State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION

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# ORDER NO. R8-2021-0003

# WASTE DISCHARGE REQUIREMENTS AND MASTER RECYCLING PERMIT FOR ORANGE COUNTY WATER DISTRICT ADVANCED WATER PURIFICATION FACILITY ORANGE COUNTY

The following Discharger is subject to waste discharge and producer/user reclamation requirements as set forth in this Order:

**Table 1. Discharger Information**

| | |
|---|---|
| **Discharger/Operator** | Orange County Water District |
| **Name of Facility** | Advanced Water Purification Facility |
| **Facility Address** | 18700 Ward Street, Fountain Valley, CA 92708 |
| | Orange County |

The discharge by the Orange County Water District from the discharge point identified below is subject to waste discharge requirements as set forth in this Order:

**Table 2. Discharge Locations and Recycled Water Use Areas**

| Discharge Point | Effluent Description | Discharge Point (Latitude) | Discharge Point (Longitude) | Receiving Water |
|---|---|---|---|---|
| DP-001 Recycled water | Up to 100 mgd of full advanced treated (FAT) recycled water currently and up to 130 mgd of FAT recycled water by 2023 | 33°41’23” N | 117°56’37” W | Orange Groundwater Management Zone |

**Table 3. Administrative Information**

| | |
|---|---|
| This Order was adopted by the Santa Ana Water Board on: | March 12, 2021 |
| This Order shall become effective on: | March 12, 2021 |

IT IS HEREBY ORDERED, that to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, Orange County Water District shall comply with the requirements set forth in this Order.

I, Hope A. Smythe, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on March 12, 2021.

Hope Smythe
Digitally signed by Hope Smythe
Date: 2021.03.16 15:17:27 -07'00'

**Hope A. Smythe,** Executive Officer

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## I. DISCHARGER/FACILITY INFORMATION

Information regarding the Discharger is summarized in Table 4, below, and sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Discharger's application for waste discharge requirements and master recycling permit. The following Discharger is subject to waste discharge and producer/user reclamation requirements as set forth in this Order:

**Table 4. Discharger/Facility Information**

| | |
|---|---|
| **Discharger** | Orange County Water District |
| **Address** | 18700 Ward Street, Fountain Valley, CA 92708 |
| **Facility** | Advanced Water Purification Facility (AWPF) |
| **Facility Address** | 18700 Ward Street, Fountain Valley, CA 92708 |
| **Facility Contact** | Jason Dadakis, (714) 378-3364<br>**JDadakis@ocwd.com** |
| **Type of Facility** | POTW |
| **Facility Design Flow** | 100 mgd of Full Advanced Treated (FAT) Recycled Water current, with 130 mgd of FAT recycled water planned design flow by 2023 |

## II. FINDINGS

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Santa Ana Water Board), finds:

**A. Legal Authorities:** This Order serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4, Division 7 of the California Water Code (commencing with § 13260). Also, this Order serves as a master recycling permit pursuant to § 13523.1 of Article 4, Chapter 7, Division 7 of the California Water Code.

**B. Background and Rationale for Requirements:** The requirements in this Order are based on information submitted as part of the application and other available information. Attachment F, which contains background information and rationale for requirements in this Order, is hereby incorporated into this Order, and thus constitutes a part of the Findings for this Order. Attachments A, B, C, E, G and H are also incorporated into this Order.

**C. CEQA Compliance:** This Order includes requirements for the production and distribution of recycled water for non-potable reuse at an existing facility. In compliance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.), OCWD prepared and certified an Environmental Impact Report (EIR) for the Groundwater Replenishment System (GWRS), a component of which is the AWPF. The EIR identified

no significant adverse impact to water quality as a result of the use of recycled water (See section III.B. of Attachment F for more details).

**D. Notification of Interested Parties:** The Santa Ana Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements and a Master Recycling Permit for this project and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet (Attachment F) of this Order.

**E. Consideration of Public Comment:** The Santa Ana Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the public meeting are provided in the Fact Sheet (Attachment F) of this Order.

## III. PROHIBITIONS

**A.** The use of recycled water shall be limited to treated effluent that meets the conditions and requirements specified in Section IV.A.

**B.** The unauthorized discharge of wastewater and/or of recycled water at a location or in a manner different from those described in this Order is prohibited.

**C.** The bypass or overflow of untreated wastewater or wastes to surface waters or surface water drainage courses is prohibited.

**D.** The discharge of any substances in concentrations toxic to animal or plant life in the affected receiving water is prohibited.

**E.** The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

**F.** The distribution and use of recycled water prior to authorization by the California State Water Resources Control Board, Division of Drinking Water, is prohibited.

## IV. RECLAMATION SPECIFICATIONS

### A. Reclamation Specifications: Discharge Point 001 (DP-001)

The Discharger shall maintain compliance with the following limitations for recycled water produced and distributed for landscape irrigation or other uses. Compliance is to be measured at monitoring location REC-001 or other approved monitoring locations where representative samples of recycled water can be obtained for laboratory testing and analysis, as described in the attached Monitoring and Reporting Program (Attachment E). The Discharger may submit for approval by the Executive Officer other monitoring location(s) not specified herein where representative samples of recycled water could be obtained for laboratory testing and analysis.

1. **Physical/Biological Limitations:** The Discharger shall maintain compliance with the following recycled water limitations at monitoring station location REC-001:

**Table 5. Recycled Water Limitations at REC-001**

| Parameter | Units | Limitations | |
|---|---|---|---|
| | | Average Monthly | Average Weekly |
| Biochemical Oxygen Demand 5-day @ 20°C | mg/L | 20 | 30 |
| Total Suspended Solids | mg/L | 20 | 30 |

2. **TDS Limitations:** The 12-month running average total dissolved solids concentration of the discharge at Discharge Point 001 shall not exceed the 580 mg/l unless:

   (1) The Discharger demonstrates to the satisfaction of the Santa Ana Water Board's Executive Officer that:

   (a) Discharges in excess of the TDS limits are due to the quality of water supply sources utilized in the Discharger's service area, and that all reasonable steps, as agreed upon by the Executive Officer, have been taken to ensure that the best quality supplies are obtained and utilized in the Discharger's service area; and/or

   (b) Discharges in excess of the TDS limits are due to chemical additions in the treatment process needed to meet waste discharge requirements, and the Discharger has taken all steps to optimize chemical additions so as to minimize the increases; and

   (2) The Discharger implements an acceptable plan to offset discharges in excess of the TDS limits.

3. **Recycled Water Specifications:** The recycled water shall all times be adequately oxidized disinfected tertiary treated recycled water, which is a filtered and subsequently disinfected wastewater that meets the following limitations:

   (1) Turbidity of the filtered effluent

When filtration[1] is through microfiltration, ultrafiltration, nanofiltration, or reverse osmosis membrane shall not exceed any of the following:

(a) 0.2 Nephelometric Turbidity Unit (NTU) more than 5 percent of the time within any 24-hour period; and
(b) 0.5 NTU at any time.

(2) Disinfected wastewater shall meet the following:

(a) The 7-day median concentration of total coliform bacteria in the disinfected effluent shall not exceed a Most Probable Number (MPN) of 2.2 per 100 milliliters (ml), utilizing the bacteriological results of the last seven days for which analysis has been completed.
(b) The number of total coliform organism shall not exceed an MPN of 23 total coliform bacteria per 100 ml in more than one sample in any 30-day period.
(c) No total coliform sample shall exceed an MPN of 240 total coliform bacteria per 100 ml.
(d) When UV disinfection shall meet the requirements specified in the Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse, published by the National Water Research Institute, Second Edition, and/or the acceptance conditions specified by the State Water Resources Control Board's (State Water Board's) Division of Drinking Water (DDW).
(e) When a disinfection process combined with the filtration process is utilized, the combined process shall demonstrate inactivation and/or removal of 99.999 percent of the plaque-forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration. The facility must be operated and maintained in accordance with a State Water Board's DDW[2], approved operations plan, which is part of the Title 22 Engineering Report. The operations plan included in the Title 22 Engineering Report shall become an enforceable part of this Order.

4. The pH of the recycled water shall at all times be within the range of 6.0 to 9.0 pH units.

5. Prior to the delivery of recycled water to any new user, the Discharger shall submit to the State Water Board's DDW and the County Environmental Health Department for review and approval a report containing the information listed in paragraph IV.A.11., below.

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1 *For recycled water use, other acceptable filtration technology that complies with Title 22 of the California Code of Regulations and approved by the California SWRCB's DDW may be used. Compliance determination will be based on California SWRCB's DDW guidance.*

2 *Before July 1, 2014 the California Department of Public Health.*

6. The Discharger shall be responsible for assuring that recycled water is delivered and utilized in conformance with this Order and the recycling criteria contained in Title 22, Division 4, Chapter 3, Sections 60301 through 60355, California Code of Regulations. The Discharger shall conduct periodic inspections of the facilities of the recycled water users to monitor compliance by the users with this Order.

7. The Discharger shall establish and enforce Rules and Regulations for Recycled Water users, governing the design and construction of recycled water use facilities and the use of recycled water in accordance with the uniform statewide recycling criteria established pursuant to California Water Code Section 13521.

    a. Use of recycled water by the Discharger shall be consistent with its Rules and Regulations for Recycled Water Use.

    b. Any revisions made to the Rules and Regulations shall be subject to the review of the Santa Ana Water Board, the State Water Board's DDW, and the County Environmental Health Department. The revised Rules and Regulations or a letter certifying that the Discharger's Rules and Regulations contain the updated provisions in this Order, shall be submitted to the Santa Ana Water Board within 60 days of adoption of this Order by the Santa Ana Water Board or within 60 days of finalization of the Recycled Water Use Site Procedures in Orange County, California, whichever is later.

8. The Discharger shall conduct periodic inspections of recycled water reuse sites to monitor compliance with the Discharger's Rules and Regulations for Recycled Water Use and the uniform statewide reclamation criteria established pursuant to California Water Code Section 13521.

9. The storage, delivery, or use of recycled water shall not individually or collectively, directly or indirectly, result in a pollution or nuisance, or adversely affect water quality, as defined in the California Water Code.

10. The Discharger shall maintain and make available upon request by the Santa Ana Water Board, State Water Board's DDW, and/or the County Environmental Health Department the following information for any recycled water users:

    a. The average number of persons estimated to be served at each use area on a daily basis.
    b. The specific boundaries of the proposed use area including a map showing the location of each facility, drinking water fountain, and impoundment to be used.
    c. The person or persons responsible for operation of the recycled water system at each use area.
    d. The specific use to be made of the recycled water at each use area.
    e. The methods to be used to assure that the installation and operation of the recycled water system will not result in cross connections between the recycled

water and potable water piping systems. This shall include a description of the pressure, dye or other test methods to be used to test the system.

f. Plans and specifications which include following:
   (1) Proposed piping system to be used.
   (2) Pipe locations of both the recycled and potable water systems.
   (3) Type and location of the outlets and plumbing fixtures that will be accessible to the public.
   (4) The methods and devices to be used to prevent backflow of recycled water into the potable water system.
   (5) Plan notes relating to specific installation and use requirements.

11. The Discharger shall require each user to designate an on-site supervisor responsible for the operation of the recycled water distribution system within the use area. The supervisor shall be responsible for complying with this Order, prevention of potential hazards, the installation, operation and maintenance of the distribution system as approved by State Water Board's DDW (previously the California Department of Public Health).

12. The recycled water use for the Anaheim Adventure Aquapark (Aquapark) must adhere to the following conditions:

    a. The Discharger must use FAT recycled water for the Miraloma Basin while the Aquapark is operational.
    b. Recycled water use signs must be posted at the proposed locations shown in Exhibit 12 of the Discharger's Aquapark approval request letter dated April 17, 2020 (Discharger's letter) and the signage wording must be per Exhibit 11 of the Discharger's letter. The information conveyed in the signs must also be included in the Aquapark customer waiver document.
    c. The modular restrooms must be always open during Aquapark hours of operation.
    d. The Discharger must maintain a schmutzdecke layer for pathogen and chemical control. If the Discharger finds that a schmutzdecke layer cannot be established with concurrent operations of the Aquapark, then the Discharger must stop Aquapark operations and propose a plan to DDW on how the Miraloma Basin meets the requirements of Water Recycling Requirements Order No. R8-2004-0002, as amended by Order No. R8-2008-0058, R8-2014-0054, R8-2016-0051, and R8-2019-0007) issued to OCWD by the Santa Ana Water Board and the Title 22 Engineering Report.

## V. RECEIVING WATER LIMITATIONS AND SPECIFICATIONS

### A. Surface Water Limitations (Not Applicable)

### B. Groundwater Limitations

The discharge of waste or use of recycled water shall not cause the underlying groundwater to be degraded, cause water quality objectives to be exceeded, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.

## VI. PROVISIONS

### A. General Provisions

1. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

2. In the event the Discharger does not comply or will be unable to comply for any reason with any prohibition, discharge limitation, or receiving water limitation of this Order, which pose an immediate threat to human health or the environment, the Discharger shall notify the Santa Ana Water Board by telephone at (951) 782-4130 or by email to **info8@waterboards.ca.gov** within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in the monthly Self-Monitoring Report, unless the Santa Ana Water Board waives confirmation or requires, orally or in writing, a written notification within five business days. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification with the details discussed above with the next monitoring report.

3. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code (CWC).

4. The Discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncomplying discharge.

5. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following.

    a. Violation of any terms or conditions of this Order;
    b. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts.

6. The Discharger shall file with the Santa Ana Water Board a Report of Waste Discharge at least 140 days before making any material change in the character, location, or volume of the discharge. A material change includes, but is not limited to, the following:

    a. Adding a major industrial waste discharge to a discharge of essentially domestic sewage or adding a new process or product by an industrial facility resulting in a change in the character of the waste.
    b. Significantly changing the disposal method or location, such as changing the disposal to another drainage area or water body.
    c. Significantly changing the method of treatment.
    d. Increasing the treatment plant design capacity beyond that specified in this Order.

7. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.

8. The Discharger shall maintain a copy of this Order at the site so that it is available to site operating personnel at all times. Key operating personnel shall be familiar with its content.

9. The Discharger shall optimize chemical additions needed in the treatment process to meet waste discharge requirements so as to minimize total dissolved solid increases in the treated wastewater.

10. Collected screenings, sludge, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Santa Ana Water Board's Executive Officer.

11. In the event of any change in control or ownership of land or waste discharge facility presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Santa Ana Water Board.

12. The treatment facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

13. The Santa Ana Water Board and other authorized representatives shall be allowed:

    a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;
    b. Access to copy any records that are kept under the conditions of the Order;
    c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
    d. To photograph, sample and monitor for the purpose of assuring compliance

with this Order, or as otherwise authorized by the Water Code.

**B. Monitoring and Reporting Program Requirements**

The Discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order. This monitoring and reporting program may be modified by the Executive Officer at any time during the term of this Order and may include a reduction or an increase in the number of parameters to be monitored, the frequency of the monitoring or the number and size of samples to be collected.

**C. Special Provisions**

**1. Special Studies, Technical Reports and Additional Monitoring Requirements (not applicable)**

**2. Best Management Practices and Pollution Prevention –**

a. Pollutant Minimization Program (not applicable)

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

a. The Discharger's wastewater treatment plant shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Title 23, Division 3, Chapter 26, California Code of Regulations.

b. The Discharger shall provide safeguards to assure that should there be reduction, loss, or failure of electric power, the Discharger will comply with the requirements of this Order.

c. The Discharger shall update as necessary, the "Operation and Maintenance Manual (O&M Manual)," which it has developed for the treatment facility to conform to latest plant changes and requirements. The O&M Manual shall be readily available to operating personnel onsite. The O&M Manual shall include the following:

(1) Description of the treatment plant’s organizational chart showing the number of employees, duties and qualifications and plant attendance schedules (daily, weekends and holidays, part-time, etc). The description should include documentation that the personnel are knowledgeable and qualified to operate the treatment facility so as to achieve the required level of treatment at all times.
(2) Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.
(3) Description of laboratory and quality assurance procedures.
(4) Process and equipment inspection and maintenance schedules.

(5) Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Discharger will be able to comply with requirements of this Order.
(6) Description of preventive (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources of accidental discharges, untreated or partially treated waste bypass, and polluted drainage (such as: loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure, etc.).

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

a. Sewer Collection System Requirements: The Discharger does not operate a sewer collection system and only applies advanced treatment to secondary effluent provided to the Facility by OCSD and, in the future, the Facility will also receive tertiary treated and disinfected wastewater from the Irvine Ranch Water District's (IRWD's) Michelson Water Recycling Plant (MWRP) as influent. Therefore, the Discharger is not subject to sewer collection system requirements.

b. Sludge Disposal Requirements: The Discharger returns all collected screenings, sludge, and other solids removed from liquid wastes to OCSD's Plant No. 1 for disposal, except for lime sludge which is returned to OCSD's Treatment Plant No. 2 for disposal.

c. Pretreatment Program Requirements: The production of FAT recycled water at the Facility for indirect potable reuse is regulated under water recycling requirement Order No. R8-2004-0002, as amended by Order No. R8-2008-0058, Order No. R8-2014-0054, Order No. R8-2016-0051, and Order No. R8-2019-0007 issued to OCWD by the Santa Ana Water Board, includes pertinent pretreatment (source control) requirements. The supplier of the secondary treated wastewater to the Facility, OCSD, has an approved pretreatment program and under contractual agreement with the Discharger controls contaminants that are harmful or may be harmful to human health and drinking water supplies. IRWD, a future supplier of disinfected tertiary treated wastewater to the Facility, also has an approved pretreatment program.

## VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

### A. General

Compliance with effluent limitations for pollutants shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the

concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the minimum level (ML).

**B. Average Monthly Effluent Limitation (AMEL)**

If the average (or when applicable, the median determined by subsection F below for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

**C. Average Weekly Effluent Limitation (AWEL)**

If the average (or when applicable, the median for multiple sample data, see subsection F) of daily discharges over a calendar week exceeds the AWEL for a given parameter, this will represent a single violation, though the Discharger may be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger may be considered out of compliance for that calendar week. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

**D. Maximum Daily Effluent Limitation (MDEL)**

If a daily discharge or when applicable, the median determined by subsection F above for multiple sample data of a daily discharge exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

**E. 12-Month Running Average**

Compliance with the 12-month running average limit under Reclamation Specification IV.A. 2. shall be determined by arithmetic mean of the last twelve monthly-averages (see Attachment A of the Order for further details).

**F. Multiple Sample Data**

When determining compliance with an AMEL for toxic pollutants and more than one sample result is available in a month, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of “Detected, but Not Quantified” (DNQ) or “Not Detected” (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

**G. Turbidity Limitations**

The Discharger shall be considered in compliance with Discharge Specifications IV.A.3.(1), if the following conditions are met. If the Discharger is using a properly operating backup turbidimeter, the reading of the backup turbidimeter shall be considered in determining whether there has been an actual noncompliance:

1. There are no excursions above the limits specified in Discharge Specifications IV.A.3.(1)(a) through IV.A.3.(1)(c);
2. The apparent exceedance was caused by interference with, or malfunction of, the monitoring instrument.

**H. Compliance Determination**

Compliance determinations shall be based on available analyses for the time interval associated with the effluent limitation. Where only one sample analysis is available in a specified time interval (e. g., monthly or weekly average), that sample shall serve to characterize the discharge for the entire interval. If quarterly sample results show noncompliance with the average monthly limit and that sample result is used for compliance determinations for each month of the quarter, then three separate violations of the average monthly limit shall be deemed to have occurred.

## ATTACHMENT A – DEFINITIONS

**Arithmetic Mean (μ),** also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$
where: $\Sigma x$ is the sum of the measured ambient water concentrations, and
$n$ is the number of samples.

**Average Monthly Effluent Limitation (AMEL):** the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month (see section VII.F of the Order).

**Average Weekly Effluent Limitation (AWEL):** the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

**Best Management Practices** (BMPs) are methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges including storm water. BMPs include structural and non-structural controls, and operation and maintenance procedures, which can be applied before, during, and/or after pollution producing activities.

**Bioaccumulative pollutants** are those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

**Carcinogenic** pollutants are substances that are known to cause cancer in living organisms.

**Daily Discharge:** Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

**Detected, but Not Quantified (DNQ)** are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

**Estimated Chemical Concentration** is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

**Existing Discharger** means any discharger that is not a new discharger. An existing discharger includes an "increasing discharger" (i.e., an existing facility with treatment systems in place for its current discharge that is or will be expanding, upgrading, or modifying its existing permitted discharge after the effective date of this Policy).

**Infeasible** means not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

**Inland Surface Waters** are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

**Instantaneous Maximum Effluent Limitation:** the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

**Instantaneous Minimum Effluent Limitation:** the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

**Maximum Daily Flow** is the maximum flow sample of all samples collected in a calendar day.

**Maximum Daily Effluent Limitation (MDEL)** means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

**MEC**: Maximum Effluent Concentration.

**Median** is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements ($n$) is odd, then the median = $X_{(n+1)/2}$. If $n$ is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

**Method Detection Limit (MDL)** is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136, Appendix B, revised as of May 14, 1999.

**Minimum Level (ML)** is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific

analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

**Not Detected (ND)** are those sample results less than the laboratory's MDL.

**Persistent pollutants** are substances for which degradation or decomposition in the environment is nonexistent or very slow.

**Pollutant Minimization Program (PMP)** means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost-effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to CWC Section 13263.3(d), shall be considered to fulfill the PMP requirements. The following reporting protocols and definitions are used in determining the need to conduct a Pollution Minimization Program (PMP). Reporting protocols in the Monitoring and Reporting Program, Attachment E, Section X.B.4 describe sample results that are to be reported as Detected but Not Quantified (DNQ) or Not Detected (ND). Definitions for a Minimum Level (ML) and Method Detection Limit (MDL) are provided in Attachment A. A Reporting Level (RL) is the ML associated with an analytical method selected by the Discharger that is authorized for monitoring effluent limitations under this Order.

**Pollution Prevention** means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code Section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the SWRCB or RWQCB.

**Process Optimization** means minor changes to the existing facility and treatment plant operations that optimize the effectiveness of the existing treatment processes.

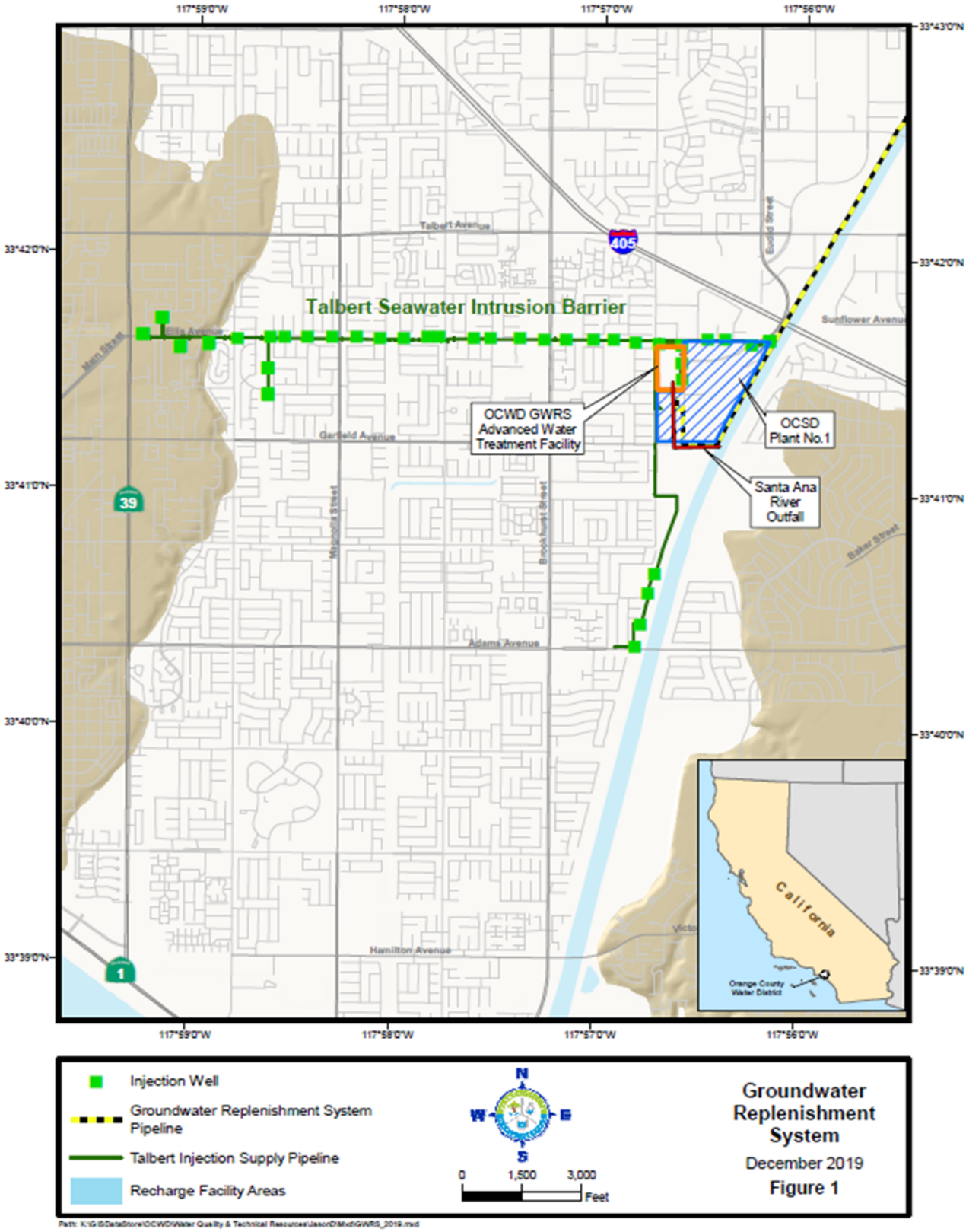
**Public Entity** includes the federal government or a state, county, city and county, city, district, public authority, or public agency.

**Reporting Level (RL)** is the ML corresponding to an approved analytical method for reporting a sample result that is selected either from Appendix 4 of the SIP by the Regional Water Board in accordance with Section 2.4.2 of the SIP or established in accordance with Section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

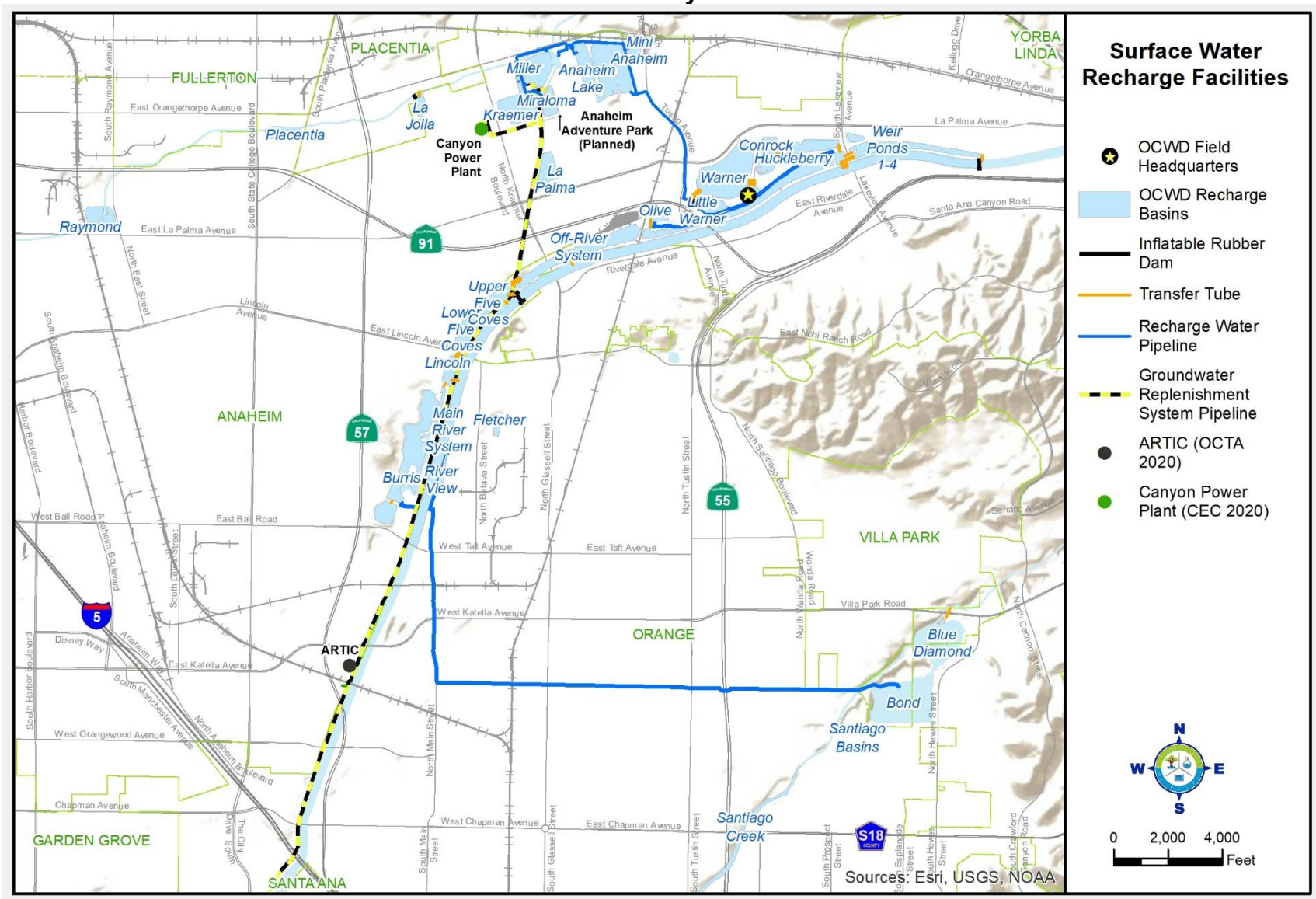
**Source of Drinking Water** is any water designated as municipal or domestic supply (MUN) in a RWQCB basin plan.

**12-Month Running Average Effluent Limitation (12-MRAEL):** the highest allowable average of monthly discharges over last twelve months, calculated as the sum of all monthly discharges measured during last twelve months divided by the number of monthly discharges measured during that time period.

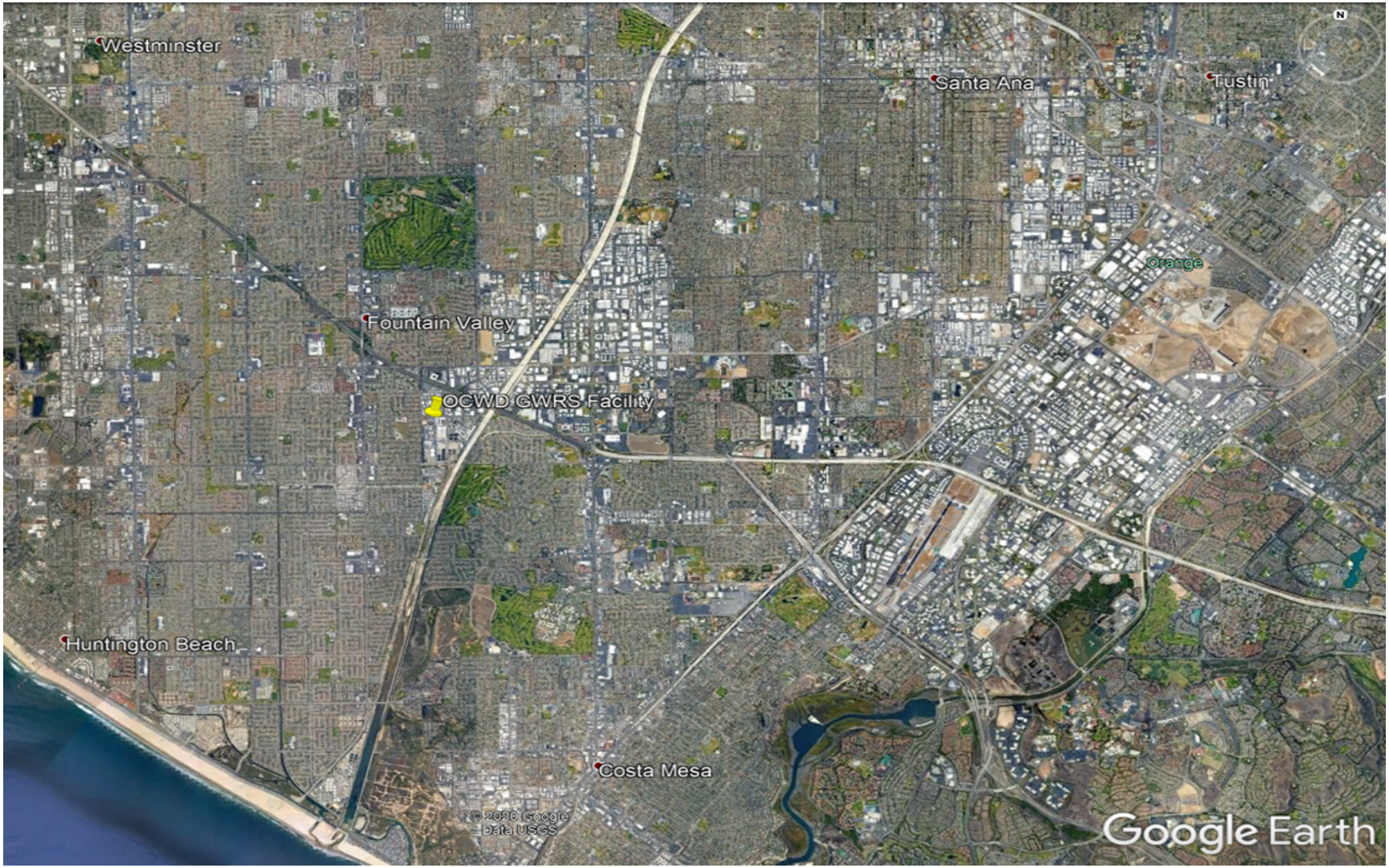
## Attachment B1 – OCWD's AWPF Location Map



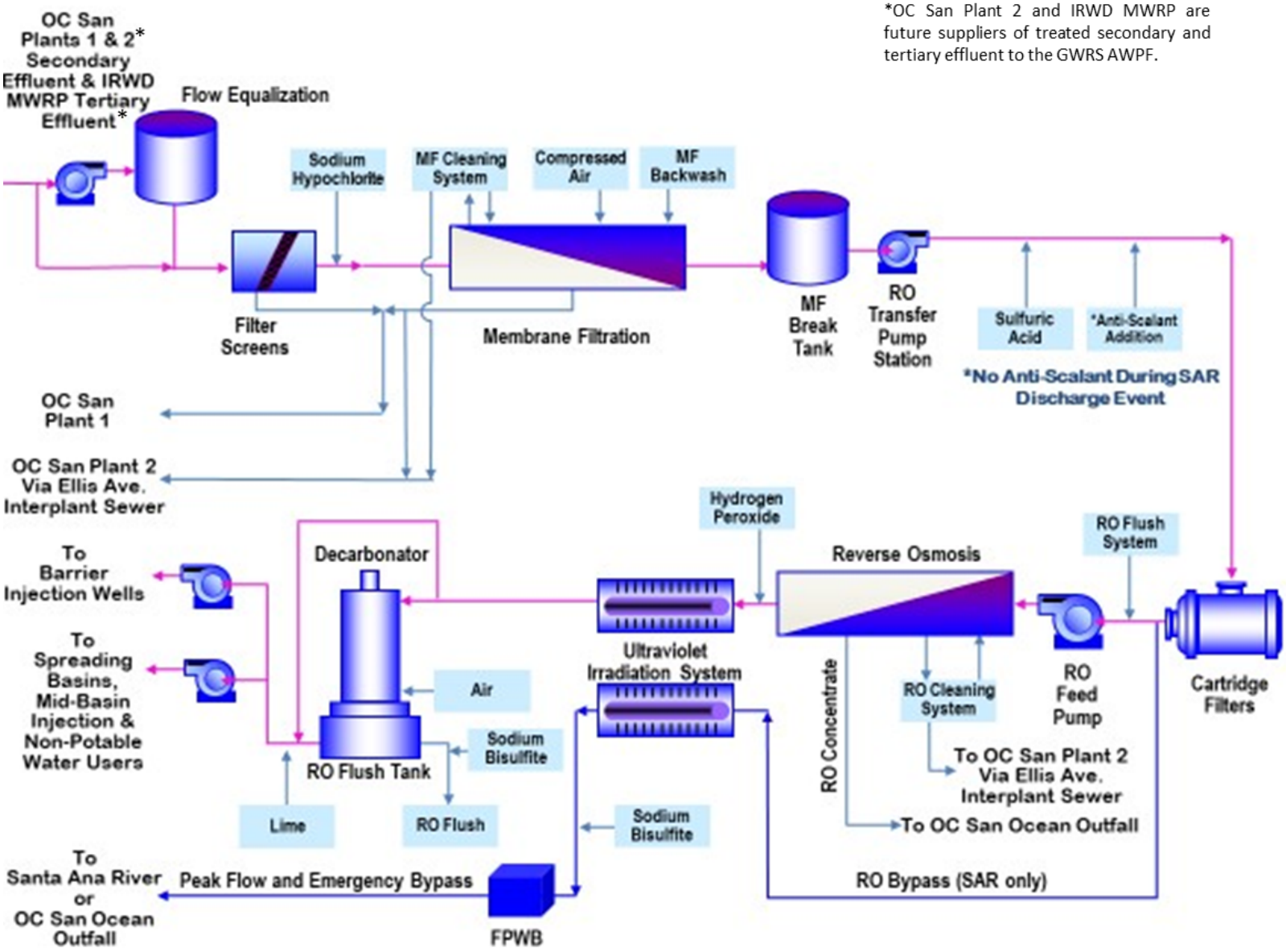
## Attachment B2 – FAT Recycled Water use sites



## Attachment B3 – OCWD's GWRS AWPF Vicinity Map



# ATTACHMENT C – FLOW SCHEMATIC



# ATTACHMENT D

There is no Attachment D for this Order

**Attachment E – Monitoring and Reporting Program**

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# ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

California Water Code § 13267 authorizes the Santa Ana Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement the federal and California regulations.

## I. GENERAL MONITORING PROVISIONS

### A. General Monitoring Provision

1. All sampling, sample preservation, and analytical procedures shall be in accordance with the current approved edition of "*Standard Methods for the Examination of Water and Wastewater*" (American Public Health Association) and/or 40 CFR Part 136 approved methods unless otherwise specified by the Executive Officer of the Santa Ana Water Board or the State Water Resources Control Board's (State Water Board) Division of Drinking Water.

2. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California State Water Resources Control Board's Division of Drinking Water (DDW) in accordance with the provision of Water Code § 13176 and must include quality assurance/quality control data with their reports, or at laboratories approved by the Executive Officer of the Santa Ana Water Board.

3. Whenever the Discharger monitors any pollutant listed in this MRP at a specified monitoring location more frequently than is required by this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharge monitoring report specified in this Order.

4. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, the actions undertaken or proposed that will bring the discharge into full compliance with requirements at the earliest time, and an estimate of the date when the Discharger will comply. The Discharger shall notify the Santa Ana Water Board by letter when compliance with the time schedule has been achieved.

5. The Discharger shall assure that records of all monitoring information are maintained and accessible for a period of at least five years from the date of the sample, report, or application. This period of retention shall be extended during any unresolved litigation regarding this discharge or by the request of the Santa Ana Water Board at any time. Records of monitoring information shall include:

   a. The laboratory which performed the analyses;

   b. The date(s) analyses were performed;

   c. The individual(s) who performed the analyses;

   d. The modification(s) to analytical techniques or methods used;

e. All sampling and analytical results, including

(1) Units of measurement;
(2) Minimum reporting level (RL) for the analysis or the minimum level (ML) or the limit of quantitation (LOQ);
(3) Results less than the reporting level (RL), minimum level (ML), or limit of quantitation (LOQ) but above the method detection limit (MDL);
(4) Data qualifiers and a description of the qualifiers;
(5) Quality control test results (and a written copy of the laboratory quality assurance plan);
(6) Dilution factors, if used; and
(7) Sample matrix type.

f. All monitoring equipment calibration and maintenance records;
g. All original strip charts from continuous monitoring devices;
h. All data used to complete the application for this Order;
i. Copies of all reports required by this Order; and,
j. Electronic data and information generated by the Supervisory Control and Data Acquisition (SCADA) System.

6. The flow measurement system shall be calibrated at least once per year or more frequently, to ensure continued accuracy.

7. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. If continuous monitoring equipment is out of service for greater than a 24-hour period, the Discharger shall obtain a representative grab sample each day the equipment is out of service. The Discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. In its monitoring report, the Discharger shall specify the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the Discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.

8. Monitoring and reporting shall be in accordance with the following:

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. The monitoring and reporting of influent, effluent, and sludge shall be done more frequently, as necessary, to maintain compliance with this Order and/or as specified in this Order.

c. A "grab" sample is defined as any individual sample collected in less than 15 minutes.

d. A composite sample is defined as a combination of no fewer than eight individual grab samples obtained at equal time intervals over the specified sampling period. The aggregate sample shall reflect the average source water quality covering the compositing period. The compositing period shall equal the specific sampling period, or 24 hours, if no period is specified.

e. Daily samples shall be collected on each day of the week.

f. Weekly samples shall be collected on any representative day during a week.

g. Monthly samples shall be collected on any representative day of each month.

## II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order.

**Table 1. Monitoring Station Locations**

| Discharge Point Name | Monitoring Location Name | Monitoring Location Description | Latitude | Longitude |
|---|---|---|---|---|
| (Influent) | M-INF1 (GWRS-Q1)[1] | Secondary treated effluent from OCSD to AWPF | 33°41'17" N | -117°56'30" W |
| DP-001 | REC-001 (GWRS-FPW) | AWPF Recycled Water Effluent (Final Product Water) | 33°41’23” N | -117°56’37” W |

## III. INFLUENT MONITORING REQUIREMENTS

### A. Influent Monitoring

1. The Discharger shall monitor the blended influent, which is the secondary effluent from the Orange County Sanitation District (OCSD) and disinfected tertiary treated effluent from the Irvine Ranch Water District (IRWD), when available, to the Orange County Water District’s (OCWD’s) Advanced Water Purification Facility (AWPF) at the influent monitoring locations specified below for the following constituents.

[1] Influent sampling stations shall be established and located upstream of any in-plant return flows and where a representative sample of the influent to the treatment facility from OCSD’s Reclamation Plant No. 1, as well as OCSD’s Reclamation Plant No. 2 and IRWD’s MWRP as applicable (blended influent), can be obtained.

**Table 2. Influent Monitoring at M-INF1**

| Parameter | Sample Location | Units | Sample Type | Minimum Sampling Frequency |
|---|---|---|---|---|
| Flow | M-INF1 (Q1) or Microfiltration Feed (MFF) | mgd | Flow meter/ Totalizer | Continuous |
| pH | Microfiltration Feed (MFF) | pH Units | Recorder | Continuous |
| Specific Conductance | Microfiltration Feed (MFF) | μmhos/cm | Recorder | Continuous |
| $BOD_5$ | M-INF1 (Q1) | mg/L | Composite | Quarterly |
| Total Suspended Solids | M-INF1 (Q1) | mg/L | Composite | Quarterly |
| Total Dissolved Solids (TDS) | M-INF1 (Q1) | mg/L | Composite | Quarterly |

## IV. RECLAMATION MONITORING REQUIREMENTS

### A. Recycled Water Monitoring Location REC-001

1. The Discharger shall monitor the recycled water entering its distribution system at monitoring location REC-001, as specified in Table 1, above, for the following constituents.

**Table 3. Recycled Water Monitoring at REC-001**

| Parameter | Units | Sample Type | Minimum Sampling & Testing Frequency |
|---|---|---|---|
| Flow | mgd | Flow Meter /Totalizer | Continuous |
| pH | Standard units | Recorder | Continuous |
| Specific Conductance | µmhos/cm | Recorder | Continuous |

**Table 3. Recycled Water Monitoring at REC-001**

| Parameter | Units | Sample Type | Minimum Sampling & Testing Frequency |
|---|---|---|---|
| Turbidity[2] | NTU | Recorder | Continuous |
| Coliform Organisms | MPN per 100 mL | Grab | Daily |
| $BOD_5$ | mg/L | composite | Monthly |
| Total Suspended Solids | mg/L | composite | Monthly |
| TDS | mg/L | Grab | Monthly |
| Total Nitrogen | mg/L | Composite | 2/week |
| Volatile organic portion of EPA Priority Pollutants (See Attachment "G")[3] | µg/L | Grab | Annually[4] |
| Remaining EPA Priority Pollutants (See Attachment "G")[5] | µg/L | Grab | Annually[6] |

## B. Monitoring Recycled Water Users

Whenever recycled water is supplied to a user, the Discharger shall record on a permanent log: the volume of recycled water supplied; the user of recycled water; the locations of those sites; the type of use (e.g. irrigation, industrial, etc); and the dates on which water is supplied.

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[2] *Turbidity analysis shall be continuous, performed by a continuous recording turbidity analyzer with at least one reading every 1.2 hours. Should the continuous turbidity meter and recorder fail, grab sampling at a minimum frequency of 1.2 hours may be substituted for a period of up to 24 hours. The results of the daily average turbidity determinations shall be reported quarterly. Turbidity samples shall be collected after filtration units but before disinfection.*

[3] *Minimum levels for priority pollutant monitoring are included in Attachment H.*

[4] *Annual priority pollutant monitoring will occur concurrent with quarterly or annual priority pollutant monitoring required for the OCWD Groundwater Replenishment System Monitoring and Reporting Program (Permit No. R8-2004-0002 as amended by Order No. R8-2008-0058, Order No. R8-2014-0054, Order No. R8-2016-0051, and Order No. R8-2019-0007 issued to OCWD by the Santa Ana Water Board).*

[5] *See Attachment H for minimum levels applicable to priority pollutant monitoring.*

[6] *Annual priority pollutant monitoring will occur concurrent with quarterly or annual priority pollutant monitoring required for the OCWD Groundwater Replenishment System Monitoring and Reporting Program (Permit No. R8-2004-0002 as amended by Order No. R8-2008-0058, Order No. R8-2014-0054, Order No. R8-2016-0051, and Order No. R8-2019-0007 issued to OCWD by the Santa Ana Water Board).*

The Discharger shall submit a quarterly report summarizing reclaimed water use, including the total amount of reclaimed water supplied, the total number of reclaimed water use sites, and the locations of those sites.

## V. OTHER MONITORING REQUIREMENTS

### A. Biosolids Monitoring

1. The Discharger shall maintain a permanent log of solids hauled away from the treatment facilities for use/disposal elsewhere, including the date hauled, the volume or weight (in dry tons), type (screening, grit, raw sludge, biosolids), application (agricultural, composting, etc.), and destination.

### B. Groundwater Monitoring for Miraloma Basin Use Site

1. The Discharger must conduct monthly monitoring for total coliform, E. coli, Giardia, and Cryptosporidium at the nearest monitoring well to the Miraloma basin for the first year of operations of Aquapark. Once completed, submit results to DDW for review.

2. The Discharger must monitor a chemical indicator compound, approved by DDW, associated with recreational activities (e.g. such as DEET or oxybenzone). The Discharger must conduct monthly monitoring for the indicator compound at the nearest monitoring well to the Miraloma basin for the first year of operations of Aquapark. Once completed, submit results to DDW for review.

### C. Pretreatment Monitoring and Reporting – Not applicable

## VI. REPORTING REQUIREMENTS

### A. General Monitoring and Reporting Requirements

1. All analytical data shall be reported with identification of either reporting level (RL), minimum level (ML), or limits of quantitation (LOQs).

2. Laboratory data for effluent samples must quantify each constituent down to the approved reporting levels (RL) or minimum level (ML) for specific constituents. Any internal quality control data associated with the sample must be reported when requested by the Executive Officer. The Santa Ana Water Board will reject the quantified laboratory data if quality control data is unavailable or unacceptable.

3. Discharge monitoring data shall be submitted in a format acceptable by the Santa Ana Water Board. Specific reporting format may include preprinted forms

and/or electronic media. The results of all monitoring required by this Order shall be reported to the Santa Ana Water Board and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order.

4. The Discharger shall tabulate the monitoring data to clearly illustrate compliance and/or noncompliance with the requirements of the Order.

5. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, and the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and an estimate of the date when the Discharger will comply. The Discharger shall notify the Santa Ana Water Board when compliance with the time schedule has been achieved by including a detailed compliance status statement in the cover letter of the quarterly SMR that corresponds with the monitoring period in which the requirement was not met, until final compliance is achieved.

6. Self-Monitoring Reports (SMRs) shall be signed by either the principal Executive Officer or ranking elected official. A duly authorized representative of the aforementioned signatories may sign documents if:

   a. The authorization is made in writing by the signatory;

   b. The authorization specifies the representative as either an individual or position having responsibility for the overall operation of the regulated facility or activity: and

   c. The written authorization is submitted to the Executive Officer of the Santa Ana Water Board.

7. SMRs shall contain the following completed declaration:

   “I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

8. The annual report shall include a roster of plant personnel, including job titles, duties, and level of State certification for each individual.

9. The Discharger shall prepare a monthly summary of operating records. The monthly summary shall include operational problems, plant and equipment breakdowns, diversion to emergency storage or disposal, and all corrective or preventive action taken. The monthly summary of operating records shall be reported quarterly.

10. The Discharger shall report monitoring results for specific parameters in accordance with the following table:

**Table 4. Reporting Requirements**

| Parameter | Measurement |
|---|---|
| Flow | Daily total flow |
| pH | Daily High and daily low |
| Turbidity | Daily maximum and daily average |
| Specific Conductance | Daily Maximum |

## B. Self-Monitoring Reports (SMRs)

1. SMRs shall be submitted quarterly and received at the Santa Ana Water Board by the 15th day of the second month following the end of the quarterly monitoring period and shall include all data collected during the quarterly monitoring period:

| Reporting Period | Report Due Date |
|---|---|
| January – March | May 15th |
| April – June | August 15th |
| July – September | November 15th |
| October – December | February 15th |

2. At any time during the term of this Order, the State Water Board or this Santa Ana Water Board may notify the Discharger to electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site: http://www.waterboards.ca.gov/ciwqs/index.html or GeoTracker. In addition, the Discharger may be required in the future to transfer all water quality monitoring results analyzed by an ELAP certified laboratory to DDW by Electronic Data Transfer (EDT) after the Discharger has been assigned Primary Station Codes (PS-Codes) for compliance monitoring sites. Until such notification is given, the Discharger shall submit SMRs to the Santa Ana Water Board, signed and certified as specified by Reporting Requirement VII.A.6. and VII.A.7. above, through our Paperless Office (ECM – Electronic Content Management) system via email transmittal to santaana@waterboards.ca.gov and to DDW. For this purpose, convert SMRs, all regulatory documents, and correspondence to a searchable (OCR) Portable Document Format (PDF). The CIWQS or GeoTracker Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

3. Reporting Protocols: The Discharger shall report with each sample result the applicable Reporting Level (RL), Minimum Level (ML), or Limit of Quantitation (LOQ), as determined by the procedure in 40 CFR Part 136.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the laboratory's RL shall be reported as "Not Detected," or ND.

   c. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard unless allowed by the analytical method. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.

4. The Discharger shall submit hard copy SMRs (with an original signature) when required by subsection B.1, above, in accordance with the following requirements:

   a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations.

   b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

5. By June 30 of each year, the Discharger shall submit an annual report to the Santa Ana Water Board. The annual report shall include the following:

   a. Tabular and graphical summaries of the monitoring data obtained during the previous year, including monitoring data for priority pollutants;

   b. A discussion of the compliance record and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the waste discharge requirements; and

   c. A summary of the quality assurance (QA) activities for the previous year.

6. By April 30$^{th}$ of each year the Discharger shall submit a Volumetric Annual Report that includes monthly volumes of recycled water for non-potable reuse that was delivered to use sites during the prior calendar year to the State Water Board

through GeoTracker. However, if the Discharger is already submitting the volumetric data for the recycled water produced at the AWPF through GeoTracker as part of another regulatory measure issued by the Santa Ana Water Board to the Discharger, then this reporting requirement may be waived, for this Order, by the Santa Ana Water Board upon the request by the Discharger. For assistance with creating a GeoTracker account you can email geotracker@waterboards.ca.gov. Also, for more information about this requirement please access the help guide at the following link: https://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/docs/2020/var_helpguide.pdf.

**Attachment F – FACT SHEET**

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## List of Tables

**ATTACHMENT F – FACT SHEET**

As described in Section II 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. DISCHARGER/FACILITY INFORMATION

The following table summarizes administrative information related to the Discharger/Facility:

| Table 1. Discharger/Facility Information | |
|---|---|
| **WDID** | 8 303708001 |
| **Discharger/Operator** | Orange County Water District |
| **Name of Facility** | Advanced Water Purification Facility (AWPF) |
| **Facility Address** | 18700 Ward St., Fountain Valley, CA 92708 |
| **Facility Contact, Title and Phone** | Jason Dadakis, Executive Director of Water Quality & Technical Resources, (714) 378-3364, JDadakis@OCWD.com |
| **Authorized Person to Sign and Submit Reports** | Jason Dadakis, Executive Director of Water Quality & Technical Resources, (714) 378-3364, JDadakis@OCWD.com |
| **Mailing/Billing Address** | 18700 Ward St., Fountain Valley, CA 92708 |
| **Type of Facility** | POTW |
| **Threat to Water Quality** | 3 |
| **Complexity** | A |
| **Pretreatment Program** | NA |
| **Reclamation Requirements** | Producer/User |
| **Facility Design Flow** | 100 million-gallons-per-day (mgd) Full Advanced Treated (FAT) recycled water current, with 130 mgd of FAT recycled water planned design flow by 2023 |
| **Facility Permitted Flow** | 100 mgd currently permitted, 130 mgd planned by 2023 |
| **Receiving Water** | Orange Groundwater Management Zone |
| **Receiving Water Type** | Groundwater |

**A.** Orange County Water District (hereinafter Discharger or OCWD) owns and operates the Advanced Water Purification Facility (hereinafter Facility or AWPF) that is part of the OCWD's Groundwater Replenishment System (GWRS). The GWRS is a joint project by OCWD and the Orange County Sanitation District (OCSD). The GWRS consists of four major components: AWPF, Talbert Gap Seawater Intrusion Barrier (Talbert Barrier), Mid-Basin Injection Project (MBI), and Kraemer/Miller/Miraloma/La Palma Spreading Basins. Non-potable use of treated water from the AWPF is an additional minor component.

**B.** The GWRS is a water supply project that supplements existing water supplies by providing a new, reliable, high-quality source of water to recharge the Orange Groundwater Management Zone (OGMZ) and protect the OGMZ from further degradation due to seawater intrusion. In addition, OCSD relies upon the GWRS to provide peak wet weather flow relief for OCSD's ocean outfall. The GWRS is in central Orange County and extends from Fountain Valley and Huntington Beach near the coast to Santa Ana, Orange, and Anaheim, generally near the Santa Ana River. Secondary treated effluent from OCSD Plant No. 1 is sent to the AWPF, where it is advance treated to produce full advanced treated (FAT) recycled water that meets the California Code of Regulations (CCR) Title 22 requirements for groundwater recharge (indirect potable reuse). In addition to the indirect potable reuse, a small volume of the FAT recycled water is used for non-potable purposes at two use sites, with additional use sites planned. The water quality of the FAT recycled water produced at the AWPF meets and exceeds CCR Title 22 requirement for recycled water produced for non-potable reuse. In a letter entitled, "Request for Letter of Approval for the Proposed Anaheim Adventure Aquapark at the Orange County Water District's Miraloma Basin," dated April 17, 2020, the Discharger made a request to the State Water Resources Control Board's Division of Drinking Water (DDW) for the approval of their proposed Anaheim Adventure Aquapark to be build and operated at the Discharger's Miraloma Spreading Basin. In a letter dated June 19, 2020, DDW gave their conditional acceptance of the proposed use of the FAT recycled water, as a nonrestricted recreational impoundment, for the operation of the Anaheim Adventure Aquapark at the Discharger's Miraloma Spreading Basin. The conditions included in DDW's June 19, 2020 letter have been incorporated into this Order. The regulation of current and future non-potable recycled water uses are the focus of this Order including the proposed Anaheim Adventure Aquapark recreational use at the Discharger's Miraloma Spreading Basin.

**C.** The Discharger submitted a Report of Waste Discharge, dated June 18, 2020, applying for waste discharge requirements and a master recycling permit for the production and distribution of FAT recycled water for non-potable reuse at present and future use sites such as the proposed Anaheim Adventure Aquapark use site in the City of Anaheim. In addition, the use of the FAT recycled water for groundwater replenishment and reuse by subsurface application (seawater intrusion barrier and MBI) and surface application at the spreading basins is regulated under Water Recycling Requirements Order No. R8-2004-0002, as amended by Order Nos. R8-2008-0058, R8-2014-0054, R8-2016-0051, and R8-2019-0007) issued to OCWD by the Santa Ana Water Board.

## II. FACILITY DESCRIPTION

### A. Description of Wastewater and Biosolids Treatment and/or Controls

#### 1. Facility Background

The AWPF is located at 18700 Ward Street, Fountain Valley in Orange County. It includes both treatment processes and pumping stations. The AWPF receives secondary treated effluent from the neighboring OCSD's Reclamation Plant No. 1 (RP-1) and OCWD applies state-of-the-art advanced treatment to the secondary treated wastewater effluent to produce FAT recycled water for mostly indirect potable reuse and for non-potable reuse, at a lower volumetric scale. In addition, OCWD may start receiving secondary treated wastewater effluent from OCSD's Treatment Plant No. 2 (TP-2) and disinfected tertiary treated wastewater effluent from Irvine Ranch Water District's (IRWD's) Michelson Water Reclamation Plant (MWRP) by 2023 as influent to the AWPF. The treatment processes comprise fine-screening, microfiltration (MF), reverse osmosis (RO), advanced oxidation/disinfection consisting of hydrogen peroxide addition and ultraviolet light exposure (UV/AOP), followed by partial decarbonation and lime stabilization. The AWPF treatment design capacity is currently 100 million gallons per day (mgd) for FAT recycled water production. The production of FAT recycled water started in January 2008 with a treatment design capacity of 70 mgd and expanded to its current 100 mgd design capacity in 2015 with the GWRS Initial Expansion (GWRSIE). The Facility is currently undergoing construction of the Final Expansion (GWRSFE) for an ultimate treatment design capacity of 130 mgd by early 2023. Deliveries of FAT recycled water to the first two recipients of AWPF's water for non-potable uses at the Anaheim Canyon Power Plant (Anaheim CPP) and Anaheim Regional Transportation Intermodal Center (ARTIC) began in July 2011 and November 2014, respectively.

#### 2. Service Area

This Facility treats residential, commercial, and industrial wastes from the service area of OCSD from which it receives the secondary treated wastewater effluent to produce FAT recycled water for indirect potable and non-potable reuse within the Orange GMZ. In future, the Facility will also treat a small amount of residential, commercial, and industrial wastes from the service area of IRWD's MWRP, from which it will receive disinfected tertiary treated wastewater effluent to produce FAT recycled water for indirect potable and non-potable reuse within the Orange GMZ.

#### 3. Design Characteristics

The following table summarizes the treatment processes at the AWPF:

**Table 2. Plant Design**

| | |
|---|---|
| **Preliminary Treatment** | OCSD's secondary treated (and future IRWD MWRP's tertiary treated) wastewater effluent flow metering (influent |

**Table 2. Plant Design**

| | |
|---|---|
| | to the Facility), fine screening (band screens), influent flow equalization, and chlorination. |
| **Primary Treatment** | No primary treatment (Done at OCSD's RP-1 and TP-2 and IRWD's MWRP) |
| **Secondary Treatment** | No secondary treatment (Done at OCSD's RP-1 and TP-2 and IRWD's MWRP**) |
| **Advanced Treatment per CCR's Title 22 GRRP* Regulations Treatment** | Process comprises microfiltration (MF), reverse osmosis (RO), advanced oxidation/disinfection consisting of hydrogen peroxide addition and ultraviolet light exposure (UV/AOP), followed by partial decarbonation and lime stabilization (100 mgd current design treatment capacity and 130 mgd design treatment capacity by 2023). |
| **Solids Handling** | Screenings and other solids generated at the Facility are sent to OCSD's treatment works for disposal. |

Note: * = Groundwater Recharge and Reuse Project
** = MWRP also conducts tertiary treatment and disinfection

**4. Non-potable Recycled Water Use**

Deliveries of FAT recycled water to the first two recipients of AWPF's water for non-potable uses at the Anaheim Canyon Power Plant (Anaheim CPP) and Anaheim Regional Transportation Intermodal Center (ARTIC) began in July 2011 and November 2014, respectively. Furthermore, the Discharger plans to use a portion of its Miraloma Spreading Basin as a nonrestricted recreational impoundment for the operation of the Anaheim Adventure Aquapark and additional uses are envisioned as authorized under this Order and by DDW.

## B. Discharge Points and Receiving Waters

Following table shows the discharge point, longitude and latitude, affected receiving waters, and estimated volume of discharge:

| Discharge Point | Effluent Description | Location (Latitude & Longitude) | Receiving Water |
|---|---|---|---|
| DP-001 Recycled Water | Up to 100 mgd of FAT recycled water currently and up to 130 mgd of FAT recycled water planned design flow by 2023 | 33°41'23" N -117°56'37" W | Orange Groundwater Management Zone |

**1. Discharge Point for Recycled Water Use – DP-001**

The Discharger has started the distribution of FAT recycled water and plans to distribute up to 100 mgd of recycled water via DP-001 to users within Orange County, however, by 2023 the Discharger plans to increase the Facility's design capacity to 130 mgd. Uses include groundwater recharge via injection at the Talbert Gap Seawater Intrusion Barrier (Talbert Barrier) and Mid-Basin Injection Project (MBI); groundwater recharge via spreading at the Kraemer/Miller/Miraloma/La Palma Spreading Basins (and additional planned recharge areas); and non-potable use of treated water by Anaheim CPP, ARTIC, Anaheim Adventure Aquapark, and other future users. The FAT recycled water use area overlies the Orange Groundwater Management Zone.

### 2. Industrial Stormwater Requirements

Pursuant to § 402(p) of the Clean Water Act and Title 40 of the Code of Federal Regulations (CFR) Part 122, 123, and 124, the State Water Resources Control Board adopted a general NPDES permit to regulate storm water discharges associated with industrial activities (State Water Board Industrial General Permit Order No. 2014-0057-DWQ, NPDES No. CAS000001) on April 1, 2014 and became effective on July 1, 2015. Storm water discharges from the Facility are regulated under the State Water Board Industrial General Permit Order No. 2014-0057-DWQ (as amended by Orders 2015-0122-DWQ and the 2018 Amendment documents).

## III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

### A. Legal Authorities

This Order serves as Waste Discharge Requirements pursuant to article 4, Chapter 4, Division 7 of the Water Code (commencing with § 13260). Also, this Order serves as a Master Reclamation Permit pursuant to § 13523.1 of Article 4, Chapter 7, Division 7 of the California Water Code.

### B. California Environmental Quality Act (CEQA)

This Order includes requirements for the production and distribution of FAT recycled water for non-potable reuse at an existing facility. In compliance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.), OCWD prepared and certified an Environmental Impact Report (EIR) for the GWRS, which includes the AWPF. The EIR identified no significant adverse impact to water quality as a result of the use of FAT recycled water. City of Anaheim's Planning Commission has reviewed and is in the process of certifying an EIR addendum document that is part of the Discharger's application to the City of Anaheim for a conditional use permit (CUP) for the operation of the Anaheim Adventure Aquapark. The Discharger also obtained

authorization from the State Water Resources Control Board's Division of Drinking Water for the production and distribution of FAT recycled water. Santa Ana Water Board staff reviewed the environmental documents prepared for the AWPF and recycled water distribution and determined that if the requirements specified herein are complied with, there should not be any significant water quality or other adverse environmental impacts from the permitted discharges.

## C. State Regulations, Policies, and Plans

### 1. Water Quality Control Plans

The Santa Ana Water Board adopted a Water Quality Control Plan for the Santa Ana River Basin (hereinafter Basin Plan) that became effective on January 24, 1995. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan.

On January 22, 2004, the Santa Ana Water Board adopted Resolution No. R8-2004-0001, amending the Basin Plan to incorporate revised boundaries for groundwater subbasins, now termed "management zones", new nitrate-nitrogen and TDS objectives for the new management zones, and new nitrogen and TDS management strategies applicable to both surface and ground waters. The State Water Board and Office of Administrative Law (OAL) approved the N/TDS Amendment on September 30, 2004 and December 23, 2004, respectively. Accordingly, these waste discharge requirements implement relevant, groundwater-related components of the N/TDS Amendment. Specifically, the total dissolved solids (TDS) limitation established in this Order is based on the amended Basin Plan.

As previously discussed, the Facility is producing tertiary treated recycled water that is being used in areas overlying the Irvine Groundwater Management Zone. The designated beneficial uses of receiving waters affected by the discharge from the Facility are as follows:

**Table 3. Basin Plan Beneficial Uses**

| Discharge Point | Receiving Water | Beneficial Uses |
|---|---|---|
| 001 | Orange GMZ | Present or Potential:<br>a. Municipal and domestic supply (MUN),<br>b. Agricultural supply (AGR),<br>c. Industrial service supply (IND), and<br>d. Industrial process supply (PROC) |

Requirements of this Order implement the Basin Plan.

### 2. Antidegradation Policy

The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Santa Ana Water Board's Basin Plan implements and incorporates by reference the State antidegradation policies. Requirements specified in this Order should prevent any degradation of the receiving waters. Therefore, the permitted discharge is consistent with the antidegradation provisions of State Water Board Resolution No. 68-16.

**3. Pretreatment**

The production of FAT recycled water at the Facility for indirect potable reuse is regulated under water recycling requirement Order No. R8-2004-0002, as amended by Order No. R8-2008-0058, Order No. R8-2014-0054, Order No. R8-2016-0051, and Order No. R8-2019-0007 issued to OCWD by the Santa Ana Water Board, includes pertinent pretreatment (source control) requirements. The supplier of the secondary treated wastewater to the Facility, OCSD, has an approved pretreatment program and under contractual agreement with Discharger controls contaminants that are harmful or may be harmful to human health and drinking water supplies. The portion of IRWD's service area that is tributary to MWRP also has an approved pretreatment program that is managed by OCSD; other portions of IRWD's service area have pretreatment programs managed by other agencies. Consequently, this Order does not contain requirements for a pretreatment program pursuant to Sections 2233 and 2235.3, Title 23, of the California Code of Regulations. (See Section VI.C.3., below)

**4. Biosolids Requirements**

On February 19, 1993, the USEPA issued a final rule for the use and disposal of sewage sludge, 40 CFR, Part 503. This rule requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. The State of California has not been delegated the authority to implement this program, therefore, the U.S. Environmental Protection Agency is the implementing agency. The sludge that may be generated by the Facility is sent to OCSD's treatment works for disposal; therefore, this Order does not include biosolids requirements.

**5. Monitoring and Reporting Requirements**

§ 13267 of the CWC authorizes the Santa Ana Water Board to require technical and monitoring reports. The Monitoring and the Reporting Program (MRP) establishes monitoring and reporting requirements to implement state requirements. This MRP is provided in Attachment E.

**D. Other Plans, Polices and Regulations – Not Applicable**

## IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

### A. Discharge Prohibitions

The discharge prohibitions are based on the Basin Plan and State Water Resources Control Board's plans and policies. These prohibitions are consistent with the requirements set for other discharges regulated by waste discharge requirements adopted by the Santa Ana Water Board.

### B. Technology-Based Effluent Limitations – Not Applicable

### C. Water Quality-Based Effluent Limitations (WQBELs) For Land Disposal – Not Applicable

### D. Best Professional Judgment-Based Effluent Limitations

For tertiary treated wastewater, the $BOD_5$ and TSS concentration limits shown in the following table are based on Best Professional Judgment.

**Table 4. Effluent $BOD_5$ and TSS Limits for Tertiary Effluent**

| Constituent | Average Weekly | Average Monthly |
|---|---|---|
| Biochemical Oxygen Demand | 30 mg/L | 20 mg/L |
| Suspended Solids | 30 mg/L | 20 mg/L |

### E. Summary of Land Disposal Limitations – Not Applicable

### F. Reclamation Specifications: DP-001

1. § 13523 of the California Water Code provides that a Santa Ana Water Board, after consulting with and receiving the recommendations from the California Department of Public Health [after July 1, 2014, the California State Water Resources Control Board's (State Water Board's) Division of Drinking Water (DDW)] and any party who has requested in writing to be consulted, and after any necessary hearing, shall prescribe water reclamation requirements for water which is used or proposed to be used as recycled water, if, in the judgment of the Santa Ana Water Board, such requirements are necessary to protect the public health, safety, or welfare. § 13523 further provides that such requirements shall include, or be in conformance with, the statewide uniform water recycling criteria established by DDW pursuant to California Water Code § 13521.

**2.** Reclamation specifications in the proposed Order are based on the recycling criteria contained in Title 22, Division 4, Chapter 3, Sections 60301 through 60355, California Code of Regulations, and California Water Code § 13521.

**3.** For recycled water use, this Order (Section IV.A.2. Reclamation Specifications – Discharge Point 001) specifies TDS limits based on the water quality objective for the Orange Groundwater Management Zone, which is 580 mg/l.

**4.** Summary of Recycled Water Limitations:

**Table 5. Summary of Recycled Water Limitations at DP-001**

| Parameter | Units | Effluent Limitations | | | | | Basis |
|---|---|---|---|---|---|---|---|
| | | Average Monthly or as noted herein | Average Weekly | Daily average or as noted herein | Instantaneous Minimum or as noted herein | Instantaneous Maximum | |
| $BOD_5$ | mg/L | 20 | 30 | -- | -- | -- | BPJ |
| Total Suspended Solids | mg/L | 20 | 30 | -- | -- | -- | BPJ |
| Coliform | MPN/100 mL | 23[1] | 2.2 median in 7 days | 240[2] | -- | -- | Title 22 |
| Turbidity | NTU | -- | -- | -- | 0.2[3] | 0.5 | Title 22 |

**5.** The Basin Plan water quality objectives for TIN do not apply to FAT recycled water use for agricultural and landscape irrigation because of plant uptake of nitrogen.

## V. RATIONALE FOR RECEIVING WATER LIMITATIONS

### A. Surface Water – Not Applicable

### B. Groundwater

**1.** The receiving groundwater limitations in the proposed Order are based on the water quality objectives contained in the Basin Plan.

[1] Not more than once in any 30-day period
[2] Maximum Daily
[3] Not more than 5 percent of the time within any 24-hour period

## VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

§ 13267 of the CWC authorizes the Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and State requirements. The following provides the rationale for monitoring and reporting requirements contained in the MRP.

### A. Influent Monitoring

Influent monitoring is required to assess treatment plant performance.

### 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 included in the proposed MRP. The MRP includes Standard Monitoring Provisions. These provisions are standard requirements applicable to all waste discharge requirements issued by the Santa Ana Water Board. In addition to containing definitions of terms, they specify general sampling/analytical protocols and requirements for reporting of spills, violations, and routine monitoring data in accordance with California Code of Regulations, the California Water Code, and Santa Ana Water Board's policies. The MRP also contains specific sampling requirements for the Discharger's wastewater treatment plant. It defines the sampling stations, frequency, pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all pollutants for which effluent limitations are specified. Effluent limits are included for all pollutants for which there are a reasonable potential to be present in the discharge.

### C. Other Monitoring Requirements

#### 1. Water Supply Monitoring – Not Applicable

#### 2. Biosolids Monitoring

Screenings and solids produced in this facility are sent to OCSD's treatment works for disposal. As such, requirements for biosolids monitoring are not included in this Order.

#### 3. Pretreatment Monitoring

The production of FAT recycled water at the Facility for indirect potable reuse is regulated under water recycling requirement Order No. R8-2004-0002, as amended by Order No. R8-2008-0058, Order No. R8-2014-0054, Order No. R8-2016-0051, and Order No. R8-2019-0007 issued to OCWD by the Santa Ana Water Board, includes pertinent pretreatment (source control) requirements. The supplier of the secondary treated wastewater to the Facility, OCSD, has an approved pretreatment program and under contractual agreement with the Discharger controls

contaminants that are harmful or may be harmful to human health and drinking water supplies. Consequently, this Order does not contain requirements for the implementation of an effective pretreatment program pursuant to Sections 2233 and 2235.3, Title 23, of the California Code of Regulations.

## VII. RATIONALE FOR PROVISIONS

### A. Provisions

#### 1. Special Studies and Additional Monitoring Requirements – Not Applicable

#### 2. Construction, Operation, and Maintenance Specifications

The Facility produces and distributes FAT recycled water for various uses and, therefore, must implement proper staffing, operation, maintenance, design, and reliability requirements contained in the Water Recycling Criteria (Title 22, Division 4, Chapter 3, Articles 7 through 10, California Code of Regulations). Also, the Discharger must ensure that the operations staff has the proper certification as required under Title 23, Division 3, Chapter 26, California Code of Regulations.

#### 3. Special Provisions for Municipal Facility - POTWs Only

**a.** Sewer Collection System Requirements

1. The Discharger does not operate a sewer collection system and only applies full advanced treatment to secondary effluent provided to the Facility by OCSD and, in the future, the Discharger will also apply full advanced treatment to tertiary treated and disinfected effluent provided to the Facility by IRWD. Therefore, the Discharger is not subject to sewer collection system requirements.

**b.** Sludge and Other Waste Disposal Requirements

1. Collected screenings, sludge, and other solids removed from liquid wastes shall be disposed of in a manner that is consistent with State Water Board and Integrated Waste Management Board's joint regulations (Title 27) of the California Code of Regulations and approved by the Santa Ana Water Board's Executive Officer. The screenings and solids generated by the Facility is sent to the OCSD's treatment works for disposal. As such, requirements for proper biosolids disposal are not included in this Order.

**c.** Pretreatment Program Requirements

1. The production of FAT recycled water at the Facility for indirect potable reuse is regulated under water recycling requirement Order No. R8-2004-0002, as amended by Order No. R8-2008-0058, Order No. R8-2014-0054, Order No.

R8-2016-0051, and Order No. R8-2019-0007 issued to OCWD by the Santa Ana Water Board, includes pertinent pretreatment (source control) requirements. The supplier of the secondary treated wastewater to the Facility, OCSD, has an approved pretreatment program and under contractual agreement with the Discharger controls contaminants that are harmful or may be harmful to human health and drinking water supplies. Consequently, this Order does not contain requirements for the implementation of an effective pretreatment program pursuant to Sections 2233 and 2235.3, Title 23, of the California Code of Regulations.

## VIII. PUBLIC PARTICIPATION

The Santa Ana Water Board has considered the issuance of waste discharge requirements (WDRs) for Orange County Water District's Advanced Water Purification Facility. As a step in the WDRs adoption process, the Santa Ana Water Board staff developed tentative WDRs and encouraged public participation in the WDRs adoption process.

### A. Notification of Interested Parties

The Santa Ana Water Board staff has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided an opportunity to submit written comments and recommendations. Notification was provided through mailings and posting of a Notice of Public Hearing on the Santa Ana Water Board website: http://www.waterboards.ca.gov/santaana.

### B. Written Comments

Interested persons were invited to submit written comments concerning these tentative WDRs by mail to the Executive Officer at the Santa Ana Water Board at the address above on the cover page of this Order, by fax to (951) 781-6288, or by email to Ryan Harris at Ryan.Harris@waterboards.ca.gov.

To be fully responded to by staff and considered by the Santa Ana Water Board, written comments must have been received at the Santa Ana Water Board offices by 5:00 p.m. on March 5, 2021.

### C. Public Hearing

The Santa Ana Water Board held a public hearing and adopted the WDRs during its regular Board meeting on the following date and time and at the following location:

Date: March 12, 2021
Time: 9:00 A.M.
Location: Meeting was remote, due to COVID-19 Restrictions

Interested persons were invited to attend. At the public hearing, the Santa Ana Water Board heard testimony pertinent to the discharge and the WDRs and master recycling permit. For accuracy of the record, extensive testimony was requested in writing.

## D. Reconsideration of Waste Discharge Requirements

Any aggrieved person may petition the State Water Board to review the decision of the Santa Ana Water Board regarding the final WDRs. The petition must be received by the State Water Board at the following address by 5:00 p.m. within 30 calendar days of the Santa Ana Water Board's adoption of this Order, except that if the thirtieth day following the adoption date of this Order falls on a Saturday, Sunday, or a state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100
Or by email at waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a petition for review, see:
http://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 by appointment, at the address above on the cover page of this Order at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Santa Ana Water Board by calling (951) 782-4130 or Ryan.Harris@waterboards.ca.gov.

## F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and master recycling permit should contact the Santa Ana 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 Ryan Harris at (951) 320-2008 or Ryan.Harris@waterboards.ca.gov.

**ATTACHMENT G - EPA PRIORITY POLLUTANT LIST**

| EPA PRIORITY POLLUTANT LIST | | |
|---|---|---|
| **Metals** | **Acid Extractibles** | **Base/Neutral Extractibles (continuation)** |
| 1. Antimony | 45. 2-Chlorophenol | 91. Hexachloroethane |
| 2. Arsenic | 46. 2,4-Dichlorophenol | 92. Indeno (1,2,3-cd) Pyrene |
| 3. Beryllium | 47. 2,4-Dimethylphenol | 93. Isophorone |
| 4. Cadmium | 48. 2-Methyl-4,6-Dinitrophenol | 94. Naphthalene |
| 5a. Chromium (III) | 49. 2,4-Dinitrophenol | 95. Nitrobenzene |
| 5b. Chromium (VI) | 50. 2-Nitrophenol | 96. N-Nitrosodimethylamine |
| 6. Copper | 51. 4-Nitrophenol | 97. N-Nitrosodi-N-Propylamine |
| 7. Lead | 52. 3-Methyl-4-Chlorophenol | 98. N-Nitrosodiphenylamine |
| 8. Mercury | 53. Pentachlorophenol | 99. Phenanthrene |
| 9. Nickel | 54. Phenol | 100. Pyrene |
| 10. Selenium | 55. 2, 4, 6 – Trichlorophenol | 101. 1,2,4-Trichlorobenzene |
| 11. Silver | **Base/Neutral Extractibles** | **Pesticides** |
| 12. Thallium | 56. Acenaphthene | 102. Aldrin |
| 13. Zinc | 57. Acenaphthylene | 103. Alpha BHC |
| **Miscellaneous** | 58. Anthracene | 104. Beta BHC |
| 14. Cyanide | 59. Benzidine | 105. Delta BHC |
| 15. Asbestos (not required unless requested) | 60. Benzo (a) Anthracene | 106. Gamma BHC |
| 16. 2,3,7,8-Tetrachlorodibenzo-P-Dioxin (TCDD) | 61. Benzo (a) Pyrene | 107. Chlordane |
| **Volatile Organics** | 62. Benzo (b) Fluoranthene | 108. 4, 4' - DDT |
| 17. Acrolein | 63. Benzo (g,h,i) Perylene | 109. 4, 4' - DDE |
| 18. Acrylonitrile | 64. Benzo (k) Fluoranthene | 110. 4, 4' - DDD |
| 19. Benzene | 65. Bis (2-Chloroethoxy) Methane | 111. Dieldrin |
| 20. Bromoform | 66. Bis (2-Chloroethyl) Ether | 112. Alpha Endosulfan |
| 21. Carbon Tetrachloride | 67. Bis (2-Chloroisopropyl) Ether | 113. Beta Endosulfan |
| 22. Chlorobenzene | 68. Bis (2-Ethylhexyl) Phthalate | 114. Endosulfan Sulfate |
| 23. Chlorodibromomethane | 69. 4-Bromophenyl Phenyl Ether | 115. Endrin |
| 24. Chloroethane | 70. Butylbenzyl Phthalate | 116. Endrin Aldehyde |
| 25. 2-Chloroethyl Vinyl Ether | 71. 2-Chloronaphthalene | 117. Heptachlor |
| 26. Chloroform | 72. 4-Chlorophenyl Phenyl Ether | 118. Heptachlor Epoxide |
| 27. Dichlorobromomethane | 73. Chrysene | 119. PCB 1016 |
| 28. 1,1-Dichloroethane | 74. Dibenzo (a,h) Anthracene | 120. PCB 1221 |

| | | |
|---|---|---|
| 29. 1,2-Dichloroethane | 75. 1,2-Dichlorobenzene | 121. PCB 1232 |
| 30. 1,1-Dichloroethylene | 76. 1,3-Dichlorobenzene | 122. PCB 1242 |
| 31. 1,2-Dichloropropane | 77. 1,4-Dichlorobenzene | 123. PCB 1248 |
| 32. 1,3-Dichloropropylene | 78. 3,3'-Dichlorobenzidine | 124. PCB 1254 |
| 33. Ethylbenzene | 79. Diethyl Phthalate | 125. PCB 1260 |
| 34. Methyl Bromide | 80. Dimethyl Phthalate | 126. Toxaphene |
| 35. Methyl Chloride | 81. Di-n-Butyl Phthalate | |
| 36. Methylene Chloride | 82. 2,4-Dinitrotoluene | |
| 37. 1,1,2,2-Tetrachloroethane | 83. 2-6-Dinitrotoluene | |
| 38. Tetrachloroethylene | 84. Di-n-Octyl Phthalate | |
| 39. Toluene | 85. 1,2-Dipenylhydrazine | |
| 40. 1,2-Trans-Dichloroethylene | 86. Fluoranthene | |
| 41. 1,1,1-Trichloroethane | 87. Fluorene | |
| 42. 1,1,2-Trichloroethane | 88. Hexachlorobenzene | |
| 43. Trichloroethylene | 89. Hexachlorobutadiene | |
| 44. Vinyl Chloride | 90. Hexachlorocyclopentadiene | |

## ATTACHMENT H – MINIMUM LEVELS

### MINIMUM LEVELS IN PPB (µg/l)

| Table 1- VOLATILE SUBSTANCES[1] | GC | GCMS |
|---|---|---|
| Acrolein | 2.0 | 5 |
| Acrylonitrile | 2.0 | 2 |
| Benzene | 0.5 | 2 |
| Bromoform | 0.5 | 2 |
| Carbon Tetrachloride | 0.5 | 2 |
| Chlorobenzene | 0.5 | 2 |
| Chlorodibromomethane | 0.5 | 2 |
| Chloroethane | 0.5 | 2 |
| Chloroform | 0.5 | 2 |
| Dichlorobromomethane | 0.5 | 2 |
| 1,1 Dichloroethane | 0.5 | 1 |
| 1,2 Dichloroethane | 0.5 | 2 |
| 1,1 Dichloroethylene | 0.5 | 2 |
| 1,2 Dichloropropane | 0.5 | 1 |
| 1,3 Dichloropropylene (volatile) | 0.5 | 2 |
| Ethylbenzene | 0.5 | 2 |
| Methyl Bromide (*Bromomethane* ) | 1.0 | 2 |
| Methyl Chloride (*Chloromethane* ) | 0.5 | 2 |
| Methylene Chloride (*Dichloromethane*) | 0.5 | 2 |
| 1,1,2,2 Tetrachloroethane | 0.5 | 1 |
| Tetrachloroethylene | 0.5 | 2 |
| Toluene | 0.5 | 2 |
| trans-1,2 Dichloroethylene | 0.5 | 1 |
| 1,1,1 Trichloroethane | 0.5 | 2 |
| 1,1,2 Trichloroethane | 0.5 | 2 |
| Trichloroethylene | 0.5 | 2 |
| Vinyl Chloride | 0.5 | 2 |
| 1,2 Dichlorobenzene (volatile) | 0.5 | 2 |
| 1,3 Dichlorobenzene (volatile) | 0.5 | 2 |
| 1,4 Dichlorobenzene (volatile) | 0.5 | 2 |

**Selection and Use of Appropriate ML Value:**

ML Selection: When there is more than one ML value for a given substance, the discharger may select any one of those ML values, and their associated analytical methods, listed in this Attachment that are below the calculated effluent limitation for compliance determination. If no ML value is below the effluent limitation, then the

[1] *The normal method-specific factor for these substances is 1, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.*

discharger shall select the lowest ML value, and its associated analytical method, listed in the PQL Table.

ML Usage: The ML value in this Attachment represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences. Assuming that all method-specific analytical steps are followed, the ML value will also represent, after the appropriate application of method-specific factors, the lowest standard in the calibration curve for that specific analytical technique. Common analytical practices sometimes require different treatment of the sample relative to calibration standards.
Note: chemical names in parenthesis and italicized is another name for the constituent.

**MINIMUM LEVELS IN PPB (µg/l)**

| Table 2 – Semi-Volatile Substances[2] | GC | GCMS | LC |
|---|---|---|---|
| 2-Chloroethyl vinyl ether | 1 | 1 | |
| 2 Chlorophenol | 2 | 5 | |
| 2,4 Dichlorophenol | 1 | 5 | |
| 2,4 Dimethylphenol | 1 | 2 | |
| 4,6 Dinitro-2-methylphenol | 10 | 5 | |
| 2,4 Dinitrophenol | 5 | 5 | |
| 2- Nitrophenol | | 10 | |
| 4- Nitrophenol | 5 | 10 | |
| 4 Chloro-3-methylphenol | 5 | 1 | |
| 2,4,6 Trichlorophenol | 10 | 10 | |
| Acenaphthene | 1 | 1 | 0.5 |
| Acenaphthylene | | 10 | 0.2 |
| Anthracene | | 10 | 2 |
| Benzidine | | 5 | |
| Benzo (a) Anthracene (*1,2 Benzanthracene*) | 10 | 5 | |
| Benzo(a) pyrene (*3,4 Benzopyrene*) | | 10 | 2 |
| Benzo (b) Flouranthene (*3,4 Benzofluoranthene*) | | 10 | 10 |
| Benzo(g,h,i)perylene | | 5 | 0.1 |
| Benzo(k)fluoranthene | | 10 | 2 |
| bis 2-(1-Chloroethoxyl) methane | | 5 | |
| bis(2-chloroethyl) ether | 10 | 1 | |
| bis(2-Chloroisopropyl) ether | 10 | 2 | |
| bis(2-Ethylhexyl) phthalate | 10 | 5 | |
| 4-Bromophenyl phenyl ether | 10 | 5 | |
| Butyl benzyl phthalate | 10 | 10 | |
| 2-Chloronaphthalene | | 10 | |
| 4-Chlorophenyl phenyl ether | | 5 | |
| Chrysene | | 10 | 5 |
| Dibenzo(a,h)-anthracene | | 10 | 0.1 |

| | | | |
|---|---|---|---|
| 1,2 Dichlorobenzene (semivolatile) | 2 | 2 | |
| 1,3 Dichlorobenzene (semivolatile) | 2 | 1 | |
| 1,4 Dichlorobenzene (semivolatile) | 2 | 1 | |
| 3,3' Dichlorobenzidine | | 5 | |
| Diethyl phthalate | 10 | 2 | |
| Dimethyl phthalate | 10 | 2 | |
| di-n-Butyl phthalate | | 10 | |
| 2,4 Dinitrotoluene | 10 | 5 | |
| 2,6 Dinitrotoluene | | 5 | |
| di-n-Octyl phthalate | | 10 | |
| 1,2 Diphenylhydrazine | | 1 | |
| Fluoranthene | 10 | 1 | 0.05 |
| Fluorene | | 10 | 0.1 |
| Hexachloro-cyclopentadiene | 5 | 5 | |
| 1,2,4 Trichlorobenzene | 1 | 5 | |

**MINIMUM LEVELS IN PPB (µg/l)**

| **Table 2 - SEMI-VOLATILE SUBSTANCES[2]** | **GC** | **GCMS** | **LC** | **COLOR** |
|---|---|---|---|---|
| Pentachlorophenol | 1 | 5 | | |
| Phenol [3] | 1 | 1 | | 50 |
| Hexachlorobenzene | 5 | 1 | | |
| Hexachlorobutadiene | 5 | 1 | | |
| Hexachloroethane | 5 | 1 | | |
| Indeno(1,2,3,cd)-pyrene | | 10 | 0.05 | |
| Isophorone | 10 | 1 | | |
| Naphthalene | 10 | 1 | 0.2 | |
| Nitrobenzene | 10 | 1 | | |
| N-Nitroso-dimethyl amine | 10 | 5 | | |
| N-Nitroso -di n-propyl amine | 10 | 5 | | |
| N-Nitroso diphenyl amine | 10 | 1 | | |
| Phenanthrene | | 5 | 0.05 | |
| Pyrene | | 10 | 0.05 | |

| **Table 3– INORGANICS[4]** | **FAA** | **GFAA** | **ICP** | **ICPMS** | **SPGFAA** | **HYDRIDE** | **CVAA** | **COLOR** | **DCP** |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10 | 5 | 50 | 0.5 | 5 | 0.5 | | | 1000 |

2 *With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1000, therefore, the lowest standards concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1000.*

3 *Phenol by colorimetric technique has a factor of 1.*

4 *The normal method-specific factor for these substances is 1, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | | 2 | 10 | 2 | 2 | 1 | | 20 | 1000 |
| Beryllium | 20 | 0.5 | 2 | 0.5 | 1 | | | | 1000 |
| Cadmium | 10 | 0.5 | 10 | 0.25 | 0.5 | | | | 1000 |
| Chromium (total) | 50 | 2 | 10 | 0.5 | 1 | | | | 1000 |
| Chromium VI | 5 | | | | | | | 10 | |
| Copper | 25 | 5 | 10 | 0.5 | 2 | | | | 1000 |
| Lead | 20 | 5 | 5 | 0.5 | 2 | | | | 10000 |
| Mercury | | | | 0.5 | | | 0.2 | | |
| Nickel | 50 | 5 | 20 | 1 | 5 | | | | 1000 |
| Selenium | | 5 | 10 | 2 | 5 | 1 | | | 1000 |
| Silver | 10 | 1 | 10 | 0.25 | 2 | | | | 1000 |
| Thallium | 10 | 2 | 10 | 1 | 5 | | | | 1000 |
| Zinc | 20 | | 20 | 1 | 10 | | | | 1000 |
| Cyanide | | | | | | | | 5 | |

**MINIMUM LEVELS IN PPB (µg/l)**

| **Table 4- PESTICIDES – PCBs[5]** | **GC** |
|---|---|
| Aldrin | 0.005 |
| alpha–BHC (*a-Hexachloro-cyclohexane*) | 0.01 |
| beta–BHC (*b-Hexachloro-cyclohexane*) | 0.005 |
| Gamma–BHC (*Lindane; g-Hexachloro-cyclohexane*) | 0.02 |
| Delta-BHC (*d-Hexachloro-cyclohexane*) | 0.005 |
| Chlordane | 0.1 |
| 4,4'-DDT | 0.01 |
| 4,4'-DDE | 0.05 |
| 4,4'-DDD | 0.05 |
| Dieldrin | 0.01 |
| Alpha-Endosulfan | 0.02 |
| Beta-Endosulfan | 0.01 |
| Endosulfan Sulfate | 0.05 |
| Endrin | 0.01 |
| Endrin Aldehyde | 0.01 |
| Heptachlor | 0.01 |
| Heptachlor Epoxide | 0.01 |
| PCB 1016 | 0.5 |
| PCB 1221 | 0.5 |

5 *The normal method-specific factor for these substances is 100, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.*

| | |
|---|---|
| PCB 1232 | 0.5 |
| PCB 1242 | 0.5 |
| PCB 1248 | 0.5 |
| PCB 1254 | 0.5 |
| PCB 1260 | 0.5 |
| Toxaphene | 0.5 |

Techniques:
GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR - Colorimetric