40 C.F.R. sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Colorado River Basin Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

A. Influent Monitoring

This Order carries forward the treatment plant influent monitoring requirements from Order R7-2015-0002.

B. Effluent Monitoring

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are given in the proposed MRP. This provision requires compliance with the MRP, and is based on 40 C.F.R. sections 122.44(i), 122.62, 122.63 and 124.5. The MRP is a standard requirement in almost all NPDES permits (including this Order) issued by the Colorado River Basin Water Board. In addition to containing definitions of terms, it specifies general sampling/analytical protocols and the requirements of reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the Water Code, and the Colorado River Basin Water Board's policies. The MRP also contains sampling programs specific to the Discharger's wastewater treatment facility. It defines the sampling stations and frequency, pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all pollutants for which effluent limitations are specified. Further, in accordance with section 1.3 of the SIP, periodic monitoring is required for all priority pollutants defined by the CTR, for which the criteria apply and for which no effluent limitations have been established, to evaluate reasonable potential to cause or contribute to an excursion above a water quality standard.

Monitoring for those pollutants expected to be present in the discharge from the Facility at Discharge Point 001 will be required as shown in the proposed MRP and as required by the SIP.

Effluent monitoring requirements are unchanged from the previous Order; weekly monitoring for $CBOD_5$ and TSS is continued at Monitoring Locations EFF-001A and EFF-001B. Further, at Monitoring Location EFF-001C, continuous monitoring for flow and total chlorine residual is continued as well as monitoring five times per month for *E. coli*, and daily monitoring for pH and temperature. Monthly monitoring for copper has been continued. Monthly monitoring for cyanide and bis(2-ethylhexyl)phthalate has been established to determine compliance with new effluent limitations for these parameters. Monthly monitoring for oil and

grease has been maintained to determine compliance with effluent limitations established for oil and grease. Monitoring for nitrite, nitrate, ammonia nitrogen, and total nitrogen have been increased to monthly to evaluate the impact of ammonia discharge on the 303(d) List of impairing pollutants for the Coachella Valley Stormwater Channel. Monitoring for total phosphate, ortho-phosphate and total dissolved solids have been reduced from monthly to quarterly since a review of effluent monitoring data indicates low variability in discharge concentrations. Quarterly monitoring for chloride and hardness has been continued in this permit. Monitoring for heptachlor has been discontinued due to the removal of effluent limitations for heptachlor; however, annual monitoring for heptachlor is still required as part of the routine monitoring for all priority pollutants.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) testing requirements establish monitoring of the effluent to ensure that the receiving water quality is protected from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. This permit requires chronic toxicity testing.

This requirement maintains conditions and protocols by which compliance with the Basin Plan narrative water quality objective for toxicity will be demonstrated. Conditions include required monitoring and evaluation of the effluent for chronic toxicity and provide monitoring triggers that, when exceeded, require the Discharger to initiate accelerated testing, TRE, and TIE procedures. The WET testing requirements in this Order include a screening phase and a monitoring phase of species testing. Screening is required during the first and fourth years of the permit term, to determine the most sensitive species that the Discharger will continue to use during the monitoring phase. This Order also includes implementation procedures for toxicity caused by ammonia, ionic imbalance, and elevated TDS concentrations.

The WET testing requirements contained in the MRP, Section V were developed based on the *Draft National Whole Effluent Toxicity (WET) Implementation Guidance Under the NPDES Program* (EPA 832-B-04-003), the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003), and *Technical Support Document for Water Quality-based Toxics Control* (EPA 833-5-91-100). This is the most current guidance available to the Colorado River Basin Water Board.

USEPA has developed a statistical approach that assesses the WET measurement of wastewater effects on specific test organisms' ability to survive, grow, and reproduce. The approach is called the Test of Significant Toxicity (TST) and is a statistical method that uses hypothesis testing techniques based on research and peer-reviewed publications. The TST approach examines whether an effluent at the critical concentration (e.g., in-stream waste concentration or IWC, as recommended in USEPA's *Technical Support Document* [EPA 833-5-91-100] and implemented under USEPA's WET NPDES

permits program) and the control within a WET test differ by an unacceptable amount; i.e., the amount that would have a measured detrimental effect on the ability of aquatic organisms to thrive and survive. This Order requires the Discharger to utilize the TST approach in conducting WET testing.

The TST approach explicitly incorporates test power (the ability to correctly classify the effluent as nontoxic) and provides a positive incentive to generate valid, high quality WET data to make informed decisions regarding WET reasonable potential and permit compliance determinations. Once the WET test has been conducted, the TST approach is used to analyze the WET test results to assess whether the effluent discharge is toxic at the critical concentration. The TST approach is designed to be used for a two-concentration data analysis of the influent water concentration (IWC) or receiving water concentration (RWC) compared to a control concentration. Using the TST approach, permitting authorities like the Colorado River Basin Water Board have more confidence when making determinations as to whether a permittee's effluent discharge is toxic or non-toxic. Use of the TST approach does not result in any changes to USEPA's WET test methods; however, a facility might want to modify its future WET tests by increasing the number of replicates over the minimum required (U.S. EPA 1995, 2002a, 2002b, 2002c) by the approved USEPA WET test method to increase test power, which is the probability of declaring an effluent non-toxic if the organism response at the IWC is truly acceptable.

D. Receiving Water Monitoring

1. Surface Water

Surface water monitoring is required to determine compliance with receiving water limitations and to characterize the water quality of the receiving water pursuant to the Basin Plan. Monitoring requirements for the receiving water are unchanged from the previous Order, except to clarify that in the event the Discharger's effluent is the only flow present at the downstream receiving water monitoring location (i.e there is no flow at the upstream receiving water monitoring location), there is no need to sample at the downstream receiving water monitoring location. Additionally, annual monitoring for priority pollutants in the upstream receiving water has been continued, as required in accordance with the SIP.

2. Groundwater–Not Applicable

E. Other Monitoring Requirements

1. Discharge Monitoring Report – Quality Assurance (DMR-QA) Study Program

Under the authority of section 308 of the Clean Water Act (33 U.S.C. § 1318), USEPA requires major and selected minor dischargers under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) the

Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) per the waiver issued by USEPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study and also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger must ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to USEPA's DMR-QA Coordinator and Quality Assurance Manager.

2. Pretreatment Monitoring

The federal Clean Water Act section 307(b) and federal regulations at 40 C.F.R. part 403 require POTWs to develop an acceptable industrial pretreatment program. A pretreatment program is required to prevent the introduction of pollutants which will interfere with treatment plant operations or sludge disposal, and prevent pass through of pollutants that exceed water quality objectives, standards, or permit limitations. These monitoring and reporting requirements are established pursuant to 40 C.F.R. part 403 to evaluate the industrial source of constituents in the wastewater.

VIII. PUBLIC PARTICIPATION

The Colorado River Basin Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the Discharger. As a step in the WDRs adoption process, the Colorado River Basin Water Board staff has developed tentative WDRs and has encouraged public participation in the WDRs adoption process.

A. Notification of Interested Persons

The Colorado River Basin Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations.

Notification was provided through the Desert Sun newspaper.

The public had access to the agenda and any changes in dates and locations through the Colorado River Basin Water Board's website at: http://www.waterboards.ca.gov/coloradoriver/board_info/agenda/

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Colorado River Basin Water Board at 73-720 Fred Waring Drive, Suite 100, Palm Desert, CA 92260.

To be fully responded to by staff and considered by the Colorado River Basin Water Board, the written comments were due at the Colorado River Basin Water Board office by 5:00 p.m. on February 28, 2020.

C. Public Hearing

The Colorado River Basin Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: March 5, 2020

Time: 10:00 AM

Location: City of Temecula Conference Center
4100 Main Street
Temecula, CA 92590

Interested persons were invited to attend. At the public hearing, the Colorado River Basin Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

D. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Colorado River Basin Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and the California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:
http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

For instructions on how to file a petition for review, see:
https://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through Colorado River Basin Water Board by calling (760) 346-7491.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Colorado River Basin Water Board, reference this Facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Jose Valle de Leon at (760) 776-8940.