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ORDER NO. R8-2012-0035
NPDES NO. CA0110604

WASTE DISCHARGE REQUIREMENTS AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT FOR ORANGE COUNTY SANITATION DISTRICT RECLAMATION PLANT NO. 1 AND TREATMENT PLANT NO. 2

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The following Discharger is subject to State waste discharge requirements and federal NPDES permit requirements, as set forth in this Order/Permit:

Table 1. Discharger Information

Discharger	**Orange County Sanitation District**	
Name of Facility (and POTW)	Reclamation Plant No. 1 and Treatment Plant No. 2, collection system, and outfalls	
Facility Address	Reclamation Plant No. 1	Treatment Plant No. 2
	10844 Ellis Avenue	22212 Brookhurst Street
	Fountain Valley, CA 92708-7018	Huntington Beach, CA 92646-8406
	Orange County	
The U.S. Environmental Protection Agency and Santa Ana Regional Water Quality Control Board have classified this discharge as a **major** discharge.		

The discharge by the Orange County Sanitation District from the discharge points identified below is subject to the requirements set forth in this Order/Permit:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Disinfected secondary treated effluent	33°34'36" N	118°00'36" W	Pacific Ocean
002	Disinfected secondary treated effluent	33°36'56" N	117°58'13" W	Pacific Ocean
003	Disinfected secondary treated effluent	33°38'06" N	117°57'20" W	Santa Ana River

Table 3. Administrative Information for State Order

This Order was adopted by the Santa Ana Regional Water Quality Control Board on:	June 15, 2012
This Order shall become effective on:	
This Order shall expire on:	
The Discharger shall file a Report of Waste Discharge, in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days prior to the Order expiration date (40 CFR 122.21(d))

I, Kurt V. Berchtold, 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.

_____

Kurt V. Berchtold, Executive Officer

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Table 4. Administrative Information for Federal Permit

This Permit was issued by the U.S. Environmental Protection Agency, Region IX on:	
This Permit shall become effective on:	
This Permit shall expire on:	
The Discharger shall submit, in accordance with 40 CFR 122.21(d), a new application at least 180 days before:	180 days prior to the Permit expiration date (40 CFR 122.21(d))

I, Alexis Strauss, do hereby certify that this Permit with all attachments is a full, true, and correct copy of an NPDES permit issued by the U.S. Environmental Protection Agency, Region IX.

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Alexis Strauss, Water Division Director

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I. PERMIT INFORMATION

The following Discharger is subject to the discharge requirements set forth in this Order/Permit:

Table 5. Permit Information

Discharger	Orange County Sanitation District	
Name of Facility (and POTW)	Reclamation Plant No. 1 and Treatment Plant No. 2, collection system, and outfalls	
Facility Address	Reclamation Plant No. 1	Treatment Plant No. 2
	10844 Ellis Avenue	22212 Brookhurst Street
	Fountain Valley, CA 92708-7018	Huntington Beach, CA 92646-8406
	Orange County	
Discharger Contact, Title, and Phone	James Ruth, General Manager (714) 593-7101	
Mailing Address	10844 Ellis Avenue Fountain Valley, CA 92708-7018	
Type of Facility	Publicly-Owned Treatment Works (POTW)	
Facility Design Flows	Reclamation Plant No. 1 and Treatment Plant No. 2: 332 mgd total secondary, average daily dry weather flow; 591 mgd total secondary, average daily wet weather flow	Reclamation Plant No. 1: 182 mgd secondary, average daily dry weather flow; 274 mgd secondary, average daily wet weather flow
		Treatment Plant No. 2: 150 mgd secondary, average daily dry weather flow; 317 mgd secondary, average daily wet weather flow

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II. FINDINGS

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Water Board) and U.S. Environmental Protection Agency, Region IX (hereinafter USEPA), find:

A. Background. The Orange County Sanitation District (hereinafter Discharger) is currently discharging pursuant to Order No. R8-2004-0062 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0110604. Compliance with secondary treatment standards governing the OCSD discharge are addressed in a consent decree (Civil Action No. SACV04-1317AHS) and a time schedule order (Time Schedule Order No. R8-2004-0067). The Discharger submitted a Report of Waste Discharge, dated April 22, 2009, and applied for an NPDES permit renewal to discharge disinfected secondary treated wastewater from Reclamation Plant No. 1 (in Fountain Valley) and Treatment Plant No. 2 (in Huntington Beach) (hereinafter treatment facilities). Final compliance with full secondary treatment must be achieved by December 31, 2012.

For the purposes of this Order/Permit, references to the “discharger” or “permittee” in applicable federal and State laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. Facility Description. The Discharger owns and operates its regional collection system, treatment facilities, and outfalls (hereinafter POTW) which serves approximately 471 square miles of central and northern Orange County, California. In addition to the domestic, commercial, and industrial wastewater received from this service area, influent flows are contributed by the Santa Ana Watershed Project Authority, Irvine Ranch Water District, and Stringfellow Superfund Site (EPA ID #CAT080012826). During dry weather conditions, the Discharger also accepts small volumes (less than 5 mgd) of dry weather urban runoff.

The Groundwater Replenishment System, a major regional wastewater reclamation project owned and operated by the Orange County Water District (OCWD), is located adjacent to Reclamation Plant No. 1 and can divert up to 100 mgd of the Discharger’s secondary treated wastewater for advanced treatment and reuse. Part of OCWD’s advanced treatment process generates filter backwash and concentrates high in salts, ammonia nitrogen, and trace metals. These waste streams are returned to OCSD for treatment and/or ocean disposal.

Reclamation Plant No. 1 and Treatment Plant No. 2 are constructed to together treat 372 mgd of primary treated wastewater and 332 mgd of secondary treated wastewater. Fiscal Year 2011-2012 average daily ocean discharge under dry weather conditions was 207 mgd without (and 152 mgd with) reclamation. The projected (2017) average daily ocean discharge under dry weather conditions is 253 mgd without (and 158 mgd with) reclamation. The projected (2017) peak dry weather flow for ocean discharge is 321 mgd without (and 226 mgd with) reclamation. The projected (2017) peak wet weather flow for ocean discharge is 552 mgd without (and 457 mgd with) reclamation.

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Raw wastewater entering the two treatment facilities passes through metering and diversion structures and continues to headworks facilities for preliminary treatment. Preliminary treatment includes grit and screenings removal. Ferric chloride and polymer can be added to provide enhanced primary treatment. The wastewater then receives primary treatment in primary sedimentation facilities. The primary effluent is routed to trickling filters and activated sludge facilities for secondary treatment or for ocean discharge. Secondary treated effluent is either discharged to the ocean, or delivered from Reclamation Plant No. 1 to OCWD for further treatment and reclamation. OCWD waste streams are recycled back into OCSD's primary or secondary treatment facilities, except for reverse osmosis backwash (brine) which is blended with other treated waste streams in the interplant lines and the final effluent stream prior to ocean discharge. Chlorine bleach (sodium hypochlorite) is fed to the primary influent, primary effluent, and secondary effluent streams. After effluent disinfection with chlorine bleach, sodium bisulfite is used to ensure that no excess residual chlorine is discharged into the ocean. The effluent is discharged through an ocean outfall system to the Pacific Ocean, a water of the United States. Authorized discharge points are described as follows. Discharge Point 001 (120" outfall) is the primary discharge point to the Pacific Ocean terminating in a multi-port diffuser, approximately 4.5 miles offshore from the mouth of the Santa Ana River, at a depth of about 195 feet (60 meters). Discharge Point 002 (78" outfall) is an emergency discharge point (deactivated ocean outfall) to the Pacific Ocean terminating in a multi-port diffuser, approximately 1 mile offshore from the mouth of the Santa Ana River, at a depth of about 65 feet (20 meters); it is also the primary discharge point, during periods of essential maintenance of the 120" outfall conducted under 40 CFR 122.41(m)(2). Discharge Point 003 is two extreme emergency discharge points (overflow) to the Pacific Ocean at the Santa Ana River and the capacity is approximately 605 mgd. Solids are shipped offsite to other facilities providing conversion to e-fuel for use in a local cement kiln, composting for agricultural use, land application for agricultural use, or disposed of in a municipal solid waste landfill. Attachment B provides a map of the area around the treatment facilities. Attachment C provides flow schematics of the full secondary treatment facilities.

C. Legal Authorities. This Order/Permit is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by USEPA and chapter 5.5, division 7, of the California Water Code (commencing with section 13370). This Order shall serve as a jointly-issued NPDES permit for point source discharges from this POTW to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7, of the California Water Code (commencing with section 13260). Although Discharge Point 001 is beyond the limit of State-regulated ocean waters, effluent plume migration into State waters warrants joint regulation of the discharge by USEPA and the Regional Water Board.

D. Background and Rationale for Requirements. The Regional Water Board and USEPA developed the requirements in this Order/Permit based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order/Permit requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E and G are also incorporated into this Order/Permit.

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E. California Environmental Quality Act (CEQA). Under California Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.

F. Technology-based Effluent Limitations. Section 301(b) of the CWA and implementing regulations at 40 CFR 125.3 require that NPDES permits include limitations which meet applicable technology-based requirements, at minimum. The discharge authorized by this Order/Permit must meet minimum federal technology-based requirements for POTWs at 40 CFR 133. Compliance with secondary treatment standards governing the OCSD discharge are addressed in a consent decree (Civil Action No. SACV04-1317AHS) and a time schedule order (Time Schedule Order No. R8-2004-0067) which establish: (1) a schedule by which OCSD will complete the planning, design, construction, and operation of facilities necessary to attain compliance with the secondary treatment requirements in this Order/Permit and (2) interim effluent limitations for biochemical oxygen demand (5-day) and total suspended solids.

On May 13, 2004, the Discharger requested the inclusion of effluent limitations for 5-day carbonaceous biochemical oxygen demand (CBOD5), as allowed by secondary treatment regulations at 40 CFR 133.102(a)(4), for the period following the completion of expanded secondary treatment facilities. CBOD5 limitations will apply to the final effluent during partial or full nitrification at OCSD's treatment facilities where effluent nitrification is being planned to reduce ammonia toxicity associated with wastewater treatment and brine reject flow from the Groundwater Replenishment System. As nitrifying bacteria use oxygen to degrade nitrogenous compounds otherwise not significantly removed in the secondary treatment process, higher oxygen demand values for the final effluent will result. Consequently, the use of CBOD5 effluent limits will ensure that secondary treatment standards are achieved while allowing the Discharger to use nitrification to reduce ammonia toxicity in the discharged effluent and comply with California Ocean Plan requirements for acute and chronic toxicity.

The federal technology-based effluent limitations for biochemical oxygen demand (5-day), carbonaceous biochemical oxygen demand (5-day), total suspended solids, and pH are applied to the combined discharge from Reclamation Plant No. 1 and Treatment Plant No. 2. The effluent limitations for oil and grease, settleable solids, and turbidity implement State treatment standards in Ocean Plan Table A and are applied to the combined discharge.

A detailed discussion of technology-based effluent limitations development is included in the Fact Sheet.

G. Water Quality-based Effluent Limitations (WQBELs). Section 301(b) of the CWA and 40 CFR 122.44(d) require that NPDES permits include limitations more stringent than applicable technology-based requirements where necessary to achieve water quality standards and State requirements. 40 CFR 122.44(d)(1) requires that permits include WQBELs for all pollutants which are or may be discharged at levels having the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives or criteria within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric objective or criterion for the pollutant, WQBELs must be established using: (1) USEPA

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criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed State criterion or policy interpreting the State's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi). USEPA has applied CWA section 403(c) and 40 CFR 125, Subpart M, following 40 CFR 122.

A detailed discussion of WQBELs development is included in the Fact Sheet.

H. Santa Ana Region Basin Plan. In 1995, the Regional Water Board adopted Water Quality Control Plan, Santa Ana River Basin (hereinafter Basin Plan), as amended, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Offshore Zone and Nearshore Zone of the Pacific Ocean and the Tidal Prism of the Santa Ana River. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63 which established State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Basin Plan beneficial uses applicable to the Pacific Ocean and/or the Santa Ana River tidal prism are shown in Table 6. Requirements of this Order/Permit implement the Basin Plan.

Table 6. Basin Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001	Pacific Ocean, Offshore Zone	**Offshore Zone:** Industrial service supply; navigation; water contact recreation; non-contact water recreation; commercial and sportfishing; wildlife habitat; rare, threatened, or endangered species; spawning, reproduction, and development; and marine habitat. **Nearshore Zone:** Industrial service supply; navigation; water contact recreation; non-contact water recreation; commercial and sportfishing; wildlife habitat; rare, threatened, or endangered species; spawning, reproduction, and development; marine habitat; and shellfish harvesting. **Santa Ana River, Reach 1:** Water contact recreation (access prohibited); non-contact water recreation; warm freshwater habitat; and wildlife habitat.
002	Pacific Ocean, Offshore and Nearshore Zones	
003	Santa Ana River, Reach 1 and Nearshore Zone	

I. California Thermal Plan. In 1972, the State Water Board adopted Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (hereinafter Thermal Plan), as amended. This plan contains temperature objectives for coastal and inland surface waters. Requirements of this Order/Permit implement the Thermal Plan.

J. California Ocean Plan. In 1972, the State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (hereinafter Ocean Plan), as amended. The latest amendment became effective on October 8, 2010. The Ocean Plan is applicable, in its entirety, to point source discharges into ocean waters of the State. Beneficial uses applicable to ocean waters of the State are shown in Table 7. To protect the beneficial uses in ocean waters, the Ocean Plan establishes Table B

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water quality objectives and a program of implementation. Requirements of this Order/Permit implement the Ocean Plan.

Table 7. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001, 002, and 003	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance; rare and endangered species; marine habitat; fish migration; fish spawning and shellfish harvesting.

K. Impaired Water Bodies on CWA 303(d) List. On October 11, 2011, USEPA issued a final decision regarding California's 2010-2010 CWA section 303(d) List of Water Quality Limited Segments. The list (hereinafter 303(d) list) identifies water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limits by point sources. Huntington Beach State Park is included on the 303(d) list for PCBs (polychlorinated biphenyls); the source is unknown and the expected TMDL completion date is 2019. The offshore and nearshore zones off Huntington Beach State Park are the immediately affected receiving waters of discharges from the Facility.

L. Alaska Rule. USEPA has revised its regulation that specifies when new and revised State and tribal water quality standards become effective for CWA purposes. (40 CFR 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (hereinafter Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000 must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

M. Stringency of Requirements for Individual Pollutants. This Order/Permit contains technology-based effluent limitations and WQBELs for individual pollutants. Technology-based effluent limitations consist of restrictions on biochemical oxygen demand (5-day), carbonaceous biochemical oxygen demand (5-day), total suspended solids, and pH which implement the minimum, applicable federal technology-based requirements for POTWs. Also, effluent limitations consisting of restrictions on oil and grease, settleable solids, and turbidity more stringent than federal technology-based limitations are necessary to implement State treatment standards in Ocean Plan Table A. Discharge Point 001 WQBELs consisting of restrictions on total chlorine residual, acute toxicity, chronic toxicity, radioactivity, benzidine, hexachlorobenzene, PCBs, TCDD equivalents, and toxaphene more stringent than federal technology-based limitations are necessary to meet State water quality standards in the Ocean Plan. Discharge Point 002 WQBELs consisting of restrictions on total coliform density, fecal coliform density, *Enterococcus* density, total chlorine residual, chronic toxicity, radioactivity, and TDCC equivalents more stringent than federal technology-based limitations are necessary to meet State water quality standards in the Ocean Plan. All effluent limitations are discussed in the Fact Sheet. Collectively, the restrictions on individual pollutants in this Order/Permit are no more stringent than required by the CWA.

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N. Antidegradation Policy. 40 CFR 131.12 requires that State water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. This resolution incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements and incorporates by reference both the State and federal antidegradation policies. As discussed in the Fact Sheet, the discharge is consistent with 40 CFR 131.12 and State Water Board Resolution No. 68-16.

O. Anti-backsliding Requirements. CWA section 402(o)/303(d)(4) and 40 CFR 122.44(l) prohibit backsliding and require effluent limitations, permit conditions, and standards in a reissued NPDES permit to be as stringent as those in the previous permit, with some exceptions where limitations and conditions may be relaxed. All effluent limitations and conditions in this Order/Permit are at least as stringent as those in the previous Order/Permit.

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

Q. Monitoring and Reporting. 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. California Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (Attachment E) establishes monitoring and reporting requirements to implement State and federal requirements. Pursuant to 40 CFR 125.123, the monitoring and reporting program is sufficient to assess the impact of the discharge on water, sediment, and biological quality, including analysis of bioaccumulation and/or persistent impact on aquatic life and human health due to the discharge. In 1998, the receiving water monitoring program was revised to reallocate the Discharger's monitoring effort into three components (i.e., Core Monitoring, Strategic Process Studies, and Regional Monitoring) to address crucial physical, chemical, and biological processes not addressed by earlier monitoring programs, and provide a regional framework for interpreting discharge-related effects. These three components are retained from the 1998 and 2004 permits and are necessary to evaluate compliance with this Order/Permit, federal ocean discharge criteria, and State water quality standards, and to assess the effects of the discharge on the marine environment.

R. Standard and Special Conditions. Standard conditions that apply to all NPDES permits, in accordance with 40 CFR 122.41, and additional conditions which apply to POTWs, in accordance with 40 CFR 122.42, are provided in Attachment D. The Regional Water Board and USEPA have also included in this Order/Permit special

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conditions applicable to the Discharger. The rational for the special conditions contained in this Order/Permit are provided in the Fact Sheet.

S. Industrial Storm Water Requirements. Industrial stormwater is managed by internal drainage systems at Reclamation Plant No. 1 and Treatment Plant No. 2, where stormwater is captured, treated, and discharged with the treated wastewater regulated under this Order/Permit. This Order/Permit requires the Discharger to submit and implement a Stormwater Management Plan to address onsite stormwater quality.

T. Sanitary Sewer Overflows. The State Water Board issued Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General Order) on May 2, 2006, as amended. The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions. Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating SSOs. The Discharger's collection system is part of the POTW that is subject to this Order/Permit. The Discharger must comply with both the General Order and this Order/Permit.

U. Sewage Sludge/Biosolids Requirements. Section 405 of the CWA and implementing regulations at 40 CFR 503 require that producers of sewage sludge/biosolids meet certain reporting, handling, and use or disposal requirements. The State has not been delegated the authority to implement this program; therefore, USEPA is the implementing agency. This Order/Permit contains sewage sludge/biosolids requirements pursuant to 40 CFR 503 that are applicable to the Discharger.

V. Pretreatment Requirements. In compliance with 40 CFR 403, OCSD has developed an approved Pretreatment Program for the POTW that it owns and operates. This Order/Permit includes the Discharger's approved Pretreatment Program and requires the Discharger to continue implementation and control of the Program throughout the service area of its POTW, including contributing jurisdictions.

The POTW, as Control Authority, may exercise its authority over the entire service area directly, as provided by State law, or may elect to enter into contracts or other multi-jurisdictional agreements with contributing jurisdictions. In case the POTW elects to enter into inter-jurisdictional agreements, the POTW must ensure that discharges received from entities outside of its political boundaries are regulated to the same extent as are discharges within its political boundaries. OCSD applies one set of local limits to all discharges to its treatment facilities.

W. Mass Emission Benchmarks. To address uncertainty due to potential increases in toxic pollutant loadings from the discharge to the marine environment during the five-year permit term, and to establish a framework for evaluating the need for an antidegradation analysis to determine compliance with State and federal antidegradation requirements at the time of permit reissuance, 12-month average mass emission benchmarks have been established for effluent discharged through Discharge Point 001. For this Order/Permit, the mass emission benchmarks (in metric tons per

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year) continue to be determined based on 1990 through 1994 effluent concentrations, using the 95th percentile of the 4-day average distribution of daily effluent concentrations, and the Discharger's projected 2009 annual average influent flow of 278 mgd. They may be re-evaluated and revised during this permit term.

X. Federal Permit Renewal Contingency. The Discharger's federal permit renewal is contingent upon: (1) determination by the U.S. Fish and Wildlife Service and NOAA National Marine Fisheries Service that the proposed discharge is consistent with the federal Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.) and (2) the Regional Water Board's certification/concurrence that the discharge will comply with applicable State water quality standards. Joint issuance of an NPDES permit which incorporates both federal requirements and State waste discharge requirements will serve as the State's concurrence that the proposed discharge complies with applicable State water quality standards. USEPA has determined that issuance of this Order/Permit may affect, but is not likely to adversely affect species listed under the federal ESA and is requesting the Services' concurrence with this determination. The California Coastal Commission has indicated that it is not necessary to obtain a consistency certification pursuant to the Coastal Zone Management Act (16 U.S.C. 1451 et seq.) for the issuance of a federal NPDES permit containing secondary treatment standards.

Y. Notification of Interested Parties. The Regional Water Board and USEPA have notified the Discharger and interested agencies and persons of their intent to jointly issue State Waste Discharge Requirements and a federal NPDES permit for discharge and have provided an opportunity to submit written comments and recommendations by June 6, 2012. Also, the Regional Water Board has provided an opportunity to submit oral comments and recommendations, at a public meeting on June 15, 2012. Details of these notifications are provided in the Fact Sheet and the joint public notice for this Order/Permit.

Z. Consideration of Public Comment. The USEPA considered all written comments pertaining to the discharge. The Regional Water Board, in a public meeting, heard and considered all written and oral comments pertaining to the discharge.

THEREFORE, IT IS HEREBY ORDERED that this Order/Permit supersedes Order No. R8-2004-0062 (NPDES Permit No. CA0110604), except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order/Permit.

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III. DISCHARGE PROHIBITIONS

A. Ocean Plan Discharge Prohibitions

1. The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into the ocean is prohibited.

2. Waste shall not be discharged to designated Areas of Special Biological Significance.

3. Pipeline discharge of sludge to the ocean is prohibited by federal law; the discharge of municipal and industrial waste sludge directly to the ocean, or into a waste stream that discharges to the ocean is prohibited by the Ocean Plan. The discharge of sludge digester supernatant directly to the ocean, or to a waste stream that discharges to the ocean without further treatment, is prohibited.

4. The by-passing of untreated wastes containing concentrations of pollutants in excess of those of Table A or Table B of the Ocean Plan to the ocean is prohibited.

B. Basin Plan General Prohibition

Unless regulated by appropriate waste discharge requirements, the discharge to surface or groundwaters of waste which contains the following substances is prohibited: toxic substances or materials; pesticides; PCBs (polychlorinated biphenyls); mercury or mercury compounds; radioactive substances or material in excess of levels allowed by the California Code of Regulations.

C. Basin Plan Prohibitions Applying to Inland Surface Waters

1. The discharge of untreated sewage to any surface water stream, natural or manmade, or to any drainage system intended to convey stormwater runoff to surface water streams is prohibited.

2. The discharge of treated sewage to streams, lakes or reservoirs, or to tributaries thereto, which are designated MUN and which are used as a domestic water supply is prohibited unless approved by the California Department of Health Services. The discharge of treated sewage to waterbodies which are excepted from MUN (see Basin Plan Table 3-1) but which are tributary to waters designated MUN and are used as a domestic water supply is prohibited unless the discharge of treated sewage to the drinking water supply is precluded or approved by the California Department of Public Health.

D. The discharge of wastewater at locations other than Discharge Point 001 (120” outfall) is prohibited, except in the event of an emergency, or to allow bypass to occur which does not cause effluent limitations to be exceeded during essential maintenance to assure efficient operation of the 120” outfall (40 CFR 122.41(m)(2)). During such bypass, the discharge of wastewater at locations other than Discharge Point 002 (78” outfall) and Discharge Point 001 is prohibited, except in the event of an emergency. An emergency is a circumstance that precludes discharging all wastewater to Discharge

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Point 001 despite proper operation and maintenance of the Discharger's facilities. Such emergencies are limited to situations such as earthquake, flood, and acts of war or terrorism. In the event of an emergency, the Discharger may discharge other than as required by the terms of this permit provided:

1. The Regional Water Board Executive Officer and USEPA Water Division Director are notified of the pending discharge as soon as possible;

2. The Executive Officer and Water Division Director agree that an emergency exists;

3. The Discharger takes all steps required by the Executive Officer or Water Division Director to minimize any harm resulting from the discharge;

4. Discharges to Orange County Water District's water recycling facilities will be maximized before wastewater is discharged through Discharge Point 002 (deactivated ocean outfall);

5. Discharges through Discharge Point 002 (deactivated ocean outfall) will be maximized before wastewater is discharged through Discharge Point 003 (two overflow points to the Santa Ana River); and

6. The Discharger returns the discharge to compliance with the terms of this permit without delay.

D. The discharge of waste/pollutants in a manner or at locations that have not been specifically authorized by this Order/Permit is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

Effluent limitations for Discharge Points 001 and 002 are specified below.

1. Final Effluent Limitations – Reclamation Plant No. 1 and Treatment Plant No. 2 Discharge Points 001 and 002

a. The Discharger shall maintain compliance with the following effluent limitations at Reclamation Plant No. 1 and Treatment Plant No. 2 Discharge Points 001 and 002, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP:

Table 8. Effluent Limitations for Reclamation Plant No. 1 and Treatment Plant No. 2 Discharge Points 001 and 002

Parameter	Units	Effluent Limitations[1]					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-month Median
Biochemical oxygen demand 5-day @ 20°C[2]	mg/L	30	45	--	--	--	--
	lbs/day	68,555	102,832	--	--	--	--

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Parameter	Units	Effluent Limitations[1]					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-month Median
Carbonaceous biochemical oxygen demand 5-day @ 20°C[2]	mg/L	25	40	--	--	--	--
	lbs/day	57,129	91,406	--	--	--	--
Total suspended solids	mg/L	30	45	--	--	--	--
	lbs/day	68,555	102,832	--	--	--	--
pH	standard units	--	--	--	6.0	9.0	--
Oil and grease	mg/L	25	40	--	--	75	--
	lbs/day	57,129	91,406	--	--	171,387	--
Settleable solids	ml/L	1.0	1.5	--	--	3.0	--
Turbidity	NTU	75	100	--	--	225	--
Notes:	[1] Mass emission effluent limitations (in lbs/day) are based on the average daily influent flow of 274 mgd projected for 2017, taken from the Discharger's 2009 Master Plan. [2] In lieu of the parameter BOD_5 and the BOD_5 levels specified for effluent quality in this table, the parameter $CBOD_5$ and the $CBOD_5$ levels specified for effluent quality in this table may be substituted and reported by the Discharger.						

b. Percent Removal: The average monthly percent removal of influent BOD 5-day 20 degrees C, CBOD 5-day 20 degrees C, and total suspended solids shall not be less than 85 percent.

c. Percent Removal: The average monthly percent removal of influent total suspended solids shall not be less than 75 percent.

2. Final Effluent Limitations – Reclamation Plant No. 1 and Treatment Plant No. 2 Discharge Point 001

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP:

Table 9. Effluent Limitations for Reclamation Plant No. 1 and Treatment Plant No. 2 Discharge Point 001

Parameter	Units	Effluent Limitations[2,3]					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-month Median
Total chlorine residual	mg/L	--	--	1.45	--	10.86	0.36
	lbs/day	--	--	3,313	--	24,817	823
Acute toxicity, TST	P or F	--	--	P	--	--	--
Chronic toxicity, TST	P or F	--	--	P	--	--	--

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Parameter	Units	Effluent Limitations[2,3]					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-month Median
Benzidine	ug/L	0.01249	--	--	--	--	--
	lbs/day	0.0285	--	--	--	--	--
Hexachloro-benzene	ug/L	0.0380	--	--	--	--	--
	lbs/day	0.0868	--	--	--	--	--
PCBs*[1]	ug/L	0.0034	--	--	--	--	--
	lbs/day	0.0078	--	--	--	--	--
TCDD equivalents*	pg/L	0.706	--	--	--	--	--
	lbs/day	0.000001613	--	--	--	--	--
Toxaphene	ug/L	0.03801	--	--	--	--	--
	lbs/day	0.0869	--	--	--	--	--
Notes:	[1] For definitions indicated by "*", see Attachment A – Definitions. [2] The minimum probable initial dilution (Dm = 180) used to calculate WQBELs for Ocean Plan Table B pollutants is 181:1. [3] Mass emission effluent limitations (in lbs/day) are based on the average daily influent flow of 274 mgd projected for 2017, taken from the Discharger's 2009 Master Plan.						

b. Acute toxicity, TST: The acute toxicity WQBEL for Discharge Point 001 is expressed as a null hypothesis (H_0) and regulatory management decision (*b* value) of 0.80 for the acute toxicity methods in Attachment E – Monitoring and Reporting Program, where a 0.20 mean response (or more) at the In-stream Waste Concentration (IWC) of 5.56% effluent demonstrates an unacceptable level of acute toxicity in an acute toxicity test. The null hypothesis for this discharge is:

H_0: Mean response (5.56% effluent) ≤ 0.80 mean response (Control).

Results obtained from a single-concentration acute toxicity test shall be analyzed using the Test of Significant Toxicity hypothesis testing approach (EPA 833-R-10-003, 2010) in Attachment E – Monitoring and Reporting Program. Compliance with this acute toxicity WQBEL is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

c. Chronic toxicity, TST: The chronic toxicity WQBEL for Discharge Point 001 is expressed as a null hypothesis (H_0) and regulatory management decision (*b* value) of 0.75 for the chronic toxicity methods in Attachment E – Monitoring and Reporting Program, where a 0.25 mean response (or more) at the In-stream Waste Concentration (IWC) of 0.556% effluent demonstrates an unacceptable level of chronic toxicity in a chronic toxicity test. The null hypothesis for this discharge is:

H_0: Mean response (0.556% effluent) ≤ 0.75 mean response (Control).

Results obtained from a single-concentration chronic toxicity test shall be analyzed using the Test of Significant Toxicity hypothesis testing approach (EPA

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833-R-10-003, 2010) in Attachment E – Monitoring and Reporting Program. Compliance with this chronic toxicity WQBEL is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

d. Radioactivity: Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations. Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.

e. Waste management systems that discharge to the ocean must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.

f. Waste discharged to the ocean must be essentially free of:

(1) Material that is floatable or will become floatable upon discharge.

(2) Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.

(3) Substances which will accumulate to toxic levels in marine waters, sediments or biota.

(4) Substances that significantly decrease the natural light to benthic communities and other marine life.

(5) Materials that result in aesthetically undesirable discoloration of the ocean surface.

g. Waste effluents shall be discharged in a manner which provides sufficient initial dilution to minimize the concentrations of substances not removed in the treatment.

h. Waste that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing and water-contact sports are to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used.

3. Effluent Limitations – Reclamation Plant No. 1 and Treatment Plant No. 2 Discharge Point 002

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 002, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP:

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Table 10. Effluent Limitations for Reclamation Plant No. 1 and Treatment Plant No. 2 Discharge Point 002

Parameter	Units	Effluent Limitations[3,4]					
		Average Monthly **[2]	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-month Median
Total coliform density	MPN/ 100 mL	1,000	--	10,000	--	--	--
Fecal coliform density	MPN/ 100 mL	200	--	400	--	--	--
Enterococcus density	MPN/ 100 mL	35	--	104	--	--	--
Total chlorine residual	mg/L	--	--	0.296	--	2.22	0.074
	lbs/day	--	--	676	--	5,073	169
Chronic toxicity, NOEC	TUc	--	--	37	--	--	--
TCDD equivalents*[1]	pg/L	0.144	--	--	--	--	--
	lbs/day	0.000000 329	--	--	--	--	--
Notes:	[1] For definitions indicated by "*", see Attachment A – Definitions. [2] "**" = The geometric mean, rather than average, is used to determine compliance for Total coliform density, Fecal coliform density, and *Enterococcus* density. [3] The minimum probable initial dilution (Dm = 36) used to calculate WQBELs for Ocean Plan Table B pollutants is 37:1. [4] Mass emission effluent limitations (in lbs/day) are based on the average daily influent flow of 274 mgd projected for 2017, taken from the Discharger's 2009 Master Plan.						

b. Radioactivity: Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations. Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.

c. Waste management systems that discharge to the ocean must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.

d. Waste discharged to the ocean must be essentially free of:

(1) Material that is floatable or will become floatable upon discharge.

(2) Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.

(3) Substances which will accumulate to toxic levels in marine waters, sediments or biota.

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(4) Substances that significantly decrease the natural light to benthic communities and other marine life.

(5) Materials that result in aesthetically undesirable discoloration of the ocean surface.

e. Waste effluents shall be discharged in a manner which provides sufficient initial dilution to minimize the concentrations of substances not removed in the treatment.

f. Waste that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing and water-contact sports are to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used.

V. RECEIVING WATER LIMITATIONS

Receiving water limitations are based on water quality objectives contained in the Ocean Plan and are a required part of this Order/Permit.

A. Surface Water Limitations

The discharge of waste by the Discharger shall not cause a violation of the Ocean Plan water quality objectives and USEPA water quality criteria specified below. Compliance with these water quality objectives shall be determined from samples collected at stations representative of the area within the waste field where initial dilution is completed.

1. Bacterial Characteristics

a. Ocean Plan Water-Contact Standards. Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Regional Water Board (i.e., waters designated as REC-1), but including all kelp beds, the following bacterial objectives shall be maintained throughout the water column.

30-day Geometric Mean: The following standards are based on the geometric mean of the five most recent samples from each site: total coliform density shall not exceed 1,000 per 100 mL; fecal coliform density shall not exceed 200 per 100 mL; and enterococcus density shall not exceed 35 per 100 mL.

Single Sample Maximum: total coliform density shall not exceed 10,000 per 100 mL; fecal coliform density shall not exceed 400 per 100 mL; enterococcus density shall not exceed 104 per 100 mL; and total coliform density shall not exceed 1,000 per 100 mL when the fecal coliform/total coliform ratio exceeds 0.1.

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The Initial Dilution Zone for any wastewater outfall shall be excluded from designation as kelp beds for purposes of bacterial standards. Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacterial standards.

California Department of Public Health (CDPH) has established minimum protective bacteriological standards for coastal waters adjacent to public beaches and for public water-contact sports areas in ocean waters. These standards are found in the California Code of Regulations, title 17, section 7958, and they are identical to the objectives contained in subsection “a”, above. When a public beach or public water-contact sports area fails to meet these standards, CDPH or the local public health officer may post with warning signs or otherwise restrict use of the public beach or public water-contact sports area until the standards are met. The CDPH regulations impose more frequent monitoring and more stringent posting and closure requirements on certain high-use public beaches that are located adjacent to a storm drain that flows in the summer. For beaches not covered under AB 411 regulations, CDPH imposes the same standards as contained in title 17 and requires weekly sampling but allows the county health officer more discretion in making posting and closure decisions.

b. USEPA Primary Recreation Criteria in Federal Waters. Ocean waters beyond the outer limit of the territorial sea shall not exceed the following 304(a)(1) criteria for enterococcus density beyond the zone of initial dilution in areas where primary contact recreation, as defined in USEPA guidance, occurs. USEPA describes the “primary contact recreation” use as protective when the potential for ingestion of, or immersion in, water is likely. Activities usually include swimming, water-skiing, skin-diving, surfing, and other activities likely to result in immersion. (Water Quality Standards Handbook, EPA-823-B-94-005a, 1994, p. 2-2.)

30-day Geometric Mean (per 100 mL): 35.

Single Sample Maximum (per 100 mL): 104 for designated bathing beach; 158 for moderate use; 276 for light use; and 501 for infrequent use.

c. Ocean Plan Shellfish Harvesting Standards. At all areas where shellfish may be harvested for human consumption, as determined by the Regional Water Board, the following bacterial objectives shall be maintained throughout the water column: The median total coliform density shall not exceed 70 per 100 mL, and not more than 10 percent of the samples shall exceed 230 per 100 mL.

2. Physical Characteristics

a. Floating particulates and grease and oil shall not be visible.

b. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.

c. Natural light shall not be significantly reduced at any point outside the initial dilution zone as a result of the discharge of waste.

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d. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.

3. Chemical Characteristics

a. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.

b. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

c. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.

d. The concentration of substances, set forth in Chapter II, Table B of the Ocean Plan, in marine sediments shall not be increased to levels which would degrade indigenous biota.

e. The concentration of organic materials in marine sediments shall not be increased to levels which would degrade marine life.

f. Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.

g. The concentrations of substances, set forth in Chapter II, Table B of the Ocean Plan, shall not be exceeded in the area within the waste field where initial dilution is completed.

4. Biological Characteristics

a. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.

b. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.

c. The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

5. Radioactivity. Discharge of radioactive waste shall not degrade marine life.

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all NPDES Standard Provisions included in Attachment D of this Order/Permit.

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2. The Discharger shall comply with the following Regional Water Board provisions:

a. Failure to comply with the provisions or requirements of this Order/Permit, or violation of other applicable laws or regulations governing discharges form this POTW, 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.

b. Neither the treatment nor the discharge of wastes shall cause, or threaten to cause, a nuisance or pollution as defined in California Water Code section 13050.

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

d. The Discharger shall file with the Regional Water Board and USEPA a Report of Waste Discharge/application for permit modification at least 180 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:

(1) 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.

(2) Significantly changing the disposal method or location, such as changing the disposal to another drainage area or waterbody.

(3) Significantly changing the method of treatment.

(4) Increasing the treatment plant design capacity beyond that specified in this Order/Permit.

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

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

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

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h. 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 this Order/Permit by letter, a copy of which shall be sent to the Regional Water Board and USEPA.

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

j. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the Discharger from its liabilities under federal, State, or local laws, nor guarantee the Discharger a capacity right in the receiving waters.

3. The Discharger shall comply with the following USEPA Region 9 Standard Provisions:

a. The following condition has been established to enforce applicable requirements of the Resource Conservation and Recovery Act. POTWs may not receive hazardous waste by truck, rail, or dedicated pipe except as provided under 40 CFR 270. Hazardous wastes are defined at 40 CFR 261 and include any mixture containing any waste listed under 40 CFR 261.31 through 261.33. The Domestic Sewage Exclusion (40 CFR 261.4) applies only to wastes mixed with domestic sewage in a sewer leading to a POTW and not to mixtures of hazardous wastes and sewage or septage delivered to the treatment plant by truck.

b. Transfers by Modification: Except as provided in 40 CFR 122.61(b), this Permit may be transferred by the Discharger to a new owner or operator only if the Permit has been modified or revoked and reissued (under 40 CFR 122.62(b)(2)), or a minor modification made (under 40 CFR 122.63(d)), to identify the new permittee and incorporate such other requirements as may be necessary under the CWA. (40 CFR 122.61(a).)

c. Automatic Transfers: As an alternative to transfers under 40 CFR 122.61(a), this Permit may be automatically transferred to a new permittee if: The notice includes a written agreement between the Discharger and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and the Water Division Director does not notify the Discharger and the proposed new permittee of his/her intent to modify or revoke and reissue the Permit. A modification under this paragraph may also be a minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement between the Discharger and the new permittee. (40 CFR 122.61(b).)

d. Minor Modification of Permits: Upon the consent of the Discharger, the Water Division Director may modify the Permit to make the corrections or allowances for changes in the permitted activity listed under 40 CFR 122.63(a) through (g), without following the procedures of 40 CFR 124. Any permit modification not processed as a minor modification under 40 CFR 122.63 must be made for

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cause and with 40 CFR 124 draft permit and public notice as required in 40 CFR 122.62. (40 CFR 122.63.)

e. Termination of Permits: The causes for terminating a permit during its term, or for denying a permit renewal application, are found at 40 CFR 122.64(a)(1) through (4). (40 CFR 122.64.)

f. Availability of Reports: Except for data determined to be confidential under 40 CFR 2, all reports prepared in accordance with the terms of this Order/Permit shall be available for public inspection at the offices of the Regional Water Board and USEPA. As required by the CWA, permit applications, permits, and effluent data shall not be considered confidential. (Pursuant to CWA section 308.)

g. Removed Substances: Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters. (Pursuant to CWA section 301.)

h. Severability: The provisions of this Order/Permit are severable, and if any provision of this Order/Permit, or the application of any provision of this Order/Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order/Permit shall not be affected thereby. (Pursuant to CWA section 512.)

i. Civil and Criminal Liability: Except as provided in standard conditions on Bypass and Upset, nothing in this Order/Permit shall be construed to relieve the Discharger from civil or criminal penalties for noncompliance. (Pursuant to CWA section 309.)

j. Oil and Hazardous Substances Liability: Nothing in this Order/Permit shall be construed to preclude the institution of any legal action or relieve the Discharger from any responsibilities, liabilities, or penalties to which the Discharger is or may be subject under CWA section 311.

k. State or Tribal Law: Nothing in this Order/Permit shall be construed to preclude the institution of any legal action or relive the operator from any responsibilities, liabilities, or penalties established pursuant to any applicable State or Tribal law or regulation under authority preserved by CWA section 510.

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order/Permit.

C. Special Provisions

1. Reopener Provisions

a. This Order/Permit may be reopened and modified in accordance with the requirements set forth at 40 CFR 122 and 124 to:

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(1) Address any changes in State or federal plans, policies, or regulations that would affect the quality requirements for the discharge.

(2) Include effluent limitations for pollutants determined to be present in the discharge.

(3) Include conditions or effluent limitations based on newly available information (e.g., effluent toxicity, significant change in waste flow, strategic process study results, etc.).

(4) Include revised effluent limitations or permit conditions to address acute or chronic toxicity in the effluent or receiving water, as a result of the discharge; or to implement new, revised, or newly interpreted water quality standards applicable to acute or chronic toxicity.

(5) Revise mass emission benchmarks contained in the Monitoring and Reporting Program of this Order/Permit (Attachment E).

b. This Order/Permit may be reopened to incorporate any applicable standard for sewage sludge use or disposal promulgated under CWA section 405(d). The Regional Water Board and/or USEPA may promptly modify or revoke and reissue this Order/Permit if the standard for sewage sludge use or disposal: is more stringent than any requirements for sludge use or disposal in the Order/Permit, or controls a pollutant or practice not limited in the Order/Permit. (40 CFR 122.44(c).)

c. The MRP (Attachment E) may be modified by the Executive Officer and USEPA to enable the Discharger to participate in comprehensive regional monitoring activities conducted in the Southern California Bight during the term of this permit. The intent of regional monitoring activities is to maximize the efforts of all monitoring partners using a cost-effective monitoring design and to best utilize the pooled scientific resources of the region. During these coordinated monitoring efforts, the Discharger's sampling and analytical effort may be reallocated to provide a regional assessment of the impact of wastewater discharges to the Southern California Bight. Anticipated modifications to the monitoring program will be coordinated so as to provide a comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollutant sources. If predictable relationships among the biological, water quality and effluent monitoring variables can be demonstrated, it may be appropriate to decrease the Discharger's monitoring effort. Conversely, the monitoring program may be intensified if it appears that the objectives cannot be achieved through the Discharger's existing monitoring program. These changes will improve the overall effectiveness of monitoring in the Southern California Bight. Minor changes may be made without further public notice.

d. This Permit may be modified, or revoked and reissued, based on the results of Endangered Species Act section 7 consultation(s) with the National Marine Fisheries Service and/or U.S. Fish and Wildlife Service.

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e. The Regional Water Board may reopen this Order to consider making conforming changes in the event the USEPA issues a version of federal NPDES Permit No. CA0110604 that contains revisions based on its consideration of comments which are timely submitted.

2. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program

The goal of the Pollutant Minimization Program is to reduce all potential sources of a pollutant through pollutant minimization (control) strategies, including pollution prevention measures, in order to maintain the effluent concentration at or below the effluent limitation.

The Discharger must develop and conduct a Pollution Minimization Program if all of the following conditions are true:

(1) The calculated effluent limitation is less than the reported Minimum Level.

(2) The concentration of the pollutant is reported as DNQ.

(3) There is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.

Alternatively, the Discharger must develop and conduct a Pollutant Minimization Program if all of the following conditions are true:

(1) The calculated effluent limitation is less than the Method Detection Limit.

(2) The concentration of the pollutant is reported as ND.

(3) There is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.

The Pollutant Minimization Program shall include actions and submittals acceptable to the Regional Water Board and USEPA including, but not limited to, the following:

(1) An annual review and semi-annual monitoring of potential sources of the reportable pollutant, which may include fish tissue monitoring and other bio-uptake sampling;

(2) Quarterly monitoring for the reportable pollutant in the influent to the wastewater treatment system;

(3) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable pollutant in the effluent at or below the calculated effluent limitation;

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(4) Implementation of appropriate cost-effective control measures for the pollutant, consistent with the control strategy; and

(5) An annual status report that shall be sent to the Regional Water Board and USEPA including: all Pollutant Minimization Program monitoring results for the previous year; a list of potential sources of the reportable pollutant; a summary of all action items taken in accordance with the control strategy; and a description of actions to be taken in the following year. By March 1 of each year, the Discharger shall submit its annual Pollutant Minimization Program report to the Regional Water Board and USEPA, for the previous calendar year.

3. Construction, Operation and Maintenance Specifications

a. The Discharger's wastewater treatment plants shall be supervised and operated by persons possessing certificates of appropriate grade, pursuant to Title 23, Division 3, Chapter 26 of the California Code of Regulations. The Discharger shall report annually to the Regional Water Board and USEPA a roster of such plant personnel, including job titles, duties, and level of State certification for each individual.

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

c. The Discharger shall develop an Operation and Maintenance Manual (O&M Manual). If an O&M Manual has been developed, then the Discharger shall update it as necessary to conform to the most recent plant changes and requirements. The O&M Manual shall be readily available to operating personnel onsite. The O&M Manual shall include:

(1) A description of the treatment plant organization 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) A detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation, and equipment.

(3) A description of laboratory and quality assurance procedures.

(4) Process and equipment inspection and maintenance schedules.

(5) A description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Discharger will be able to comply with the requirements of this Order/Permit.

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(6) A 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 (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.

d. The Discharger shall file with the Regional Water Board and USEPA, within 180 days after the effective date of this Order/Permit, an updated technical report on the Discharger's preventive (failsafe) and contingency (response and cleanup) plans for controlling accidental discharges and for minimizing the effect of such events. This technical report shall:

(1) Identify the possible sources of accidental loss, untreated waste bypass, and contaminated drainage. Loading and storage areas, power outage, waste treatment outage, and failure of process equipment, tanks, and collection system sewer pipes and pump stations should be considered.

(2) Evaluate the effectiveness of present facilities and procedures and when they become operational. Describe facilities and procedures needed for effective preventive and contingency plans.

(3) Describe any new facilities and procedures needed. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

(4) Describe proposed and completed training programs and schedules to train and familiarize plant operating personnel with the Discharger's preventative (failsafe) and contingency (response and cleanup) plans for controlling accidental discharges and for minimizing the effects of such events. (California Water Code sections 13267(b) and 13268.)

e. Storm Water Management Plan

The Discharger shall file with the Regional Water Board and USEPA, within 180 days of the effective date of this Order/Permit, an updated Storm Water Management Plan for discharges of storm water associated with industrial activities excluding construction activities at its treatment/reclamation plants.

4. Special Provisions for Municipal Facilities (POTWs Only)

a. Treatment Plant Capacity

The Discharger shall submit a written report to the Executive Officer and Water Division Director within 90 days after the monthly average influent flow rate equals or exceeds 75 percent of the secondary design capacity of the POTW. The Discharger's senior administrative officer shall sign a letter in accordance with the Standard Provisions (Attachment D) which transmits the report and

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certifies that the policy-making body is adequately informed of the influent flow rate relative to the POTW design capacity. The report shall include the following:

(1) Daily average influent flow for the calendar month, the date on which the maximum daily flow occurred, and the rate of that maximum flow.

(2) The Discharger's best estimate of when the daily average influent flow for a calendar month will equal or exceed the design capacity of the POTW.

(3) The Discharger's intended schedule for studies, design, and other steps needed to provide additional treatment for the wastewater from the collection system before the waste flow exceeds the capacity of the POTW.

b. Sludge (Biosolids) Requirements

(Note: "Biosolids" refers to non-hazardous sewage sludge, as defined at 40 CFR 503.9. Sewage sludge that is hazardous, as defined at 40 CFR 261, must be disposed of in accordance with the Resource Conservation and Recovery Act.)

(1) General Requirements

(a) All biosolids generated by the Discharger shall be used or disposed of in compliance with applicable portions of the Clean Water Act and Safe Drinking Water Act and implementing regulations, including: 40 CFR 503—for biosolids that are land applied, placed in a surface disposal site (dedicated land disposal site, monofill, or sludge-only parcel at a municipal landfill), or incinerated; 40 CFR 258—for biosolids disposed of in a municipal solid waste landfill (with other materials); and 40 CFR 257—for all biosolids use and disposal practices not covered under 40 CFR 258 or 503.

40 CFR 503, Subpart B (land application), sets forth requirements for biosolids that are applied for the purpose of enhancing plant growth or for land reclamation. 40 CFR 503, Subpart C (surface disposal), sets forth requirements for biosolids that are placed on land for the purpose of disposal.

The Discharger is responsible for assuring that all biosolids produced at its facility are used or disposed of in accordance with these rules, whether the Discharger uses or disposes of the biosolids itself, or transfers their biosolids to another party for further treatment, use, or disposal. The Discharger is responsible for informing subsequent preparers, appliers, and disposers of requirements they must meet under these rules.

(b) Duty to Mitigate: The Discharger shall take all reasonable steps to prevent or minimize any biosolids use or disposal which has a likelihood of adversely affecting human health or the environment.

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(c) No biosolids shall be allowed to enter wetlands or other waters of the United States.

(d) Biosolids treatment, storage, use, or disposal shall not contaminate groundwater.

(e) Biosolids treatment, storage, use, or disposal shall not create a nuisance such as objectionable odors or flies.

(f) The Discharger shall assure that haulers transporting biosolids off-site for treatment, storage, use, or disposal take all necessary measures to keep the biosolids contained. Trucks hauling biosolids that are not Class A, as defined at 40 CFR 503.32(a), shall be cleaned as necessary after loading and after unloading, so as to have no biosolids on the exterior of the truck or wheels. Trucks hauling biosolids that are not Class A shall be tarped. All haulers must have spill clean-up procedures. Trucks hauling biosolids that are not Class A shall not be used for hauling food or feed crops after unloading the biosolids unless the Discharger submits a hauling description, to be approved by USEPA, describing how trucks will be thoroughly cleaned prior to adding food or feed.

(g) If biosolids are stored for over two years from the time they are generated, the Discharger must ensure compliance with all requirements for surface disposal under 40 CFR 503, Subpart C, or must submit a written notification to USEPA and the State with the information specified under 40 CFR 503.20(b), demonstrating the need for longer temporary storage. During storage of any length for non-Class A biosolids, whether on the facility site or off-site, adequate procedures must be taken to restrict access by the public and domestic animals.

(h) Any biosolids treatment, disposal, or storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect the site boundaries from erosion, and to prevent any conditions that would cause drainage from the materials to escape from the site. Adequate protection is defined as protection from at least a 100-year storm and the highest tidal stage which may occur.

(i) There shall be adequate screening at the plant headworks and/or at the biosolids treatment units to ensure that all pieces of metal, plastic, glass, and other inert objects with a diameter greater than 3/8 inches are removed.

(j) Sewage sludge containing more than 50 mg/kg PCBs shall be disposed of in accordance with 40 CFR 761.

(k) The Discharger shall comply, if applicable, with WDRs issued by Regional Water Boards, or the State Water Board, to which jurisdiction

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the biosolids are transported and applied; and with other applicable State jurisdictions not limited to Arizona biosolids rules and regulations governing biosolids transport, treatment, and beneficial reuse.

(2) Inspection and Entry

The USEPA, State, or an authorized representative thereof, upon the presentation of credentials, shall be allowed by the Discharger directly, or through contractual arrangements with their biosolids management contractors, to:

(a) Enter upon all premises where biosolids produced by the Discharger are treated, stored, used, or disposed of, by either the Discharger or another party to whom the Discharger transfers biosolids for further treatment, storage, use, or disposal.

(b) Have access to and copy any records that must be kept by either the Discharger or another party to whom the Discharger transfers biosolids for further treatment, storage, use, or disposal, under the conditions of this Order/Permit or 40 CFR 503.

(c) Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations used in biosolids treatment, storage, use, or disposal by either the Discharger or another party to whom the Discharger transfers biosolids for further treatment, storage, use, or disposal.

(3) Monitoring

(a) Biosolids shall be monitored for the following constituents, at the frequency stipulated in Table 1 of 40 CFR 503.16: arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, organic nitrogen, ammonia nitrogen, and total solids. If biosolids are removed for use or disposal on a routine basis, sampling should be scheduled at regular intervals throughout the year. If biosolids are stored for an extended period prior to use or disposal, sampling may occur at regular intervals, or samples of the accumulated stockpile may be collected prior to use or disposal, corresponding to the tons accumulated in the stockpile over that period.

Monitoring shall be conducted using the methods in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846), or as otherwise required under 40 CFR 503.8(b). All results must be reported on a 100% dry weight basis and records of all analyses must state on each page of the analytical results whether the reported results are expressed on an “as-is” or a “100% dry weight” basis.

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(b) The Discharger shall sample biosolids twice per year for the pollutants listed under CWA section 307(a) using best practicable detection limits.

For accumulated, previously untested biosolids, the Discharger shall develop a representative sampling plan which addresses the number and location of sampling points, and collected representative samples.

Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis.

Biosolids to be land applied shall be tested for organic-N, ammonium-N, and nitrate-N, at the frequencies required above.

(c) Class 1 facilities (facilities with pretreatment programs or others designated as Class 1 by the USEPA Regional Administrator) and federal facilities with >5 mgd influent flow shall sample biosolids for pollutants listed under CWA section 307(a) (as required in the pretreatment section of this Order/Permit). Class 1 facilities and federal facilities with >5 mgd influent flow shall test dioxins/dibenzofurans using a detection limit of <1 pg/g, during their next sampling period if they have not done so within the past 5 years and once per 5 years thereafter.

(d) The biosolids shall be tested annually, or more frequently if necessary, to determine hazardousness in accordance with California law.

(4) Pathogen and Vector Control

(a) Prior to land application, the Discharger shall demonstrate that biosolids meet Class A or Class B pathogen reduction levels by one of the methods listed under 40 CFR 503.32.

(b) Prior to disposal in a surface disposal site, the Discharger shall demonstrate that biosolids meet Class B pathogen reduction levels, or ensure that the site is covered at the end of each operating day. If pathogen reduction is demonstrated using a “Process to Further Reduce Pathogens” or one of the “Processes to Significantly Reduce Pathogens”, the Discharger shall maintain daily records of the operating parameters used to achieve this reduction. If pathogen reduction is demonstrated by testing for fecal coliform and/or pathogens, samples must be collected at the frequency specified in Table 1 of 40 CFR 503.16. If Class B is demonstrated using fecal coliform, at least seven grab samples must be collected during each monitoring period and a geometric mean calculated from these samples. The following holding times between sample collection and analysis shall not be exceeded: fecal coliform—6 hours when cooled to <4 degrees C (extended to 24 hours when cooled to <4 degrees C for Class A composted and Class B aerobically digested, and Class B

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anaerobically digested sample types; Salmonella spp. bacteria—24 hours when cooled to 4 degrees C (unless using Method 1682—6 hours when cooled to <10 degrees C); enteric viruses—6 hours when cooled to <10 degrees C (extended to 24 hours when cooled to <4 degrees C, or 2 weeks when frozen); helminth ova—6 hours when cooled to <10 degrees C (extended to one month when cooled to <4 degrees C).

(c) For biosolids that are land applied or placed in a surface disposal site, the Discharger shall track and keep records of the operational parameters used to achieve the Vector Attraction Reduction requirements under 40 CFR 503.33(b).

(5) Surface Disposal

If biosolids are placed in a surface disposal site (dedicated land disposal site or monofill), a qualified groundwater scientist shall develop a groundwater monitoring program for the site, or shall certify that the placement of biosolids on the site will not contaminate an aquifer.

(6) Landfill Disposal

Biosolids placed in a municipal landfill shall be tested by the Paint Filter Test (SW-846, Method 9095) at the frequency specified in Table 1 of 40 CFR 503.16, or more often if necessary to demonstrate that there are no free liquids.

(7) Notifications

The Discharger, either directly or through contractual arrangements with their biosolids management contractors, shall comply with the following notification requirements.

(a) Notification of Non-compliance

The Discharger shall notify USEPA and the State (for both Discharger and use or disposal site) of any non-compliance within 24 hours, if the non-compliance may seriously endanger health or the environment. For other instances of non-compliance, the Discharger shall notify USEPA and the State of the non-compliance in writing within 5 working days of becoming aware of the non-compliance. The Discharger shall require their biosolids management contractors to notify USEPA and the State of any non-compliance within these same time-frames.

(b) Interstate Notification

If biosolids are shipped to another State or Tribal Land, the Discharger shall send 60 days prior notice of the shipment to the permitting

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authorities in the receiving State or Tribal Land, and the USEPA Regional Office.

(c) Land Application Notification

Prior to using any biosolids from this facility (other than composted biosolids) at a new or previously unreported site, the Discharger shall notify USEPA and the State. This notification shall include a description and topographic map of the proposed site(s), names and addresses of the applier and site owner, and a listing of any State or local permits which must be obtained. It shall also include a description of the crops or vegetation to be grown, proposed loading rates, and a determination of agronomic rates.

Within a given monitoring period, if any biosolids do not meet the applicable metals concentration limits specified under 40 CFR 503.13, then the Discharger (or its contractor) must pre-notify USEPA, and determine the cumulative metals loading at that site to date, as required by 40 CFR 503.12.

(d) Surface Disposal Notification

Prior to disposal at a new or previously unreported site, the Discharger shall notify USEPA and the State. The notice shall include a description and topographic map of the proposed site, depth to groundwater, whether the site is lined or unlined, site operator and site owner, and any State or local permits. It shall also describe procedures for ensuring grazing and public access restrictions for three years following site closure. The notice shall include a groundwater monitoring plan or description of why groundwater monitoring is not required.

(8) Reporting

The Discharger shall submit an annual biosolids report to the USEPA Region 9 Biosolids Coordinator and the State by February 19 of each year for the period covering the previous calendar year. The report shall include:

(a) The amount of biosolids generated that year, in dry metric tons, and the amount accumulated from previous years.

(b) Results of all pollutant monitoring required under Monitoring, above. Results must be reported on a 100% dry weight basis.

(c) Demonstrations of pathogen and vector attraction reduction methods, as required under 40 CFR 503.17 and 503.27, and certifications.

(d) Names, mailing addresses, and street addresses of persons who received biosolids for storage, further treatment, disposal in a

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municipal landfill, deep well injection, or other use or disposal method not covered above, and tonnage delivered to each.

(e) The following information must be submitted by the Discharger, unless the Discharger requires its biosolids management contractors to report this information directly to the USEPA Region 9 Biosolids Coordinator.

i. For land application sites:

Locations of land application sites (with field names and numbers) used that calendar year, size of each field applied to, applier, and site owner.

Volumes applied to each field (in wet tons and dry metric tons), nitrogen applied, and calculated plant available nitrogen.

Crops planted, dates of planting and harvesting.

For biosolids exceeding 40 CFR 503.13 Table 3 metals concentrations, the locations of sites where the biosolids were applied and cumulative metals loading at the sites to date.

Certifications of management practices at 40 CFR 503.14.

Certifications of site restrictions at 40 CFR 503(b)(5).

ii. For surface disposal sites:

Locations of sites, site operator and site owner, size of parcel on which biosolids were disposed.

Results of any required groundwater monitoring.

Certifications of management practices at 40 CFR 503.24.

iii. For closed sites, the date of site closure and certifications of management practices for three years following site closure.

(f) All reports shall be submitted to:

Regional Biosolids Coordinator
U.S. Environmental Protection Agency
NPDES Permits Office (WTR-5)
75 Hawthorne Street
San Francisco, CA 94105-3901

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Biosolids Program Coordinator
Arizona Department of Environmental Quality
Mail Code: 5415B-1
1110 West Washington Street
Phoenix, AZ 85007

c. Pretreatment Program Requirements

(1) The Discharger shall be responsible and liable for the performance of all Control Authority pretreatment requirements contained in 40 CFR 403, including any subsequent revisions to that part. Where 40 CFR 403 or subsequent revisions place mandatory actions upon the Discharger, as Control Authority, but do not specify a timetable for completion, the Discharger shall complete the mandatory actions within 180 days of the issuance date of this Order/Permit, or the effective date of the revisions to 40 CFR 403, whichever is later. For violations of pretreatment requirements, the Discharger shall be subject to enforcement actions, penalties, fines, and other remedies imposed by the USEPA and/or the Regional Water Board, as provided in the CWA and/or the California Water Code. The Regional Water Board or USEPA may initiate enforcement action against a nondomestic user for noncompliance with applicable standards and requirements, as provided in the CWA and/or the California Water Code.

(2) The Discharger shall implement and enforce its approved pretreatment program, and all subsequent revisions, which are hereby made enforceable conditions of this Order/Permit. The Discharger shall enforce the requirements promulgated pursuant to CWA sections 307(b), 307(c), 307(d), and 402(b) with timely, appropriate, and effective enforcement actions. The Discharger shall cause all nondomestic users subject to federal categorical standards to achieve compliance no later than the date specified in those requirements, or, in the case of a new nondomestic user, upon commencement of discharge.

(3) The Discharger shall perform the pretreatment functions required by 40 CFR 403, including, but not limited to:

(a) Implement the necessary legal authorities as required by 40 CFR 403.8(f)(1);

(b) Enforce the pretreatment requirements under 40 CFR 403.5 and 403.6;

(c) Implement the programmatic functions as required by 40 CFR 403.8(f)(2); and

(d) Provide the requisite funding and personnel to implement the pretreatment program as required by 40 CFR 403.8(f)(3).

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(4) By March 1 of each year, the Discharger shall submit an annual pretreatment report to the Regional Water Board, USEPA, the State Water Board's Division of Water Quality-Regulations Unit, and the Orange County Department of Health Services' Hazardous Materials Division, describing its pretreatment activities over the previous calendar year (January 1 through December 31). In the event the Discharger is not in compliance with any condition or requirement of this Order/Permit, or any pretreatment compliance inspection/audit requirements, the Discharger shall include the reasons for noncompliance and state how and when it will comply with such conditions and requirements. The annual report shall contain, but not be limited, the following information:

(a) A summary of analytical results from representative flow-proportioned 24-hour composite sampling of the Discharger's influent and effluent for those pollutants USEPA has identified under CWA section 307(a) which are known or suspected to be discharged by nondomestic users. Representative grab sampling shall be employed for pollutants that may degrade after collection, or where the use of automatic sampling equipment may otherwise result in unrepresentative sampling; such pollutants include, but are not limited to, cyanide, oil and grease, volatile organic compounds, chlorine, phenol, sulfide, pH, and temperature. Wastewater sampling and analysis shall be performed in accordance with the minimum frequency of analysis required by the MRP (Attachment E). The Discharger shall also provide influent and effluent monitoring data for non-priority pollutants, which the Discharger believes may be causing or contributing to interference or pass through. The Discharger is not required to sample and analyze for asbestos. Sludge sampling and analysis is addressed elsewhere in this Order/Permit. Wastewater sampling and analysis shall be performed in accordance with 40 CFR 136.

(b) A discussion of upset, interference, or pass through, if any, at the Discharger's facilities, which the Discharger knows or suspects were caused by nondomestic users of the POTW system. The discussion shall include the reasons why the incidents occurred, any corrective actions taken, and, if known, the name and address of the responsible nondomestic user(s). The discussion shall also include a review of the applicable local pollutant limitations to determine whether any additional limitations, or changes to existing limitations, are necessary to prevent pass-through, interference, or noncompliance with sludge disposal requirements.

(c) An updated list of the Discharger's SIUs including their names and addresses, and a list of deletions, additions and SIU name changes keyed to the previously submitted list. The Discharger shall provide a brief explanation for each change. The list shall identify the SIUs subject to federal categorical standards by specifying which set(s) of

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standards are applicable to each SIU. The list shall also indicate which SIUs are subject to local limitations.

(d) The Discharger shall characterize the compliance status of each SIU by providing a list or table for the following:

Name of SIU;

Category, if subject to categorical standards;

Type of wastewater treatment or control processes in place;

Number of samples taken by SIU during the year;

Number of samples and inspections by Discharger during the year;

For an SIU subject to discharge requirements for total toxic organics, whether all required certifications were provided;

A list of pretreatment standards (categorical or local) violated during the year, or any other violations;

SIUs in significant noncompliance (SNC) as defined at 40 CFR 403.8(f)(2)(viii), at any time during the year;

A summary of enforcement actions or any other actions taken against SIUs during the year. Describe the type of action, final compliance date, and the amount of fines and/or penalties collected, if any. Describe any proposed actions for bringing SIUs into compliance.

(e) A brief description of any programs the Discharger implements to reduce pollutants from nondomestic users not classified as SIUs.

(f) A brief description of any significant changes in operating the pretreatment program which differ from the previous year, including, but not limited to, changes in the program's administrative structure, local limits, monitoring program, legal authority, enforcement policy, funding, and staffing levels.

(g) A summary of the annual pretreatment program budget, including the cost of pretreatment program functions and equipment purchases.

(h) A summary of activities to involve and inform the public of the pretreatment program, including a copy of the newspaper notice, if any, required by 40 CFR 403.8(f)(2)(vii).

(i) A description of any changes in sludge disposal methods.

(j) A description of the program to quantify, characterize, regulate, and treat flow from low-flow urban runoff diversion systems and "first flush"

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industrial stormwater diversion systems that are routed to the sanitary sewer collection system.

(k) A discussion of any concerns not described elsewhere in the annual report.

(5) Semiannual SIU Status Report

The Discharger shall submit a semiannual SIU noncompliance status report to the Regional Water Board, the State Water Board, and USEPA. The reports shall cover the periods of January 1 through June 30, and July 1 through December 31 and shall be submitted no later than September 1 and March 1, respectively. (All required information for semiannual SIU noncompliance status reporting covering the period July 1 through December 31 shall be included in the annual report that is due March 1.) The report shall contain:

(a) The names and addresses of all SIUs which violated any discharge or reporting requirements during the semi-annual reporting period.

(b) A description of the violations, including whether the discharge violations were for categorical standards or local limits.

(c) A description of the enforcement actions or other actions taken to remedy the noncompliance.

(d) The status of enforcement actions or other actions taken in response to SIU noncompliance identified in previous reports.

(6) Nonindustrial Source Control Program and Public Education Program

The Discharger shall continue to develop and implement its nonindustrial source control program and public education program. The purpose of these programs is to eliminate the entrance of nonindustrial toxic pollutants and pesticides into the POTW. The nonindustrial source control program will be supplemented with an updated survey of industrial and nonindustrial contaminant sources. These programs shall be periodically reviewed and addressed in the annual report.

(7) Signatory Requirements and Report Submittal

(a) The semi-annual and annual reports must be signed by a principal executive officer, ranking elected official or other duly authorized employee if such employee is responsible for the overall operation of the POTW. Any person signing these reports must make the certification at 40 CFR 403.6(a)(2)(ii).

(b) An original copy of the annual report and semi-annual report must be sent to the Pretreatment Program Coordinator of the Regional Water

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Board and duplicate copies of the reports must be sent to USEPA to the following addresses:

Pretreatment Program Coordinator
California Regional Water Quality Control Board, Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

Pretreatment Program
U.S. Environmental Protection Agency, Region 9
NPDES Permits Office (WTR-5)
75 Hawthorne Street
San Francisco, CA 94105-3901

d. Collection System of POTW

The State Water Board has adopted Water Quality Order No. 2006-0003-DWQ (General Order), a Statewide General WDR for Sanitary Sewer Systems, as amended. The Discharger shall be subject to the requirements of the General Order and any future revisions, thereto. Regardless of the coverage obtained under the General Order, the Discharger's collection system is part of the POTW that is subject to this Order/Permit. As such, pursuant to federal regulations, the Discharger must properly operate and maintain its collection system (40 CFR 122.41(e)), report any non-compliance (40 CFR 122.41(l)(6) and (7)), and mitigate any discharge from the collection system in violation of this Order/Permit (40 CFR 122.41(d)).

5. Other Special Provisions

a. To address the uncertainty due to potential increases in toxic pollutant loadings from the discharge to the marine environment during the five-year Order/Permit term, and to establish a framework for evaluating the need for an antidegradation analysis to determine compliance with State and federal antidegradation requirements at the time of Order/Permit reissuance, 12-month average mass emission benchmarks have been established for the discharge in the MRP (Attachment E). These mass emissions benchmarks are calculated based on the USEPA's evaluation of 1990 through 1994 effluent concentrations, using the concentration associated with the 95th percentile of the 4-day average distribution of daily effluent concentrations and the Discharger's annual average influent flow of 278 mgd projected for 2009, as described in Appendix Q of the application for the 2004 Order/Permit. These mass emission benchmarks are not enforceable water quality based effluent limitations. They may be re-evaluated and revised during the five-year Order/Permit term.

b. The Discharger shall make monitoring data accessible to the public via the Internet. Within 180 days of the effective date of this Order/Permit, the Discharger shall submit a report to the Regional Water Board that updates the Discharger's plans and activities for making monitoring data accessible to the

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public via the Internet, including implementation schedules. The Regional Water Board shall be informed of any change, in writing, within 30 days of the change.

VII. COMPLIANCE DETERMINATION

A. General

Compliance with the effluent limitations contained in section IV of this Order/Permit shall be determined as specified below.

1. Sufficient sampling and analysis shall be required to determine compliance with the effluent limitation. If the analytical result of any single sample (daily discharge) monitored monthly, or less frequently, exceeds the AMEL (or 6-month median effluent limitation), then the Discharger shall increase the monitoring frequency to weekly until compliance with the effluent limitation is demonstrated.

2. Compliance with Effluent Limitations expressed as Single Constituents

Dischargers are out of compliance with the effluent limitation if the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level.

3. Compliance with Effluent Limitations expressed as Sum of Several Constituents

Dischargers are out of compliance with an effluent limitation which applies to the sum of a group of chemicals (e.g., PCBs) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as “Not Detected” (ND) or “Detected, but Not Quantified” (DNQ).

4. Multiple Sample Data Reduction

The concentration of the pollutant in the effluent may be estimated from the result of a single sample analysis or by a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses when all sample results are quantifiable (i.e., greater than or equal to the reported Minimum Level). When one or more sample results are reported as ND or DNQ, the central tendency concentration of the pollutant shall be the median (middle) value of the multiple samples, where DNQ is lower than a quantified value and ND is lower than DNQ. If, in an even number of samples, one or both of the middle values is ND or DNQ, the median will be the lower of the two middle values.

5. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection 4 above for multiple sample data reduction) of daily discharges over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and 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). However, an alleged violation of the AMEL will be considered one violation for the

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purpose of assessing State mandatory minimum penalties. If no sample (daily discharge) is taken over a calendar month, no compliance determination can be made for that month with respect to effluent violation determination, but compliance determination can be made for that month with respect to reporting violation determination.

6. Average Weekly Effluent Limitation (AWEL)

If the average (or when applicable, the median determined by subsection 3 above for multiple sample data reduction) of daily discharges over a calendar week exceeds the AWEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that week for that parameter (e.g., resulting in seven days of non-compliance). However, an alleged violation of the AWEL will be considered one violation for the purpose of assessing State mandatory minimum penalties. The average of daily discharges over a calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. If no sample (daily discharge) is taken over a calendar week, no compliance determination can be made for that week with respect to effluent violation determination, but compliance determination can be made for that week with respect to reporting violation determination.

A calendar week will begin on Sunday and end on Saturday. Partial calendar weeks at the end of the calendar month will be carried forward to the next month in order to calculate and report a consecutive seven-day average value on Saturday.

7. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge on a calendar day exceeds the MDEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that day for that parameter. If no sample (daily discharge) is taken over a calendar day, no compliance determination can be made for that day with respect to effluent violation determination, but compliance determination can be made for that day with respect to reporting violation determination.

8. Instantaneous Minimum Effluent Limitation

If the analytical result of a single grab sample exceeds (is lower than) the instantaneous minimum effluent limitation for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that single sample for that parameter. Non-compliance for each single grab sample will be considered separately (e.g., the analytical results of two grab samples taken over a calendar day that are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

9. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample exceeds (is higher than) the instantaneous maximum effluent limitation for a given parameter, an alleged

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violation will be flagged and the Discharger will be considered out of compliance for that single sample for that parameter. Non-compliance for each single grab sample will be considered separately (e.g., the analytical results of two grab samples taken over a calendar day that both are higher than the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

10. 6-month Median Effluent Limitation

If the median of daily discharges over any 180-day period exceeds the 6-month median effluent limitation for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that 180-day period (e.g., resulting in 180 days of non-compliance in any 180-day period). The next assessment of compliance will occur when the next sample is taken. If no sample (daily discharge) is taken over a 180-day period, no compliance determination can be made for that period with respect to effluent violation determination, but compliance determination can be made for that period with respect to reporting violation determination.

11. Mass Emission Rate

The daily discharge mass emission rate for any calendar day is calculated using the following equations:

$$\text{Daily Discharge mass emission rate (lb/day)} = \frac{8.337}{N}\sum_{i=1}^{N} Q_i C_i$$

$$\text{Daily Discharge mass emission rate (kg/day)} = \frac{3.785}{N}\sum_{i=1}^{N} Q_i C_i$$

in which "N" is the number of samples taken over any calendar day. If grab samples are taken, "C_i" is the constituent concentration (mg/L) and "Q_i" is the flow rate (mgd) associated with each "N" grab sample. If composite samples are taken, "C_i" is the constituent concentration (mg/L) in each composite sample and "Q_i" is the average flow rate (mgd) during the period over which sample compositing occurs.

The daily discharge concentration of a constituent shall be determined from the flow-weighted average of the same constituent in the combined waste stream using the following equation:

$$\text{Daily discharge concentration} = \frac{1}{Q_t}\sum_{i=1}^{N} Q_i C_i$$

in which "N" is the number of component waste streams. "C_i" is the constituent concentration (mg/L) and "Q_i" is the flow rate (mgd) associated with each "N" component waste stream. "Q_t" is the total flow rate of the combined waste stream.

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12. Mass and Concentration Limitations

Compliance with mass effluent limitations and concentration effluent limitations for the same parameter shall be determined separately. When the concentration of a parameter in a sample is reported as ND or DNQ, the corresponding mass emission rate determined using that sample concentration shall also be reported as ND or DNQ.

13. Mass and Concentration Limitations

Compliance with mass limitations and concentration limitations for the same parameter shall be determined separately. When the concentration of a parameter in a sample is reported as ND or DNQ, the corresponding mass emission rate determined using that sample concentration shall also be reported as ND or DNQ.

14. Sample Reporting Protocols

The Discharger must report with each sample result the reported Minimum Level, selected and used in accordance with Ocean Plan sections III.C.5 and 6, the laboratory's current Method Detection Limit, *and method number*. In accordance with Ocean Plan section III.C.7, the Discharger must also 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 reported Minimum Level must be reported "as measured" by the laboratory (i.e., the measured chemical concentration in the sample).

b. Sample results less than the reported Minimum Level, but greater than or equal to the laboratory's Method Detection Limit, must be reported as "Detected, but Not Quantified", or "DNQ". The laboratory must write the estimated chemical concentration of the sample next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc.").

c. Sample results less than the laboratory's Method Detection Limit must be reported as "Not Detected", or "ND".

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ATTACHMENT A – DEFINITIONS

Acute Toxicity (not applicable to Test of Significant Toxicity hypothesis testing):

a. Acute Toxicity (TUa)

Expressed in Toxic Units Acute (TUa)

$$TUa = \frac{100}{\text{96-hr LC 50\%}}$$

b. Lethal Concentration 50% (LC 50)

LC 50 (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay techniques using standard marine test species as specified in Ocean Plan Appendix III, Chapter II. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC 50 may be determined after the test samples are adjusted to remove the influence of those substances.

When it is not possible to measure the 96-hour LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$TUa = \frac{\log (100 - S)}{1.7}$$

where:

S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

Areas of Special Biological Significance (ASBS): are those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of STATE WATER QUALITY PROTECTION AREAS.

Average Monthly Effluent Limitation (AMEL) means 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. (40 CFR 122.2.)

Average Weekly Effluent Limitation (AWEL) means 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. (40 CFR 122.2.)

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Best Management Practices ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States". BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs means "best management practices". (40 CFR 122.2.)

Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

Chronic Toxicity (not applicable to Test of Significant Toxicity hypothesis testing): This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response.

a. Chronic Toxicity (TUc)

Expressed as Toxic Units Chronic (TUc)

$$TUc = \frac{100}{NOEL}$$

b. No Observed Effect Level (NOEL)

The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Ocean Plan Appendix III.

Composite Sample, for flow rate measurements, means the arithmetic mean of no fewer than eight individual measurements taken at equal intervals for 24 hours or for the duration of discharge, whichever is shorter.

Composite sample, for other than flow rate measurements, means:

a. No fewer than eight individual sample portions taken at equal time intervals for 24 hours, or the duration of the discharge, whichever is shorter. The volume of each individual sample portion shall be directly proportional to the discharge flow rate at the time of sampling; or

b. No fewer than eight individual sample portions taken of equal time volume taken over a 24 hour period. The time interval between each individual sample portion shall vary such that the volume of the discharge between each individual sample portion remains constant.

The compositing period shall equal the specified sampling period, or 24 hours, if no period is specified.

For a composite sample, if the duration of the discharge is less than 24 hours but greater than 8 hours, at least eight flow-weighted individual sample portions shall be taken during the

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duration of the discharge and composited. For a discharge duration of 8 hours or less, eight individual "grab samples" may be substituted and composited.

The composite sample result shall be reported for the calendar day during which composite sampling ends.

Daily Discharge means the "discharge of a pollutant" measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. 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 average measurement of the pollutant over the day. (40 CFR 122.2.)

DDT shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

Degrade. Degradation shall be determined by comparison of the waste field and reference site(s) for characteristic species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

Detected, but Not Quantified (DNQ) means sample results less than the reported Minimum Level, but greater than or equal to the laboratory's MDL.

Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.

Downstream Ocean Waters shall mean waters downstream with respect to ocean currents.

Dredged Material: Any material excavated or dredged from the navigable waters of the United States, including material otherwise referred to as "spoil".

Enclosed Bays are indentations along the coast, which enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

Endosulfan shall mean the sum of endosulfan-alpha and -beta and endosulfan sulfate.

Estuaries and Coastal Lagoons are waters at the mouths of streams that serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams that are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by section 12220

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of the California Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

Grab Sample means any individual sample collected during a period of time not to exceed 15 minutes. Grab samples shall be collected during normal peak loading conditions for the parameter of interest, which may or may not occur during hydraulic peaks.

Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

HCH shall mean the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

Initial Dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and non-buoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Water Board, whichever results in the lower estimate for initial dilution.

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 effluent 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 effluent limitation).

Kelp Beds, for purposes of the bacteriological standards of the Ocean Plan, are significant aggregations of marine algae of the genera Macrocystis and Nereocystis. Kelp beds include the total foliage canopy of Macrocystis and Nereocystis plants throughout the water column.

Mariculture is the culture of plants and animals in marine waters independent of any pollution source.

Material: (a) In common usage: (1) the substance or substances of which a thing is made or composed (2) substantial; (b) For purposes of the Ocean Plan relating to waste disposal, dredging and the disposal of dredged material and fill, MATERIAL means matter of any kind or

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description which is subject to regulation as waste, or any material dredged from the navigable waters of the United States. See also, DREDGED MATERIAL.

Maximum Daily Effluent Limitation (MDEL) means the highest allowable "daily discharge". (40 CFR 122.2.)

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

Minimum Level (ML) is the concentrations 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.

Natural Light: Reduction of natural light may be determined by the Regional Water Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Regional Water Board.

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

Ocean Waters are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the State could affect the quality of the waters of the State, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene (benzo[a]anthracene), 3,4-benzofluoranthene (benzo[b] fluoranthene), benzo[k]fluoranthene, 1,12-benzoperylene (benzo[ghi]perylene), benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

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 pollutant through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, in order to maintain the effluent concentration at or below the 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 California Water

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Code section 13263.3(d), shall be considered to fulfill the PMP requirements in Ocean Plan section III.C.9.

Publicly Owned Treatment Works. The term Publicly Owned Treatment Works or POTW means a treatment works as defined by section 212 of the Act, which is owned by a State or municipality (as defined by section 502(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality which has jurisdiction over the Indirect Discharges to and the discharges from such treatment works. (40 CFR 403.3(q).)

Reported Minimum Level is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in their permit. The MLs included in this permit correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board in accordance with Ocean Plan section III.C.5. The ML is based on the proper application of method-specific analytical procedures 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 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 reported ML. (See Ocean Plan section III.C.6.)

Shellfish are organisms identified by the California Department of Health Services as shellfish for public health purposes (i.e., mussels, clams and oysters).

Significant Difference is defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

Six-month Median Effluent Limitation: the highest allowable moving median of all “daily discharges” for any 180-day period.

State Water Quality Protection Areas (SWQPAs) are non-terrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE (ASBS) that were previously designated by the State Water Board in Resolutions 74-28, 74-32, and 75-61 are now also classified as a subset of State Water Quality Protection Areas and require special protections afforded by the Ocean Plan.

TCDD Equivalents shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.

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Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8 tetra CDF	0.1
1,2,3,7,8 penta CDF	0.05
2,3,4,7,8 penta CDF	0.5
2,3,7,8 hexa CDFs	0.1
2,3,7,8 hepta CDFs	0.01
octa CDF	0.001

Waste: As used in the Ocean Plan, waste includes a discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

Water Reclamation: The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

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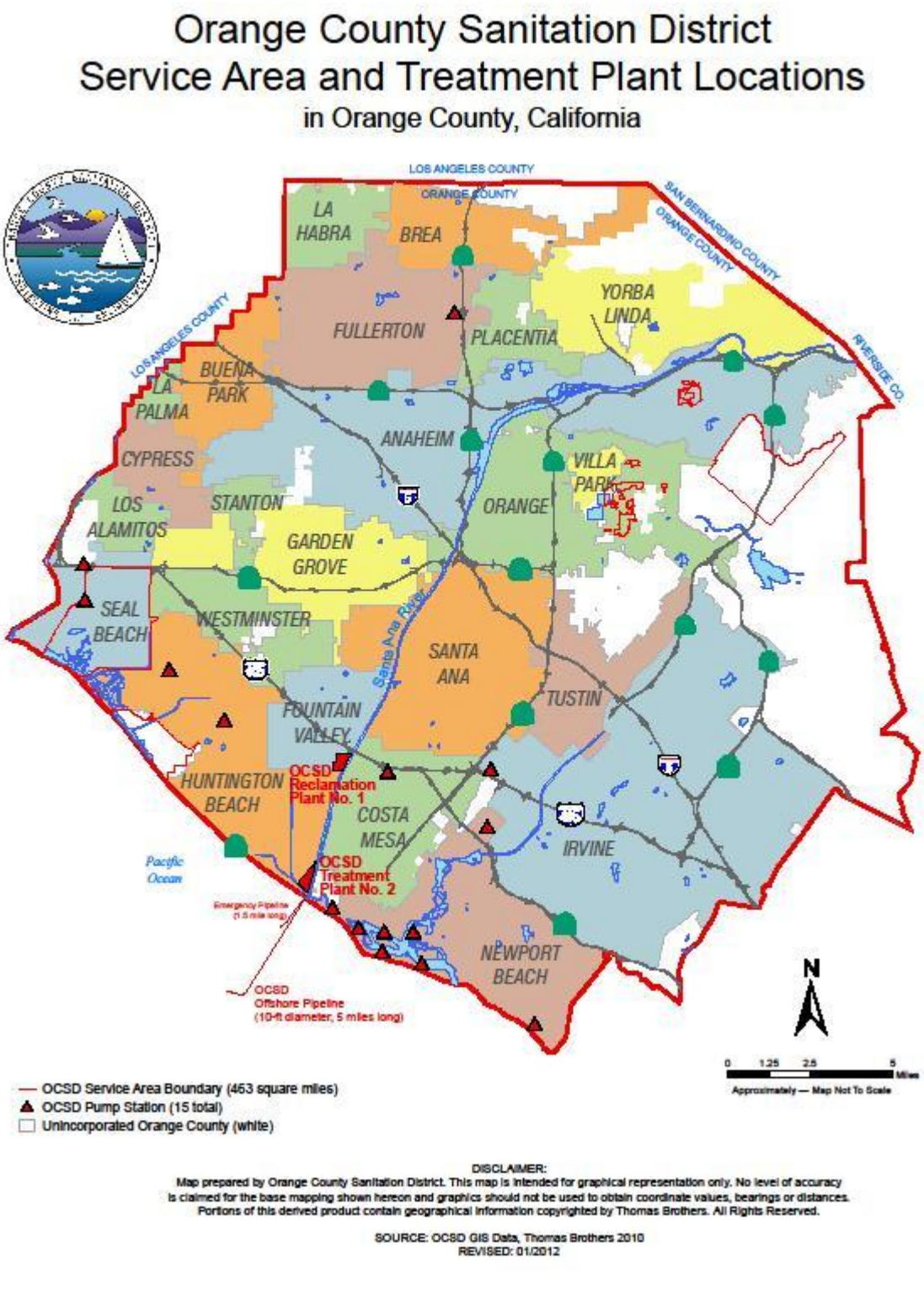
OCSD Service Area and Reclamation Plant No. 1 and Treatment Plant No. 2 Locations



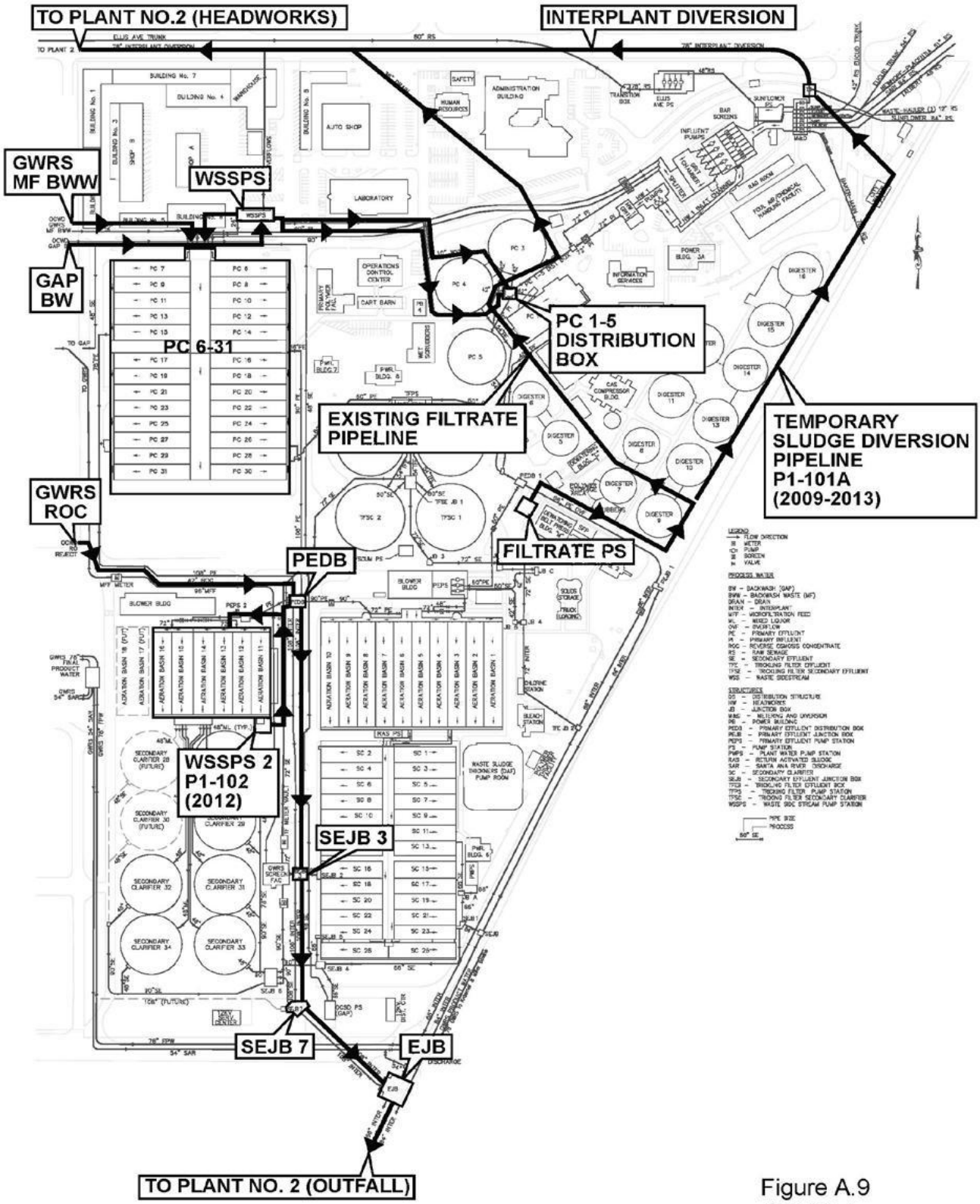
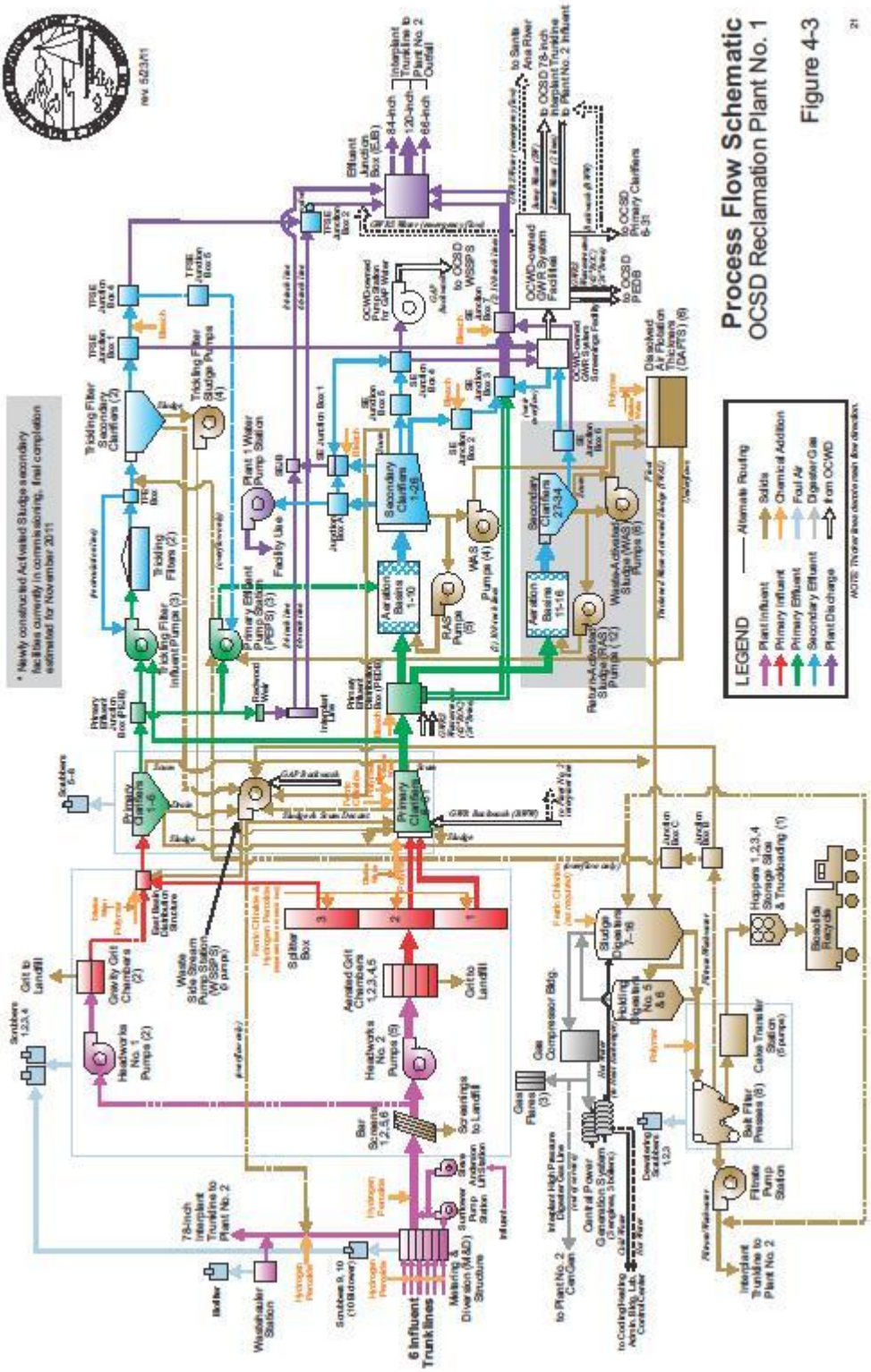


Figure A.9
Plant No. 1
Major Sidestreams

Orange County Sanitation District
2009 Master Plan


Process Flow Schematic
OCSD Reclamation Plant No. 1
Figure 4-3
LEGEND
Plant Influent
Primary Influent
Primary Effluent
Secondary Effluent
Plant Discharge
Alternate Routing
Solids
Chemical Addition
Foul Air
Digester Gas
from OCWD
* Newly constructed Activated Sludge secondary facilities currently in commissioning, final completion estimated for November 2011
rev 5/23/11
6 Influent Trunklines
Headworks No. 1 Pumps (2)
Headworks No. 2 Pumps (5)
Gravity Grit Chambers (2)
Aerated Grit Chambers 1,2,3,4,5
Grit to Landfill
Screenings to Landfill
Bar Screens 1,2,3,6
Primary Clarifiers 1-6
Primary Clarifiers 7-8
Aeration Basins 1-10
Aeration Basins 11-16
Secondary Clarifiers 1-36
Secondary Clarifiers 37-44
Tricking Filters (2)
Tricking Filter Secondary Clarifiers (2)
Tricking Filter Sludge Pumps (4)
Tricking Filter Influent Pumps (3)
Primary Effluent Pump Station (PEPS) (3)
Plant 1 Water Pump Station
Facility Use
RAS Pumps (5)
WAS Pumps (4)
Waste Activated Sludge (WAS) Pumps (6)
Return Activated Sludge (RAS) Pumps (12)
Dissolved Air Flotation Thickeners (DAFTS) (8)
OCWD-owned GWR System Facilities
Effluent Junction Box (EJB)
84-inch
120-inch
66-inch
Interplant Trunkline to Plant No. 2 Outfall
to OCSD Primary Clarifiers 6-31
to OCSD PEB
to OCSD WSSPS
to Santa Ana River
to OCSD 78-inch Interplant Trunkline to Plant No. 2 Influent
Sludge Digesters 7-16
Holding Digesters No. 5 & 6
Hoppers 1,2,3,4 Storage Silos & Truckloading (1)
Biosolids Recycle
Cake Transfer Station (5 pumps)
Belt Filter Presses (8)
Filtrate Pump Station
Gas Compressor Bldg.
Gas Flares (3)
Central Power Generation System (3 engines, 3 boilers)
Interplant High Pressure Digester Gas Line
Dewatering Scrubbers 1,2,3
Interplant Trunkline to Plant No. 2
78-inch Interplant Trunkline to Plant No. 2
Washwater Station
Screenings Pump Station
Metering & Diversion (M&D) Structure
Waste Side Stream Pump Station (WSSPS) (6 pump)
Splitter Box
Grit Basin Distribution Structure
Scrubbers 1,2,3,4
Scrubbers 5-8
Scrubbers 9, 10 (10 Blower)
Scrubbers 1,2,3
Biofilter
Hydrogen Peroxide
Ferric Chloride & Hydrogen Peroxide
Polymer
Alum
Chlorine
Sodium Bisulfite
Sodium Hypochlorite
Junction Box C
Junction Box B
Junction Box 1
Junction Box 2
Junction Box 3
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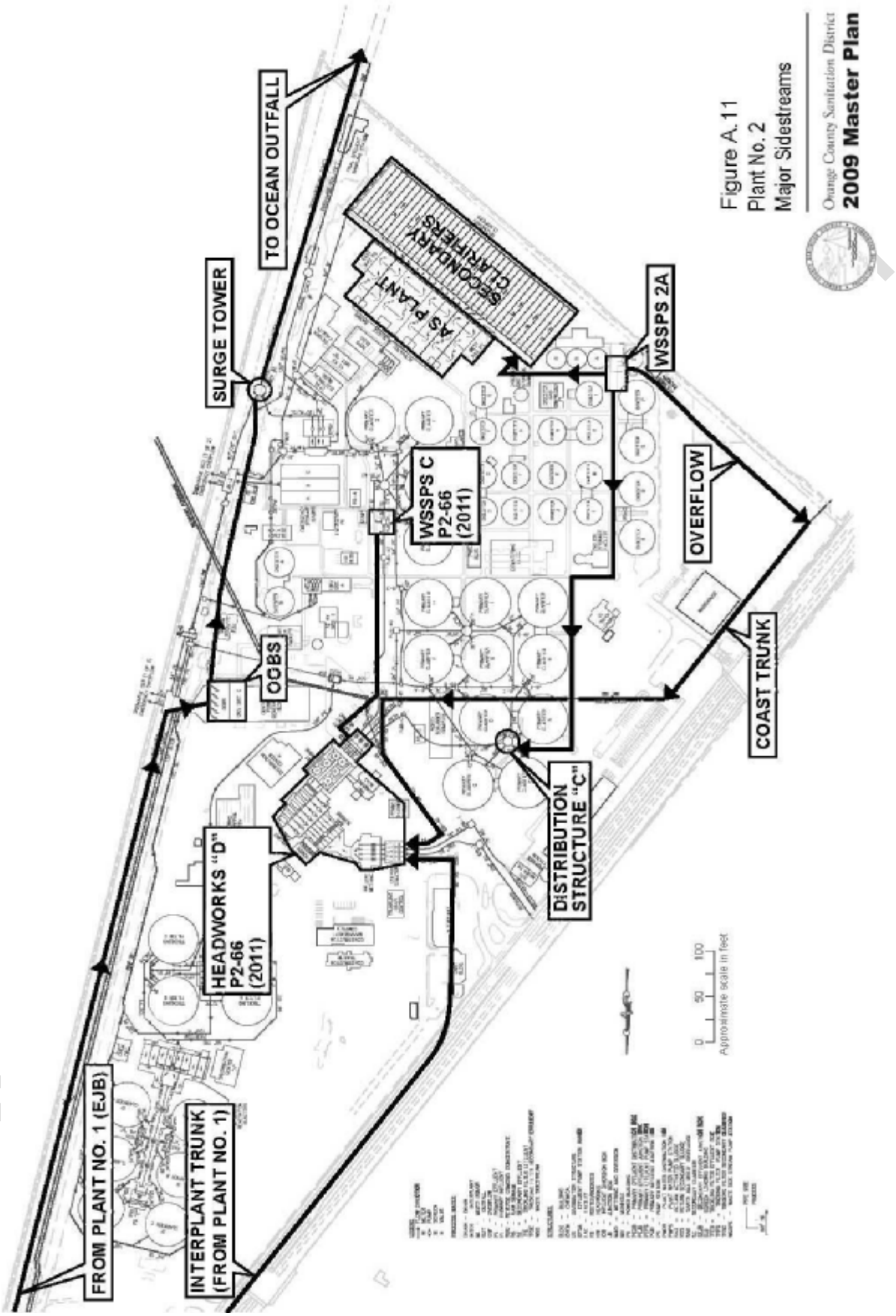
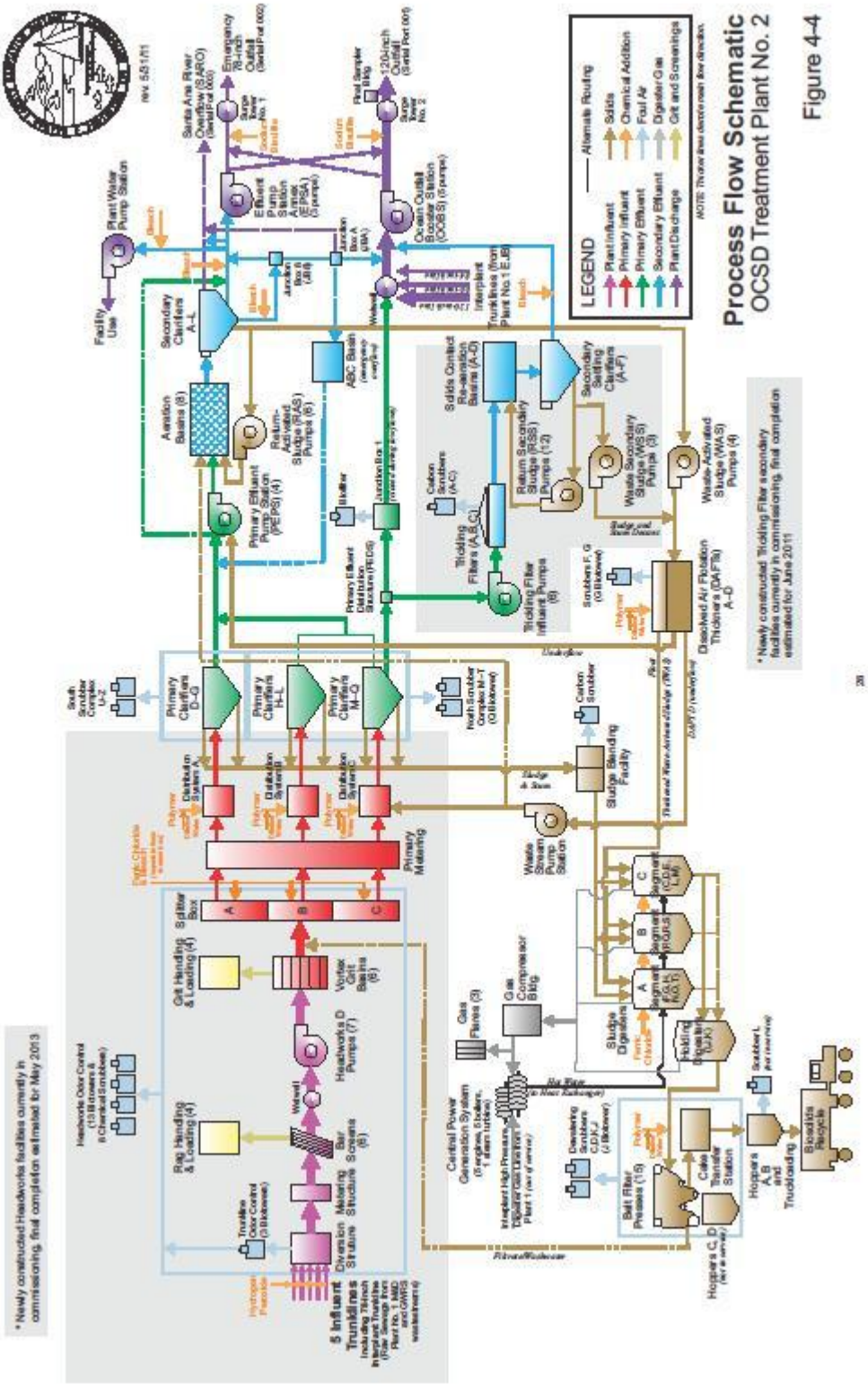

FROM PLANT NO. 1 (EJB)
INTERPLANT TRUNK (FROM PLANT NO. 1)
HEADWORKS "D" P2-66 (2011)
OGBS
SURGE TOWER
TO OCEAN OUTFALL
AS PLANT
SECONDARY CLARIFIERS
WSSPS C P2-66 (2011)
DISTRIBUTION STRUCTURE "C"
WSSPS 2A
OVERFLOW
COAST TRUNK
0 50 100
Approximate scale in feet
Figure A.11
Plant No. 2
Major Sidestreams
Orange County Sanitation District
2009 Master Plan


Process Flow Schematic
OCSD Treatment Plant No. 2
Figure 4-4
LEGEND
Alternate Routing
Solids
Chemical Addition
Foul Air
Digester Gas
Grit and Screenings
Plant Influent
Primary Influent
Primary Effluent
Secondary Effluent
Plant Discharge
* Newly constructed Headworks facilities currently in commissioning, final completion estimated for May 2013
* Newly constructed Trickling Filter secondary facilities currently in commissioning, final completion estimated for June 2011
5 Influent Trunklines
Headworks Odor Control
Grit Handling & Loading
Rag Handling & Loading
Headworks D Pumps
Vortex Grit Basins
Bar Screens
Splitter Box
Primary Metering
Distribution System
Primary Clarifiers
Primary Effluent Pump Station
Aeration Basins
Secondary Clarifiers
Return-Activated Sludge (RAS) Pumps
Plant Water Pump Station
Facility Use
Effluent Pump Station
Ocean Outfall Booster Station
Santa Ana River Overflow
Emergency 78-inch Outfall
120-inch Outfall
Solids Contact Re-aeration Basins
Secondary Settling Clarifiers
Return Secondary Sludge (RSS) Pumps
Waste Secondary Sludge (WSS) Pumps
Waste-Activated Sludge (WAS) Pumps
Trickling Filters
Trickling Filter Influent Pumps
Dissolved Air Flotation Thickeners (DAFTs)
Carbon Scrubber
Sludge Blending Facility
Waste Stream Pump Station
Sludge Digesters
Holding Digesters
Gas Compressor Bldg
Gas Flares
Central Power Generation System
Belt Filter Presses
Cake Transfer Station
Hoppers A,B and Truckloading
Biosolids Recycle
Hoppers C,D

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A Duty to Comply

1. The Discharger must comply with all conditions of this Order/Permit. Any Order/Permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR part 122.41(a).)

2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the Order/Permit has not yet been modified to incorporate the requirement. (40 CFR part 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order/Permit. (40 CFR part 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order/Permit which has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR part 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order/Permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a Discharger only when the operation is necessary to achieve compliance with the conditions of the Order/Permit. (40 CFR part 122.41(e).)

E. Property Rights

1. This Order/Permit does not convey any property rights of any sort, or any exclusive privilege. (40 CFR part 122.41(g).)

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2. The issuance of this Order/Permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations. (40 CFR part 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, USEPA, and/or an authorized representatives (including an authorized contractor acting as a representative), upon the presentation of credentials and other documents as may be required by law, to (40 CFR part 122.41(i); CWC section 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order/Permit (40 CFR part 122.41(i)(1));

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order/Permit (40 CFR part 122.41(i)(2));

3. Inspect and photograph at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order/Permit (40 CFR part 122.41(i)(3)); and

4. Sample or monitor at reasonable times, for the purposes of assuring Order/Permit compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location (40 CFR part 122.41(i)(4)).

G. Bypass

1. Definitions

a. Bypass means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR part 122.41(m)(1)(i).)

b. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR part 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5. (40 CFR part 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board and USEPA may take enforcement action against a Discharger for bypass, unless (40 CFR part 122.41(m)(4)(i)):

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a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR part 122.41(m)(4)(i)(A));

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance (40 CFR part 122.41(m)(4)(i)(B)); and

c. The Discharger submitted notices to the Regional Water Board and USEPA as required under Standard Provisions – Permit Compliance I.G.5. (40 CFR part 122.41(m)(4)(i)(C).)

4. The Regional Water Board and USEPA may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board and USEPA determine that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3. (40 CFR part 122.41(m)(4)(ii).)

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass. (40 CFR part 122.41(m)(3)(i).)

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions – Reporting V.E (24-hour notice). (40 CFR part 122.41(m)(3)(ii).)

H. Upset

Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR part 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR part 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly

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signed, contemporaneous operating logs, or other relevant evidence that (40 CFR part 122.41(n)(3)):

a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR part 122.41(n)(3)(i));

b. The permitted facility was at the time being properly operated (40 CFR part 122.41(n)(3)(ii)); and

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b (24-hour notice) (40 CFR part 122.41(n)(3)(iii)).

d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C. (40 CFR part 122.41(n)(3)(iv).)

3. Burden of proof. In any enforcement proceeding the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR part 122.41(n)(4).)

II. Standard Provisions – Permit Action

A. Permit Actions

This Order/Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order/Permit condition. (40 CFR part 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order/Permit after the expiration date of this Order/Permit, the Discharger must apply for and obtain a new Order/Permit. (40 CFR part 122.41(b).)

C. Transfers

This Order/Permit is not transferable to any person except after notice to the Regional Water Board and USEPA. The Regional Water Board and USEPA may require modification or revocation and reissuance of the Order/Permit to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and CWC. (See 40 CFR part 122.61; in some cases, modification or revocation and reissuance is mandatory.) (40 CFR part 122.41(l)(3).)

III. Standard Provisions – Monitoring

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR part 122.41(j)(1).)

B. Monitoring results must be conducted according to test procedures approved under 40 CFR part 136 or, in the case of sludge use or disposal, approved under 40 CFR part

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136 unless otherwise specified in 40 CFR part 503, unless other test procedures have been specified in the Order/Permit. (40 CFR part 122.41(j)(4).)

IV. Standard Provisions – Records

A. Except for records of monitoring information required by this Order/Permit related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order/Permit, and records of all data used to complete the application for this Order/Permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer or USEPA Water Division Director at any time. (40 CFR part 122.41(j)(2).) It is recommended that the Discharger maintain the results of all analyses indefinitely.

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR part 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 CFR part 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 CFR part 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 CFR part 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 CFR part 122.41(j)(3)(v)); and

6. The results of such analyses (40 CFR part 122.41(j)(3)(vi)).

C. Claims of confidentiality for the following information will be denied (40 CFR part 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 CFR part 122.7(b)(1)); and

2. Permit applications, permits, and effluent data. (40 CFR part 122.7(b)(2).)

V. Standard Provisions – Reporting

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA, within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order/Permit or to determine compliance with this Order/Permit. The Discharger shall also furnish to the Regional

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Water Board, State Water Board, or USEPA upon request, copies of records required to be kept by this Order/Permit. (40 CFR part 122.41(h); CWC section 13267.)

B. Signatory and Certification Requirements

1. All Order/Permit applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5. See 40 CFR §122.22.

2. All Order/Permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR part 122.22(a)(3).)

3. All reports required by Orders/Permits, and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2, or by a duly authorized representative of that person. A person is a duly authorized representative only if (40 CFR part 122.22(b)):

a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 (40 CFR part 122.22(b)(1));

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR part 122.22(b)(2)) and,

c. The written authorization is submitted to the Regional Water Board, State Water Board, and USEPA (40 CFR part 122.22(b)(3)).

4. Changes to authorization. If an authorization under Standard Provisions – Reporting V.B.3 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 must be submitted to the Regional Water Board, State Water Board, and USEPA prior to or together with any reports, information, or applications to be signed by an authorized representative. (40 CFR part 122.22(c).)

5. Certification. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 shall make the following certification:

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"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." (40 CFR part 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified elsewhere in this Order/Permit. (40 CFR part 122.41(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board, State Water Board, or USEPA for reporting results of monitoring of sludge use or disposal practices. (40 CFR part 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by the Order/Permit using test procedures approved under 40 CFR part 136 or, in the case of sludge use or disposal, approved under 40 CFR part 136 unless otherwise specified in 40 CFR part 503, or as specified in the Order/Permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board or USEPA. (40 CFR part 122.41(l)(4)(ii).)

4. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the Order/Permit. (40 CFR part 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order/Permit shall be submitted no later than 14 days following each schedule date. (40 CFR part 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances.

Santa Ana Regional Water Quality Control Board – (951) 782-4130
USEPA Region 9 – (415) 972-3505

A written submission shall also be provided within 5 *working* days of the time the Discharger becomes aware of the circumstances. The written submission shall

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contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR part 122.41(l)(6)(i).)

2. The following shall be included as information which must be reported within 24 hours under this paragraph (40 CFR part 122.41(l)(6)(ii)):

a. Any unanticipated bypass which exceeds any effluent limitation in the Order/Permit. (See 40 CFR part 122.41(g).) (40 CFR part 122.41(l)(6)(ii)(A).)

b. Any upset which exceeds any effluent limitation in the Order/Permit. (40 CFR part 122.41(l)(6)(ii)(B).)

c. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Regional Water Board and USEPA in the Order/Permit to be reported within 24 hours. (See 40 CFR part 122.44(g).) (40 CFR part 122.41(l)(6)(ii)(C).)

3. The Regional Water Board and USEPA may waive the written report on a case-by-case basis for reports under Standard Provisions – Reporting V.E.2 of this section if the oral report has been received within 24 hours. (40 CFR part 122.41(l)(6)(iii).)

F. Planned Changes

The Discharger shall give notice to the Regional Water Board and USEPA as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when (40 CFR part 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR part 122.29(b) (40 CFR part 122.41(l)(1)(i)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the Order/Permit, nor to notification requirements under 40 CFR part 122.42(a)(1) (40 CFR part 122.41(l)(1)(ii)).

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of Order/Permit conditions that are different from or absent in the existing Order/Permit, including notification of additional use or disposal sites not reported during the Order/Permit application process or not reported pursuant to an approved land application plan. (40 CFR part 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board and USEPA of any planned changes in the permitted facility or activity which may result in noncompliance with Order/Permit requirements. (40 CFR part 122.41(l)(2).)

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H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E of this section. (40 CFR part 122.41(l)(7).)

I. Other Information

Where the Discharger becomes aware that it failed to submit any relevant facts in an Order/Permit application, or submitted incorrect information in an Order/Permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR part 122.41(l)(8).)

VI. Standard Provisions – Enforcement

A. The Regional Water Board is authorized to enforce the terms of this Order/Permit under provisions of the CWC including, but not limited to, sections 13385, 13386, and 13387.

B. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who *negligently* violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who *knowingly* violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions. (40 CFR 122.41(a)(2).)

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C. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000. (40 CFR 122.41(a)(3).)

D. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order/Permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both. (40 CFR 122.41(j)(5).)

E. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order/Permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both. (40 CFR 122.41(k)(2).)

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. PUBLICLY OWNED TREATMENT WORKS (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board and USEPA of the following (40 CFR part 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the CWA if it were directly discharging those pollutants; and (40 CFR part 122.42(b)(1))

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the Order/Permit. (40 CFR part 122.42(b)(2).)

3. For purposes of this paragraph, adequate notice shall include information on the quality and quantity of effluent introduced into the POTW, and any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR part 122.42(b)(3).)

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM

National Pollutant Discharge Elimination System (NPDES) regulations at 40 CFR 122.48 requires that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) sections 13267 and 13383 also authorize the Santa Ana Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This monitoring and reporting program (MRP) establishes monitoring and reporting requirements that implement the federal and California regulations. The Discharger shall comply with this MRP.

I. Monitoring and Reporting Program Components

This MRP is guided, in part, by the principals, framework, and recommended design for discharge and receiving water monitoring presented in *Model Monitoring Program for Large Ocean Dischargers in Southern California* (SCCWRP Tech. Rep. #357. Southern California Coastal Water Research Project, Westminster, CA. 101 pp.). The SCCWRP model monitoring program has three components that comprise a range of spatial and temporal scales: (1) core monitoring, (2) regional monitoring, and (3) special studies.

Core Monitoring. Core monitoring is local in nature and focuses on monitoring trends in quality and effects of the point source discharge. This includes discharge monitoring, as well as some aspects of receiving water monitoring. Core monitoring results for the discharge shall be submitted on monthly Discharge Monitoring Reports/State Monitoring Reports and summarized in the annual receiving water monitoring report. Core monitoring results for receiving water, including annotated QA/QC findings, shall be described and summarized in the annual receiving water monitoring report, due by March 15, for the previous fiscal year (July 1 through June 30). The annual receiving water monitoring report shall include the specified parameters for each station along with more detailed statistical comparisons, including analyses to elucidate spatial and temporal trends in the data, and in relation to the wastewater plume. Methods shall include, but are not limited to, various multivariate techniques such as cluster analysis, ordination, and regression.

Regional Monitoring. Regional monitoring is focused on questions best answered by a region-wide approach that incorporates coordinated survey design and sampling techniques. Key components of regional monitoring include elements to address pollutant mass emission estimates, public health concerns, monitoring trends in natural resources, assessment of regional impacts from all contaminant sources, and beneficial use protection. The final designs of regional monitoring programs are developed by means of steering and technical committees comprised of participating agencies. For each component of regional monitoring, this Order/Permit specifies the required degree and nature of participation by Orange County Sanitation District (OCSD), based upon its past participation in regional monitoring programs. The degree and nature of OCSD's participation in regional monitoring programs shall be briefly described and summarized in the annual receiving water monitoring report. Each year, at a Spring Quarterly Regulatory Meeting, the Discharger shall provide an informational report summarizing to date its contributing activities towards coordinated implementation of regional monitoring programs.

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Although participation in regional monitoring programs is required under this Order/Permit, revisions to Attachment E, at the direction of the Regional Water Board and USEPA, may be necessary to accomplish the goals of regional monitoring. Revisions may include a reduction or increase in the number or parameters to be monitored, the frequency of monitoring, or the number and size of samples to be collected. Such changes may be authorized by the Regional Water Board Executive Officer and USEPA Director, upon written notification to the Discharger.

Strategic Process Studies. Strategic process studies are focused on refined questions regarding specific effects or development of monitoring techniques and are anticipated to be of short duration and/or small scale, although multi-year studies may be needed. Questions regarding discharge or receiving water quality, discharge impacts, ocean processes in the area of the discharge, or development of techniques for monitoring the same, arising out of the results of core, regional monitoring, or other relevant studies shall be pursued through special studies. These studies are by nature ad hoc and, typically, cannot be anticipated in advance of the five-year permit cycle. Monitoring efforts, status of in-progress studies, and summary results for completed strategic process studies shall be briefly described and summarized in the annual receiving water monitoring report.

In the spring, beginning in 2013 and continuing every-other year during the term of this Order/Permit, the Discharger, Regional Water Board, and USEPA shall consult to determine the need for strategic process studies. By October 1, the Discharger shall submit proposals to the Regional Water Board and USEPA for the following year's (July 1 through June 30) monitoring effort, or a letter explaining why no special studies are proposed. Final scopes of work, including reporting schedules, shall be presented by the Discharger at a spring Regional Water Board meeting to obtain Regional Water Board approval and inform the public. Upon approval by the Regional Water Board and USEPA, the Discharger shall implement its special studies.

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/Permit:

Table E-1. Discharge Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description	Latitude	Longitude
Discharge Core Monitoring Stations				
Influent Monitoring Stations (n=x)				
--	INF-001	Reclamation Plant No. 1 sampling stations shall be located at each point of inflow to the treatment plant and upstream of any in-plant return flows, where representative samples of the influent can be obtained.	xx° xx.xxx' N	xxx° xx.xxx' W

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Discharge Point Name	Monitoring Location Name	Monitoring Location Description	Latitude	Longitude
--	INF-002	Treatment Plant No. 2 sampling stations shall be located at each point of inflow to the treatment plant and upstream of any in-plant return flows, where representative samples of the influent can be obtained.	xx° xx.xxx' N	xxx° xx.xxx' W
Effluent Monitoring Stations (n=1)				
001 and 002	EFF-001	Sampling station shall be located downstream of any in-plant return flows, but before entering the discharge outfall, where representative samples of the effluent discharge can be obtained.	xx° xx.xxx' N	xxx° xx.xxx' W
Emergency Discharge Monitoring Stations (n=2)				
002	EMG-001	Sampling station shall be located downstream of any in-plant return flows, but before entering the emergency discharge outfall, where representative samples of the effluent discharge can be obtained.	xx° xx.xxx' N	xxx° xx.xxx' W
003	EMG-002	Sampling station shall be located before entering the emergency discharge outfall, where representative samples of the effluent discharge can be obtained.	xx° xx.xxx' N	xxx° xx.xxx' W

Table E-2. Receiving Water Core and Regional Monitoring Station Locations

Station Description	Station Location Name	Latitude	Longitude	Depth (m)	CTD sampling depths (1 m intervals)	Discrete sampling depths (m)
Receiving Water Core Monitoring Stations						
Monthly Water Quality Monitoring Stations (n=28) * = Station sampled for ammonia (NH_3 - N).						
*	2103	33° 35.089' N	117° 56.678' W	110	1 - 75 m	1, 10, 20, 30, 40, 50, 60
downcoast reference; *	2104	33° 34.199' N	117° 57.414' W	143	1 - 75 m	1, 10, 20, 30, 40, 50, 60
downcoast reference; *	2105	33° 33.309' N	117° 58.150' W	280	1 - 75 m	1, 10, 20, 30, 40, 50, 60
*	2106	33° 32.420' N	117° 58.885' W	309	1 - 75 m	1, 10, 20, 30, 40, 50, 60
*	2183	33° 35.701' N	117° 57.744' W	36	1 - 2 m above bottom	1, 10, 20, 30, 34
*	2184	33° 34.811' N	117° 58.480' W	51	1 - 2 m above bottom	1, 10, 20, 30, 40, 49
*	2185	33° 33.922' N	117° 59.215' W	114	1 - 75 m	1, 10, 20, 30, 40, 50, 60
*	2186	33° 33.032' N	117° 59.951' W	247	1 - 75 m	1, 10, 20, 30, 40, 50, 60

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Station Description	Station Location Name	Latitude	Longitude	Depth (m)	CTD sampling depths (1 m intervals)	Discrete sampling depths (m)
*	2203	33° 36.313' N	117° 58.810' W	25	1 - 2 m above bottom	1, 10, 20, 23
*	2204	33° 35.423' N	117° 59.546' W	39	1 - 2 m above bottom	1, 10, 20, 30, 37
ZID boundary; *	2205	33° 34.534' N	118° 00.282' W	57	1 - 2 m above bottom	1, 10, 20, 30, 40, 50, 55
*	2206	33° 33.644' N	118° 01.018' W	185	1 - 75 m	1, 10, 20, 30, 40, 50, 60
*	2223	33° 36.924' N	117° 59.871' W	22	1 - 2 m above bottom	1, 10, 20
*	2224	33° 36.035' N	118° 00.608' W	31	1 - 2 m above bottom	1, 10, 20, 29
*	2225	33° 35.146' N	118° 01.346' W	47	1 - 2 m above bottom	1, 10, 20, 30, 40, 45
*	2226	33° 34.257' N	118° 02.083' W	135	1 - 75 m	1, 10, 20, 30, 40, 50, 60
*	2303	33° 37.537' N	118° 00.936' W	21	1 - 2 m above bottom	1, 10, 19
*	2304	33° 36.649' N	118° 01.674' W	29	1 - 2 m above bottom	1, 10, 20, 27
*	2305	33° 35.760' N	118° 02.412' W	38	1 - 2 m above bottom	1, 10, 20, 30, 36
*	2306	33° 34.871' N	118° 03.149' W	114	1 - 75 m	1, 10, 20, 30, 40, 50, 60
--	2351	33° 38.151' N	118° 02.001' W	21	1 - 2 m above bottom	None
--	2352	33° 37.262' N	118° 02.739 'W	29	1 - 2 m above bottom	None
--	2353	33° 36.373' N	118° 03.477' W	37	1 - 2 m above bottom	None
--	2354	33° 35.484' N	118° 04.214' W	123	1 - 75 m	None
--	2403	33° 38.765' N	118° 03.072' W	21	1 - 2 m above bottom	None
upcoast reference	2404	33° 37.875' N	118° 03.808' W	30	1 - 2 m above bottom	None
--	2405	33° 36.986' N	118° 04.544' W	37	1 - 2 m above bottom	None
upcoast reference	2406	33° 36.096' N	118° 05.280' W	60	1 - 2 m above bottom	None
Quarterly REC-1 Water Quality Monitoring Stations (Offshore Zone) (n=8) Quarterly stations are monitored 5-days (on any day, Monday through Friday) during a 30-day period in spring, summer, fall, and winter ("spring" means April, May, or June; "summer" means July, August, or September; "fall" means October, November, or December; and "winter" means January, February, or March).						
--	2103	33° 35.089' N	117° 56.678' W	110	1 - 75 m	1, 10, 20, 30, 40, 50, 60
--	2104	33° 34.199' N	117° 57.414' W	143	1 - 75 m	1, 10, 20, 30, 40, 50, 60
--	2183	33° 35.701' N	117° 57.744' W	36	1 - 2 m above bottom	1, 10, 20, 30, 34

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Station Description	Station Location Name	Latitude	Longitude	Depth (m)	CTD sampling depths (1 m intervals)	Discrete sampling depths (m)
--	2203	33° 36.313' N	117° 58.810' W	25	1 - 2 m above bottom	1, 10, 20, 23
--	2223	33° 36.924' N	117° 59.871' W	22	1 - 2 m above bottom	1, 10, 20
--	2303	33° 37.537' N	118° 00.936' W	21	1 - 2 m above bottom	1, 10, 19
--	2351	33° 38.151' N	118° 02.001' W	21	1 - 2 m above bottom	1, 10, 19
--	2403	33° 38.765' N	118° 03.072' W	21	1 - 2 m above bottom	1, 10, 19
Semi-annual Benthic Monitoring Stations (n=29) Semi-annual stations are monitored in summer and winter ("winter" means January, February, or March; "summer" means July, August, or September. * = Station sampled annually for whole sediment toxicity (n=9).						
ZID boundary; *	0	33° 34.573' N	118° 00.598' W	56	--	--
*	1	33° 34.657' N	118° 00.968' W	56	--	--
--	3	33° 34.434' N	118° 00.660' W	60	--	--
ZID boundary; *	4	33° 34.498' N	117° 59.761' W	56	--	--
--	5	33° 34.749' N	118° 01.612' W	59	--	--
--	9	33° 34.363' N	117° 59.510' W	59	--	--
--	12	33° 34.385' N	117° 59.054' W	58	--	--
--	68	33° 34.849' N	118° 00.694' W	52	--	--
--	69	33° 34.795' N	118° 00.464' W	52	--	--
--	70	33° 34.736' N	118° 00.182' W	52	--	--
--	71	33° 34.687' N	117° 59.939' W	52	--	--
*	72	33° 34.675' N	118° 01.147' W	55	--	--
*	73	33° 34.596' N	118° 00.709' W	55	--	--
--	74	33° 34.616' N	118° 00.230' W	57	--	--
--	75	33° 34.559' N	117° 59.974' W	60	--	--
ZID boundary; *	76	33° 34.459' N	118° 00.297' W	58	--	--
*	77	33° 34.373' N	117° 59.730' W	60	--	--
--	78	33° 34.329' N	118° 00.035' W	63	--	--
--	79	33° 34.383' N	118° 00.876' W	65	--	--
--	80	33° 34.324' N	118° 00.662' W	65	--	--
--	81	33° 34.263' N	118° 00.362' W	65	--	--

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Station Description	Station Location Name	Latitude	Longitude	Depth (m)	CTD sampling depths (1 m intervals)	Discrete sampling depths (m)
--	82	33° 34.207' N	118° 00.077' W	65	--	--
--	84	33° 34.648' N	118° 00.543' W	54	--	--
--	85	33° 34.560' N	118° 00.802' W	57	--	--
--	86	33° 34.400' N	118° 00.380' W	60	--	--
--	87	33° 34.780' N	118° 00.842' W	53	--	--
farfield reference	C	33° 35.799' N	118° 03.855' W	56	--	--
farfield reference; *	Control 1	33° 36.037' N	118° 05.387' W	59	--	--
ZID boundary; *	ZB	33° 34.545' N	118° 00.274' W	56	--	--
Annual Benthic Monitoring Stations (n=39) Annual stations are monitored in summer ("summer" means July, August, or September).						
--	7	33° 35.325' N	118° 00.367' W	41	--	--
--	8	33° 35.164' N	117° 59.555' W	44	--	--
--	10	33° 34.902' N	118° 02.081' W	62	--	--
--	13	33° 35.307' N	118° 02.944' W	59	--	--
--	17	33° 33.961' N	118° 00.187' W	91	--	--
--	18	33° 34.064' N	118° 00.750' W	91	--	--
--	20	33° 34.599' N	118° 02.229' W	100	--	--
--	21	33° 35.313' N	118° 01.891' W	44	--	--
--	22	33° 35.204' N	117° 59.028' W	45	--	--
--	23	33° 33.968' N	117° 59.147' W	100	--	--
--	24	33° 33.563' N	118° 01.140' W	200	--	--
--	25	33° 33.924' N	118° 02.176' W	200	--	--
--	27	33° 33.326' N	117° 59.708' W	200	--	--
--	29	33° 35.033' N	118° 03.113' W	100	--	--
--	30	33° 35.493' N	118° 02.899' W	46	--	--
--	33	33° 34.349' N	117° 57.866' W	100	--	--
--	36	33° 35.308' N	117° 57.495' W	45	--	--
--	37	33° 34.832' N	117° 57.369' W	56	--	--
--	38	33° 34.634' N	117° 57.317' W	100	--	--
--	39	33° 33.283' N	117° 58.531' W	200	--	--

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Station Description	Station Location Name	Latitude	Longitude	Depth (m)	CTD sampling depths (1 m intervals)	Discrete sampling depths (m)
--	40	33° 32.496' N	117° 59.775' W	303	--	--
--	41	33° 32.690' N	118° 01.149' W	303	--	--
--	42	33° 33.098' N	118° 02.598' W	303	--	--
--	44	33° 34.586' N	118° 05.422' W	241	--	--
--	55	33° 36.739' N	118° 05.413' W	40	--	--
--	56	33° 35.665' N	118° 05.417' W	100	--	--
--	57	33° 34.970' N	118° 05.418' W	200	--	--
--	58	33° 33.365' N	118° 05.347' W	300	--	--
--	59	33° 36.070' N	118° 03.701' W	40	--	--
--	60	33° 35.532' N	118° 04.017' W	100	--	--
--	61	33° 35.011' N	118° 04.326' W	200	--	--
--	62	33° 34.069' N	118° 04.568' W	300	--	--
--	63	33° 34.173' N	118° 03.407' W	200	--	--
--	64	33° 33.484' N	118° 03.663' W	300	--	--
--	65	33° 33.859' N	117° 57.230' W	200	--	--
--	83	33° 34.239' N	118° 01.414' W	100	--	--
--	C2	33° 36.125' N	117° 56.014' W	56	--	--
--	C4	33° 35.056' N	117° 55.833' W	187	--	--
--	C5	33° 33.920' N	117° 55.620' W	296	--	--
Semi-annual Trawl Fish Monitoring Stations (n=6) Semi-annual stations are monitored in summer and winter ("winter" means January, February, or March; "summer" means July, August, or September. * = Station sampled annually for demersal fish tissue chemistry and 1/5 years for demersal fish liver histopathology.						
outfall; *	T1	33° 34.641' N	118° 00.567' W	55	--	--
farfield reference; *	T11	33° 36.055' N	118° 05.199' W	60	--	--
--	T12	33° 34.868' N	118° 01.670' W	57	--	--
--	T17	33° 35.309' N	118° 02.987' W	60	--	--
--	T22	33° 34.326' N	117° 59.856' W	60	--	--
--	T23	33° 34.336' N	117° 59.051' W	58	--	--
Annual Trawl Fish Monitoring Stations (n=8) Annual stations are monitored in summer ("summer" means July, August, or September).						
--	T2	33° 35.688' N	117° 59.561' W	35	--	--
--	T6	33° 35.946' N	118° 02.785' W	36	--	--

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Station Description	Station Location Name	Latitude	Longitude	Depth (m)	CTD sampling depths (1 m intervals)	Discrete sampling depths (m)
--	T10	33° 33.771' N	118° 00.250' W	137	--	--
--	T14	33° 34.672' N	118° 03.200' W	137	--	--
--	T18	33° 36.960' N	118° 05.273' W	36	--	--
--	T19	33° 35.394' N	118° 05.424' W	137	--	--
--	T24	33° 35.648' N	118° 01.274' W	36	--	--
--	T25	33° 34.245' N	118° 01.967' W	137	--	--
Annual Rig Fish Monitoring Zones (n=2) Annual stations are monitored in summer ("summer" means July, August, or September). *** =** All station positions and depths shall be surveyed for actual latitude, longitude, and bottom depth prior to the first sampling. RF2 (Zone 2) shall be located offshore of the Crystal Cove Marine Conservation Area and upcoast of the Laguna Beach State Marine Reserve, the specific zone to be determined in cooperation with the California Department of Fish and Game and MPA Monitoring Enterprise (California Ocean Science Trust).						
Zone 1 (outfall)	RF1	Inshore of the 60 m depth contour bounded by coordinates: **33° 36.272' N / 117° 57.264' W** and **33° 37.522' N / 117° 59.374' W** along the 15 m contour; and **33° 34.698' N / 118° 01.713' W** along the 80 m contour and **33° 33.475' N / 117° 59.583' W** along the 180 m contour.*	1	--	--
Zone 2 (farfield reference)	RF2	Bordering the Laguna Beach State Marine Reserve, inshore of the 60 m depth contour bounded by coordinates: **xx° xx.xxx' N / xxx° xx.xxx' W** and **xx° xx.xxx' N / xxx° xx.xxx' W** along the 15 m contour; and **xx° xx.xxx' N / xxx° xx.xxx' W** and **xx° xx.xxx' N / xxx° xx.xxx' W** along the 60 m contour.*	1	--	--
Receiving Water Regional Monitoring Stations						
Quarterly Central Bight Water Quality Monitoring Stations (n=66) * = Water quality core monitoring station sampled during Central Bight Water Quality surveys.						
--	1901	33° 33.682' N	117° 49.654' W	10	1 - 2 m above bottom	--
--	1902	33° 33.165' N	117° 49.944' W	60	1 - 2 m above bottom	--
--	1903	33° 32.762' N	117° 50.182' W	100	1 - 75 m	--
--	1904	33° 31.787' N	117° 50.734' W	405	1 - 75 m	--
--	1905	33° 30.810' N	117° 51.285' W	510	1 - 75 m	--
--	1906	33° 29.829' N	117° 51.842' W	550	1 - 75 m	--
--	2001	33° 35.335' N	117° 51.564' W	10	1 - 2 m above bottom	--

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Station Description	Station Location Name	Latitude	Longitude	Depth (m)	CTD sampling depths (1 m intervals)	Discrete sampling depths (m)
--	2002	33° 34.755' N	117° 51.844' W	60	1 - 2 m above bottom	--
--	2003	33° 34.565' N	117° 52.123' W	100	1 - 75 m	--
--	2004	33° 33.589' N	117° 52.657' W	345	1 - 75 m	--
--	2005	33° 32.613' N	117° 53.225' W	410	1 - 75 m	--
--	2006	33° 31.647' N	117° 53.793' W	470	1 - 75 m	--
--	2021	33° 35.771' N	117° 52.099' W	10	1 - 2 m above bottom	--
--	2022	33° 35.283' N	117° 52.379' W	53	1 - 2 m above bottom	--
--	2023	33° 34.796' N	117° 52.658' W	165	1 - 75 m	--
--	2024	33° 33.811' N	117° 53.179' W	300	1 - 75 m	--
--	2025	33° 32.851' N	117° 53.741' W	390	1 - 75 m	--
--	2026	33° 31.900' N	117° 54.301' W	432	1 - 75 m	--
--	2101	33° 36.183' N	117° 55.749' W	10	1 - 2 m above bottom	--
--	2102	33° 35.631' N	117° 56.206' W	26	1 - 2 m above bottom	--
*	2103	33° 35.089' N	117° 56.678' W	110	1 - 75 m	--
*	2104	33° 34.199' N	117° 57.414' W	143	1 - 75 m	--
*	2105	33° 33.309' N	117° 58.150' W	280	1 - 75 m	--
*	2106	33° 32.420' N	117° 58.885' W	309	1 - 75 m	--
--	2181	33° 36.877’ N	117° 56.752’ W	10	1 - 2 m above bottom	--
--	2182	33° 36.272’ N	117° 57.264’ W	15	1 - 2 m above bottom	--
*	2183	33° 35.701’ N	117° 57.744’ W	36	1 - 2 m above bottom	--
*	2184	33° 34.811’ N	117° 58.480’ W	51	1 - 2 m above bottom	--
*	2185	33° 33.922’ N	117° 59.215’ W	114	1 - 75 m	--
*	2186	33° 33.032’ N	117° 59.951’ W	247	1 - 75 m	--
--	2201	33° 37.493' N	117° 57.831' W	10	1 - 2 m above bottom	--
--	2202	33° 36.901' N	117° 58.314' W	16	1 - 2 m above bottom	--
*	2203	33° 36.313' N	117° 58.810' W	25	1 - 2 m above bottom	--

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Station Description	Station Location Name	Latitude	Longitude	Depth (m)	CTD sampling depths (1 m intervals)	Discrete sampling depths (m)
*	2204	33° 35.423' N	117° 59.546' W	39	1 - 2 m above bottom	--
*	2205	33° 34.534' N	118° 00.282' W	57	1 - 2 m above bottom	--
*	2206	33° 33.644' N	118° 01.018' W	185	1 - 75 m	--
--	2221	33° 38.099' N	117° 58.908' W	10	1 - 2 m above bottom	--
--	2222	33° 37.522' N	117° 59.374' W	15	1 - 2 m above bottom	--
*	2223	33° 36.924' N	117° 59.871' W	22	1 - 2 m above bottom	--
*	2224	33° 36.035' N	118° 00.608' W	31	1 - 2 m above bottom	--
*	2225	33° 35.146' N	118° 01.346' W	47	1 - 2 m above bottom	--
*	2226	33° 34.257' N	118° 02.083' W	135	1 - 75 m	--
--	2301	33° 38.572' N	118° 00.064' W	10	1 - 2 m above bottom	--
--	2302	33° 38.053' N	118° 00.495' W	15	1 - 2 m above bottom	--
*	2303	33° 37.537' N	118° 00.936' W	21	1 - 2 m above bottom	--
*	2304	33° 36.649' N	118° 01.674' W	29	1 - 2 m above bottom	--
*	2305	33° 35.760' N	118° 02.412' W	38	1 - 2 m above bottom	--
*	2306	33° 34.871' N	118° 03.149' W	114	1 - 75 m	--
--	2349	33° 39.190' N	118° 01.135' W	10	1 - 2 m above bottom	--
--	2350	33° 38.667' N	118° 01.566' W	14	1 - 2 m above bottom	--
*	2351	33° 38.151' N	118° 02.001' W	21	1 - 2 m above bottom	--
*	2352	33° 37.262' N	118° 02.739' W	29	1 - 2 m above bottom	--
*	2353	33° 36.373' N	118° 03.477' W	37	1 - 2 m above bottom	--
*	2354	33° 35.484' N	118° 04.214' W	123	1 - 75 m	--
--	2401	33° 39.920' N	118° 02.103' W	10	1 - 2 m above bottom	--
--	2402	33° 39.342' N	118° 02.593' W	16	1 - 2 m above bottom	--
*	2403	33° 38.765' N	118° 03.072' W	21	1 - 2 m above bottom	--

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Station Description	Station Location Name	Latitude	Longitude	Depth (m)	CTD sampling depths (1 m intervals)	Discrete sampling depths (m)
*	2404	33° 37.875' N	118° 03.808' W	29	1 - 2 m above bottom	--
*	2405	33° 36.986' N	118° 04.544' W	37	1 - 2 m above bottom	--
*	2406	33° 36.096' N	118° 05.280' W	60	1 - 2 m above bottom	--
--	2451	33° 41.475' N	118° 03.944' W	10	1 - 2 m above bottom	--
--	2452	33° 40.739' N	118° 04.584' W	17	1 - 2 m above bottom	--
--	2453	33° 39.987' N	118° 05.204' W	22	1 - 2 m above bottom	--
--	2454	33° 39.098' N	118° 05.946' W	30	1 - 2 m above bottom	--
--	2455	33° 38.210' N	118° 06.675' W	36	1 - 2 m above bottom	-
--	2456	33° 37.318' N	118° 07.411' W	42	1 - 2 m above bottom	--
Responsible Agency	**Station Location Name**	**Latitude**	**Longitude**	**Depth**	**Station Location**	**Station Description**
Monthly REC-1 Water Quality Monitoring Stations (Nearshore Zone) (n=38) r = Regional station. c = Former core station. Monthly stations are monitored 5-days (Monday through Wednesday) during a 30-day period. * = Monthly stations are monitored 10-days (on any day, but including Monday, Tuesday, or Wednesday) during a 30-day period.						
OCSD-r	OSB02*	33° 44.420' N	118° 06.937' W	surf	Seal Beach/Sunset Beach	Projection of 1st St
OCSD-r	OSB03	33° 44.355' N	118° 06.449' W	surf	Seal Beach/Sunset Beach	Projection of 8th St
OCSD-r	OSB05	33° 44.296' N	118° 06.378' W	surf	Seal Beach/Sunset Beach	100 yards south of Pier
OCSD-r	OSB04	33° 44.209' N	118° 06.121' W	surf	Seal Beach/Sunset Beach	Projection of 14th St
OCSD-r	OSB01	33° 43.603' N	118° 05.041' W	surf	Seal Beach/Sunset Beach	Projection of Seaway
OCSD-r	OSUB1	33° 42.986' N	118° 04.341' W	surf	Seal Beach/Sunset Beach	Projection of Broadway
OCSD-c	39N	33° 42.114' N	118° 03.321' W	surf	Bolsa Chica/Huntington Beach	Bolsa Chica Beach
OCSD-c	33N	33° 41.281' N	118° 02.495' W	surf	Bolsa Chica/Huntington Beach	Projection of Bolsa Chica Reserve
OCSD-r	BCO-1	33° 40.994' N	118° 02.138' W	surf	Bolsa Chica/Huntington Beach	Bolsa Chica Wetlands Channel
OCSD-c	27N	33° 40.587' N	118° 01.712' W	surf	Bolsa Chica/Huntington Beach	Bluffs at Sea Pointe (Dog Beach)
OCSD-r	HB1	33° 40.065' N	118° 01.937' W	surf	Bolsa Chica/Huntington Beach	PCH & Goldenwest

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Station Description	Station Location Name	Latitude	Longitude	Depth (m)	CTD sampling depths (1 m intervals)	Discrete sampling depths (m)
OCSD-r	HB2	33° 40.022' N	118° 01.937' W	surf	Bolsa Chica/Huntington Beach	PCH & 22nd St
OCSD-r	HB3	33° 39.952' N	118° 00.933' W	surf	Bolsa Chica/Huntington Beach	PCH & 20th St
OCSD-c	21N	33° 39.843' N	118° 00.785' W	surf	Bolsa Chica/Huntington Beach	Projection of 17th St
OCSD-r	HB4	33° 39.680' N	118° 00.613' W	surf	Bolsa Chica/Huntington Beach	PCH & 13th St
OCSD-r	HB5	33° 39.414' N	118° 00.310' W	surf	Bolsa Chica/Huntington Beach	PCH & 6th St
OCSD-c	15N	33° 39.114' N	117° 59.846' W	surf	Bolsa Chica/Huntington Beach	Projection of Jack's Snack Bar
OCSD-c	12N	33° 38.854' N	117° 59.413' W	surf	Bolsa Chica/Huntington Beach	Projection of Beach Blvd
OCSD-c	9N*	33° 38.565' N	117° 58.924' W	surf	Bolsa Chica/Huntington Beach	Projection of Newland St
OCSD-c	6N*	33° 38.331' N	117° 58.573' W	surf	Bolsa Chica/Huntington Beach	Projection of Magnolia St
OCSD-c	3N*	33° 38.018' N	117° 58.032' W	surf	Bolsa Chica/Huntington Beach	Projection of Brookhurst St
OCSD-c	0*	33° 37.764' N	117° 57.598' W	surf	Bolsa Chica/Huntington Beach	Santa Ana River mouth
OCSD-r	TM	33° 37.994' N	117° 57.645' W	surf	Bolsa Chica/Huntington Beach	PCH Bridge at Talbert Marsh
OCSD-r	SAR-N	33° 37.870' N	117° 57.434' W	surf	Bolsa Chica/Huntington Beach	Santa Ana River mouth
OCSD-c	3S	33° 37.619' N	117° 57.264' W	surf	Bolsa Chica/Huntington Beach	Projection Orange St
OCSD-c	6S	33° 37.337' N	117° 56.704' W	surf	Bolsa Chica/Huntington Beach	Projection 52nd/53rd St
OCSD-c	9S	33° 37.033' N	117° 56.283' W	surf	Bolsa Chica/Huntington Beach	Projection 38th St
OCSD-c	15S	33° 36.342' N	117° 55.459' W	surf	Bolsa Chica/Huntington Beach	Projection of 15th/16th St
OCSD-c	21S	33° 36.059' N	117° 54.213' W	surf	Bolsa Chica/Huntington Beach	Upcoast of Balboa Pier
OCSD-c	27S	33° 35.646' N	117° 52.910' W	surf	Bolsa Chica/Huntington Beach	The Wedge
OCSD-c	29S	33° 35.559' N	117° 52.508' W	surf	Bolsa Chica/Huntington Beach	Corona del Mar State Beach
OCSD-r	BGC	33° 35.384' N	117° 52.117' W	surf	Bolsa Chica/Huntington Beach	Little Corona Beach

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Station Description	Station Location Name	Latitude	Longitude	Depth (m)	CTD sampling depths (1 m intervals)	Discrete sampling depths (m)
OCSD-r	PPC	33° 34.490' N	117° 50.512' W	surf	Crystal Cove	Pelican Point Beach (reef)
OCSD-c	39S	33° 34.700' N	117° 51.946' W	surf	Crystal Cove	Pelican Point (ramp)
OCSD-r	WFC	33° 34.887' N	117° 51.342' W	surf	Crystal Cove	Pelican Hill Waterfall
OCSD-r	ONB39	33° 34.450' N	117° 50.449' W	surf	Crystal Cove	Crystal Cove - Los Trancos
OCSD-r	MDC	33° 33.607' N	117° 49.323' W	surf	Crystal Cove	Muddy Creek Beach (Reef Point)
OCSD-r	ELMORO	33° 34.702' N	117° 50.939' W	surf	Crystal Cove	El Moro Beach

III. Influent Monitoring

A. Monitoring Location – Influent Monitoring Stations (n=x)

The Discharger shall monitor influent to Treatment Plant No. 1 at INF-001 and Reclamation Plant No. 2 at INF-002 (see Table E-1), as follows. For definitions indicated by "*", see Attachment A – Definitions.

Table E-3. Influent Monitoring

Parameter	Units	Sample Type*	Minimum Sampling Frequency	Required Analytical Test Method
Miscellaneous				
Flow rate	mgd	recorder/totalizer	continuous	[1]
Total coliform density	--	--	--	--
Fecal coliform density	--	--	--	--
Enterococcus density	--	--	--	--
Nitrite nitrogen	mg/L	24-hr composite	1/quarter	[1]
Nitrate nitrogen	mg/L	24-hr composite	1/quarter	[1]
Organic nitrogen	mg/L	24-hr composite	1/quarter	[1]
Total phosphorous (as P)	mg/L	24-hr composite	1/quarter	[1]
Secondary Treatment Standards and/or Ocean Plan Table A Effluent Limitations				
Biochemical oxygen demand, 5-day @ 20°C (BOD_5)	mg/L	24-hr composite	1/day	[1]
Carbonaceous biochemical oxygen demand, 5-day @ 20°C ($CBOD_5$)	mg/L	24-hr composite	1/day	[1]
Suspended solids	mg/L	24-hr composite	1/day	[1]
pH	pH units	24-hr composite	1/day	[1]
Grease and oil	mg/L	grab	1/month	[1]

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Parameter	Units	Sample Type*	Minimum Sampling Frequency	Required Analytical Test Method
Settleable solids	--	--	--	--
Turbidity	--	--	--	--
Ocean Plan Table B Protection of Marine Aquatic Life				
Arsenic, total recoverable	ug/L	24-hr composite	1/month	[1]
Cadmium, total recoverable	ug/L	24-hr composite	1/month	[1]
Chromium (VI), total recoverable	ug/L	24-hr composite	1/month	[1]
Copper, total recoverable	ug/L	24-hr composite	1/month	[1]
Lead, total recoverable	ug/L	24-hr composite	1/month	[1]
Mercury, total recoverable[2]	ug/L	24-hr composite	1/month	[1]
Nickel, total recoverable	ug/L	24-hr composite	1/month	[1]
Selenium, total recoverable	ug/L	24-hr composite	1/month	[1]
Silver, total recoverable	ug/L	24-hr composite	1/month	[1]
Zinc, total recoverable	ug/L	24-hr composite	1/month	[1]
Cyanide[3]	ug/L	grab	1/month	[1]
Total chlorine residual	--	--	--	--
Ammonia (as N)	mg/L	24-hr composite	7 days/month	[1]
Acute toxicity, TST (only Discharge Point 001)	--	--	--	--
Acute toxicity, TST – relative difference of mean response (IWC and control) (only Discharge Point 001)	%			
Acute toxicity, TST – IWC standard deviation (only Discharge Point 001)	--			
Acute toxicity, TST – Control standard deviation (only Discharge Point 001)	--			
Chronic toxicity, TST (only Discharge Point 001)	--	--	--	--
Chronic toxicity, TST – relative difference of mean response (IWC and control) (only Discharge Point 001)	%			
Chronic toxicity, TST – IWC standard deviation (only Discharge Point 001)	--			
Chronic toxicity, TST – Control standard deviation	--			

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Parameter	Units	Sample Type*	Minimum Sampling Frequency	Required Analytical Test Method
(only Discharge Point 001)				
Chronic toxicity, NOEC (only Discharge Point 002)	--	--	--	--
Phenolic compounds (non-chlorinated)	ug/L	24-hr composite	1/month	[1]
Chlorinated phenolics	ug/L	24-hr composite	1/month	[1]
Endosulfan	ug/L	24-hr composite	2/year	[1]
Endrin	ug/L	24-hr composite	2/year	[1]
HCH*	ug/L	24-hr composite	2/year	[1]
Radioactivity[4]	pCi/L	24-hr composite	1/month	[1]
Ocean Plan Table B Protection of Human Health – Noncarcinogens				
Acrolein	ug/L	grab	1/quarter	[1]
Antimony, total recoverable	ug/L	24-hr composite	1/month	[1]
Bis(2-chloroethoxy) methane	ug/L	24-hr composite	1/month	[1]
Bis(2-chloroisopropyl) ether	ug/L	24-hr composite	1/month	[1]
Chlorobenzene	ug/L	grab	1/quarter	[1]
Chromium (III), total recoverable	ug/L	24-hr composite	1/month	[1]
Di-n-butyl phthalate	ug/L	24-hr composite	1/month	[1]
Dichlorobenzenes*	ug/L	grab	1/quarter	[1]
Diethyl phthalate	ug/L	24-hr composite	1/month	[1]
Dimethyl phthalate	ug/L	24-hr composite	1/month	[1]
4,6-dinitro-2-methylphenol	ug/L	24-hr composite	1/month	[1]
2,4-dinitrophenol	ug/L	24-hr composite	1/month	[1]
Ethylbenzene	ug/L	grab	1/quarter	[1]
Fluoranthene	ug/L	24-hr composite	1/month	[1]
Hexachlorocyclopentadiene	ug/L	24-hr composite	1/month	[1]
Nitrobenzene	ug/L	24-hr composite	1/month	[1]
Thallium, total recoverable	ug/L	24-hr composite	1/month	[1]
Toluene	ug/L	grab	1/quarter	[1]
Tributyltin	--	--	--	--
1,1,1-trichloroethane	ug/L	grab	1/quarter	[1]
Ocean Plan Table B Protection of Human Health – Carcinogens				

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Parameter	Units	Sample Type*	Minimum Sampling Frequency	Required Analytical Test Method
Acrylonitrile	ug/L	grab	1/quarter	[1]
Aldrin	ug/L	24-hr composite	2/year	[1]
Benzene	ug/L	grab	1/quarter	[1]
Benzidine	ug/L	24-hr composite	1/month	[1]
Beryllium, total recoverable	ug/L	24-hr composite	1/month	[1]
Bis(2-chloroethyl) ether	ug/L	24-hr composite	1/month	[1]
Bis(2-ethylhexyl) phthalate	ug/L	24-hr composite	1/month	[1]
Carbon tetrachloride	ug/L	grab	1/quarter	[1]
Chlordane*[,5]	ug/L	24-hr composite	2/year	[1]
Chlorodibromomethane	ug/L	grab	1/quarter	[1]
Chloroform	ug/L	grab	1/quarter	[1]
DDT*	ug/L	24-hr composite	2/year	[1]
1,4-dichlorobenzene	ug/L	grab	1/quarter	[1]
3,3-dichlorobenzidine	ug/L	24-hr composite	1/month	[1]
1,2-dichloroethane	ug/L	grab	1/quarter	[1]
1,1-dichloroethylene	ug/L	grab	1/quarter	[1]
Dichlorobromomethane	ug/L	grab	1/quarter	[1]
Dichloromethane	ug/L	grab	1/quarter	[1]
1,3-dichloropropene	ug/L	grab	1/quarter	[1]
Dieldrin	ug/L	24-hr composite	2/year	[1]
2,4-dinitrotoluene	ug/L	24-hr composite	1/month	[1]
1,2-diphenylhydrazine	ug/L	24-hr composite	1/month	[1]
Halomethanes*	ug/L	grab	1/month	[1]
Heptachlor	ug/L	24-hr composite	2/year	[1]
Heptachlor epoxide	ug/L	24-hr composite	2/year	[1]
Hexachlorobenzene	ug/L	24-hr composite	1/month	[1]
Hexachlorobutadiene	ug/L	24-hr composite	1/month	[1]
Hexachloroethane	ug/L	24-hr composite	1/month	[1]
Isophorone	ug/L	24-hr composite	1/month	[1]
N-nitrosodimethylamine	ug/L	24-hr composite	1/month	[1]
N-nitrosodi-N-propylamine	ug/L	24-hr composite	1/month	[1]

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Parameter	Units	Sample Type*	Minimum Sampling Frequency	Required Analytical Test Method
N-nitrosodiphenlamine	ug/L	24-hr composite	1/month	[1]
PAHs*	ug/L	24-hr composite	1/month	[1]
PCBs*	ug/L	24-hr composite	2/year	[1]
Individual PCB congeners	--	--	--	--
TCDD equivalents*	--	--	--	--
1,1,2,2-tetrachloroethane	ug/L	grab	1/quarter	[1]
Tetrachloroethylene	ug/L	grab	1/quarter	[1]
Toxaphene	ug/L	24-hr composite	2/year	[1]
Trichloroethylene	ug/L	grab	1/quarter	[1]
1,1,2-trichloroethane	ug/L	grab	1/quarter	[1]
2,4,6-trichlorophenol	ug/L	24-hr composite	1/month	[1]
Vinyl chloride	ug/L	grab	1/quarter	[1]

[1] As specified in the 2011 edition of 40 CFR 136, or in this Order/Permit.

[2] **Mercury, total recoverable.** USEPA Method 1631E, with a quantitation level of 0.5 ng/L, shall be used to analyze total recoverable mercury in wastewater.

[3] **Cyanide.** If the Discharger can demonstrate to the satisfaction of the Regional Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met (or performance goals may be evaluated) by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometalic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR 136.

[4] **Radioactivity.** The following USEPA methods shall be used: Method 900.0 for gross alpha and gross beta; Method 903.0 or 903.1 for radium-226; Method 904.0 for radium-228; Method 906.0 for tritium; Method 905.0 for strontium-90; and Method 908.0 for uranium. Analysis for combined radium-226 and 228 shall be conducted only if gross alpha results for the sample exceed 15 pCi/L. If radium-226 and 228 exceed the stipulated criteria, then analyze for tritium, strontium-90, and uranium.

[5] **Chlordane.** The Discharger may temporarily suspend the monitoring requirements for alpha- and gamma-chlordene, if analytical standards for these compounds are not available. However, the Discharger is required to resume detection and quantification practices as soon as standards become available.

IV. Effluent Monitoring

A. Monitoring Location – Effluent Monitoring Stations (n=1)

Upon discharge through Discharge Point 001, or Discharge Point 002 during periods of essential maintenance of the 120” outfall conducted under 40 CFR 122.41(m)(2),

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the Discharger shall monitor effluent at EFF-001 (see Table E-1), as follows. For definitions indicated by "*", see Attachment A – Definitions.

Table E-4. Effluent Monitoring

Parameter	Units	Sample Type*	Minimum Sampling Frequency	Required Analytical Test Method
Miscellaneous				
Flow rate	mgd	recorder/totalizer	continuous	[1]
Total coliform density	MPN/ 100 mL	grab	1/day	[1]
Fecal coliform density	MPN/ 100 mL	grab	1/day	[1]
Enterococcus density	MPN/ 100 mL	grab	1/day	[1]
Nitrite nitrogen	mg/L	24-hr composite	1/quarter	[1]
Nitrate nitrogen	mg/L	24-hr composite	1/quarter	[1]
Organic nitrogen	mg/L	24-hr composite	1/quarter	[1]
Total phosphorous (as P)	mg/L	24-hr composite	1/quarter	[1]
Secondary Treatment Standards and/or Ocean Plan Table A Effluent Limitations				
Biochemical oxygen demand, 5-day @ 20°C (BOD_5)[2]	mg/L	24-hr composite	1/day	[1]
Carbonaceous biochemical oxygen demand, 5-day @ 20°C ($CBOD_5$)[2]	mg/L	24-hr composite	1/day	[1]
Suspended solids[2]	mg/L	24-hr composite	1/day	[1]
pH	pH units	24-hr composite	1/day	[1]
Grease and oil	mg/L	grab	1/month	[1]
Settleable solids	ml/L	grab	1/day	[1]
Turbidity	NTU	24-hr composite	1/month	[1]
Ocean Plan Table B Protection of Marine Aquatic Life				
Arsenic, total recoverable	ug/L	24-hr composite	1/month	[1]
Cadmium, total recoverable	ug/L	24-hr composite	1/month	[1]
Chromium (VI), total recoverable	ug/L	24-hr composite	1/month	[1]
Copper, total recoverable	ug/L	24-hr composite	1/month	[1]
Lead, total recoverable	ug/L	24-hr composite	1/month	[1]
Mercury, total recoverable[3]	ug/L	24-hr composite	1/month	[1]
Nickel, total recoverable	ug/L	24-hr composite	1/month	[1]
Selenium, total recoverable	ug/L	24-hr composite	1/month	[1]

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Parameter	Units	Sample Type*	Minimum Sampling Frequency	Required Analytical Test Method
Silver, total recoverable	ug/L	24-hr composite	1/month	[1]
Zinc, total recoverable	ug/L	24-hr composite	1/month	[1]
Cyanide[4]	ug/L	grab	1/month	[1]
Total chlorine residual[5]	ug/L	grab	1/12 hours	[1]
Ammonia (as N)	mg/L	24-hr composite	7 days/month	[1]
Acute toxicity, TST (only Discharge Point 001)	P or F	24-hr composite	1/quarter	[1]
Acute toxicity, TST – relative difference of percent mean response (IWC and control) (only Discharge Point 001)	%			
Acute toxicity, TST – IWC standard deviation (only Discharge Point 001)	--			
Acute toxicity, TST – Control standard deviation (only Discharge Point 001)	--			
Chronic toxicity, TST (only Discharge Point 001)	P or F	24-hr composite	1/month	[1]
Chronic toxicity, TST – relative difference of percent mean response (IWC and control) (only Discharge Point 001)	%			
Chronic toxicity, TST – IWC standard deviation (only Discharge Point 001)	--			
Chronic toxicity, TST – Control standard deviation (only Discharge Point 001)	--			
Chronic toxicity, NOEC (only Discharge Point 002)	TUc	24-hr composite	1/month	[1]
Phenolic compounds (non-chlorinated)	ug/L	24-hr composite	1/month	[1]
Chlorinated phenolics	ug/L	24-hr composite	1/month	[1]
Endosulfan	ug/L	24-hr composite	2/year	[1]
Endrin	ug/L	24-hr composite	2/year	[1]
HCH*	ug/L	24-hr composite	2/year	[1]
Radioactivity[6]	pCi/L	24-hr composite	1/month	[1]
Ocean Plan Table B Protection of Human Health – Noncarcinogens				

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Parameter	Units	Sample Type*	Minimum Sampling Frequency	Required Analytical Test Method
Acrolein	ug/L	grab	1/quarter	[1]
Antimony, total recoverable	ug/L	24-hr composite	1/month	[1]
Bis(2-chloroethoxy) methane	ug/L	24-hr composite	1/month	[1]
Bis(2-chloroisopropyl) ether	ug/L	24-hr composite	1/month	[1]
Chlorobenzene	ug/L	grab	1/quarter	[1]
Chromium (III), total recoverable	ug/L	24-hr composite	1/month	[1]
Di-n-butyl phthalate	ug/L	24-hr composite	1/month	[1]
Dichlorobenzenes*	ug/L	grab	1/quarter	[1]
Diethyl phthalate	ug/L	24-hr composite	1/month	[1]
Dimethyl phthalate	ug/L	24-hr composite	1/month	[1]
4,6-dinitro-2-methylphenol	ug/L	24-hr composite	1/month	[1]
2,4-dinitrophenol	ug/L	24-hr composite	1/month	[1]
Ethylbenzene	ug/L	grab	1/quarter	[1]
Fluoranthene	ug/L	24-hr composite	1/month	[1]
Hexachlorocyclopentadiene	ug/L	24-hr composite	1/month	[1]
Nitrobenzene	ug/L	24-hr composite	1/month	[1]
Thallium, total recoverable	ug/L	24-hr composite	1/month	[1]
Toluene	ug/L	grab	1/quarter	[1]
Tributyltin	--	--	--	--
1,1,1-trichloroethane	ug/L	grab	1/quarter	[1]
Ocean Plan Table B Protection of Human Health – Carcinogens				
Acrylonitrile	ug/L	grab	1/quarter	[1]
Aldrin	ug/L	24-hr composite	2/year	[1]
Benzene	ug/L	grab	1/quarter	[1]
Benzidine	ug/L	24-hr composite	1/month	[1]
Beryllium, total recoverable	ug/L	24-hr composite	1/month	[1]
Bis(2-chloroethyl) ether	ug/L	24-hr composite	1/month	[1]
Bis(2-ethylhexyl) phthalate	ug/L	24-hr composite	1/month	[1]
Carbon tetrachloride	ug/L	grab	1/quarter	[1]
Chlordane*[,7]	ug/L	24-hr composite	2/year	[1]
Chlorodibromomethane	ug/L	grab	1/quarter	[1]

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Parameter	Units	Sample Type*	Minimum Sampling Frequency	Required Analytical Test Method
Chloroform	ug/L	grab	1/quarter	[1]
DDT*	ug/L	24-hr composite	2/year	[1]
1,4-dichlorobenzene	ug/L	24-hr composite	1/month	[1]
3,3-dichlorobenzidine	ug/L	24-hr composite	1/month	[1]
1,2-dichloroethane	ug/L	grab	1/quarter	[1]
1,1-dichloroethylene	ug/L	grab	1/quarter	[1]
Dichlorobromomethane	ug/L	grab	1/quarter	[1]
Dichloromethane	ug/L	grab	1/quarter	[1]
1,3-dichloropropene	ug/L	grab	1/quarter	[1]
Dieldrin	ug/L	24-hr composite	2/year	[1]
2,4-dinitrotoluene	ug/L	24-hr composite	1/month	[1]
1,2-diphenylhydrazine	ug/L	24-hr composite	1/month	[1]
Halomethanes*	ug/L	grab	1/month	[1]
Heptachlor	ug/L	24-hr composite	2/year	[1]
Heptachlor epoxide	ug/L	24-hr composite	2/year	[1]
Hexachlorobenzene	ug/L	24-hr composite	1/month	[1]
Hexachlorobutadiene	ug/L	24-hr composite	1/month	[1]
Hexachloroethane	ug/L	24-hr composite	1/month	[1]
Isophorone	ug/L	24-hr composite	1/month	[1]
N-nitrosodimethylamine	ug/L	24-hr composite	1/month	[1]
N-nitrosodi-N-propylamine	ug/L	24-hr composite	1/month	[1]
N-nitrosodiphenlamine	ug/L	24-hr composite	1/month	[1]
PAHs*	ug/L	24-hr composite	1/month	[1]
PCBs*	ug/L	24-hr composite	2/year	[1]
Individual PCB congeners[8]	ug/L	24-hr composite	1/year	[1]
TCDD equivalents*,[9]	ug/L	24-hr composite	1/quarter	[1]
1,1,2,2-tetrachloroethane	ug/L	grab	1/quarter	[1]
Tetrachloroethylene	ug/L	grab	1/quarter	[1]
Toxaphene	ug/L	24-hr composite	2/year	[1]
Trichloroethylene	ug/L	grab	1/quarter	[1]
1,1,2-trichloroethane	ug/L	grab	1/quarter	[1]

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Parameter	Units	Sample Type*	Minimum Sampling Frequency	Required Analytical Test Method
2,4,6-trichlorophenol	ug/L	24-hr composite	1/month	[1]
Vinyl chloride	ug/L	grab	1/quarter	[1]

[1] As specified in the 2011 edition of 40 CFR 136, or in this Order/Permit.

[2] Percent removal shall be calculated based on mass where:
% removal = (influent mass – effluent mass) / influent mass;
influent mass (lbs/day) = influent flow (mgd) x influent parameter concentration (mg/L) x 8.34; and
effluent mass (lbs/day) = effluent flow (mgd) x effluent parameter concentration (mg/L) x 8.34.

[3] **Mercury, total recoverable.** USEPA Method 1631E, with a quantitation level of 0.5 ng/L, shall be used to analyze total recoverable mercury in wastewater.

[4] **Cyanide.** If the Discharger can demonstrate to the satisfaction of the Regional Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met (or performance goals may be evaluated) by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometalic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR 136.

[5] **Total chlorine residual.** The limit of detection for total chlorine residual in wastewater shall be less than or equal to 20 ug/L.

[6] **Radioactivity.** The following USEPA methods shall be used: Method 900.0 for gross alpha and gross beta; Method 903.0 or 903.1 for radium-226; Method 904.0 for radium-228; Method 906.0 for tritium; Method 905.0 for strontium-90; and Method 908.0 for uranium. Analysis for combined radium-226 and 228 shall be conducted only if gross alpha results for the sample exceed 15 pCi/L. If radium-226 and 228 exceed the stipulated criteria, then analyze for tritium, strontium-90, and uranium.

[7] **Chlordane.** The Discharger may temporarily suspend the monitoring requirements for alpha- and gamma-chlordene, if analytical standards for these compounds are not available. However, the Discharger is required to resume detection and quantification practices as soon as standards become available.

[8] **Individual PCB congeners.** USEPA draft Method 1668c (and quantitation levels) shall be used to analyze PCB congeners in wastewater. To facilitate interpretation of sediment and fish tissue data, individual PCB congeners whose analytical characteristics resemble those of PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153/168, 156, 157, 167, 169, 170, 177, 180, 183, 187, 189, 194, 201, 206 (optional 8, 27, 29, 31, 33, 56, 60, 64, 95, 97, 141, 146, 158, 174, 198/199, 200, 203, 209) shall be individually quantified and reported.

[9] **TCDD equivalents.** TCDD equivalents shall mean the sum of the concentrations of 2,3,7,8-CDDs and 2,3,7,8-CDFs multiplied by their respective toxicity equivalency factor (TEF), below. For TCDD congeners, the Discharger shall use USEPA Method 1613 for dioxins and furans and the minimum levels, below.

Congener	TEF	Minimum Level (pg/L)
chlorinated dibenzo-p-dioxins (2,3,7,8-CDDs)		
2,3,7,8-TCDD	1.0	5
1,2,3,7,8-PeCDD	0.5	25

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1,2,3,4,7,8-HxCDD	0.1	25
1,2,3,6,7,8-HxCDD	0.1	25
1,2,3,7,8,9-HxCDD	0.1	25
1,2,3,4,6,7,8-HpCDD	0.01	25
OCDD	0.001	50
chlorinated dibenzofurans (2,3,7,8-CDFs)		
2,3,7,8-TCDF	0.1	5
1,2,3,7,8-PeCDF	0.05	25
2,3,4,7,8-PeCDF	0.5	25
1,2,3,4,7,8-HxCDF	0.1	25
1,2,3,6,7,8-HxCDF	0.1	25
1,2,3,7,8,9-HxCDF	0.1	25
2,3,4,6,7,8-HxCDF	0.1	25
1,2,3,4,6,7,8-HpCDF	0.01	25
1,2,3,4,7,8,9-HpCDF	0.01	25
OCDF	0.001	50

V. Effluent Emergency Discharge Monitoring

Monitoring Location – Emergency Discharge Monitoring Stations (n = 2)

Upon emergency discharge through Emergency Discharge Point 002, the Discharger shall monitor effluent at EMG-001 (see Table E-1). Upon emergency discharge through Emergency Discharge Point 003, the Discharger shall monitor effluent at EMG-002 (see Table E-1). At minimum, monitored parameters shall include bacteria indicator organisms and relevant pollutants of concern. During emergency discharge, the minimum sampling frequency shall be daily, until emergency discharge ceases.

VI. Whole Effluent Toxicity Monitoring

A. Acute Whole Effluent Toxicity

1. Monitoring Frequency

The Discharger shall conduct acute toxicity tests on 24-hour composite effluent samples (Table E-4). Once each calendar year, at a different time of year from the previous years, the Discharger shall split a 24-hour composite effluent sample and concurrently conduct toxicity tests using a fish and an invertebrate species. The Discharger shall then continue to conduct routine quarterly toxicity testing using the single, most sensitive species.

Acute toxicity test samples shall be collected at the designated NPDES sampling station for the effluent. A split of each toxicity sample should be analyzed for all other monitored parameters at the minimum frequency of analysis specified by the effluent monitoring program.

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2. Marine and Estuarine Species and Test Methods

Species and short-term test methods for estimating the acute toxicity of NPDES effluents are generally found in the fifth edition of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012, 2002; Table IA, 40 CFR 136).

For this Order/Permit, the Discharger shall conduct 96-hour static renewal toxicity tests with the vertebrate species: topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.0) in the first edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995) (specific to Pacific Coast waters); and with the invertebrate species: mysid, *Americamysis bahia* (1007.0) in the third edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms* (EPA/821/R-02/014, 2002; Table IA, 40 CFR 136).

If laboratory-held cultures of the topsmelt, *Atherinops affinis*, are not available for testing, then the Discharger shall conduct a 96-hour static renewal toxicity test with the inland silverside, *Menidia beryllina* (Larval Survival and Growth Test Method 1006.0) in the third edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms* (EPA/821/R-02/014, 2002; Table IA, 40 CFR 136).

3. Quality Assurance

a. Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manuals previously referenced. Additional requirements are specified, below.

b. For Discharge Point 001, an acute dilution allowance is authorized such that the critical acute instream waste concentration (IWC) is set at a percent effluent value lower than 100% effluent. The acute IWC for Discharge Point 001 is 5.56% effluent. 5.56% effluent and a control shall be tested.

c. Effluent dilution water and control water should be prepared and used as specified in the test methods manual for the test species. If the dilution water is different from test organism culture water, then a second control using culture water shall also be used. If the use of artificial sea salts is considered provisional in the test method, then artificial sea salts shall not be used to increase the salinity of the effluent sample prior to toxicity testing without written approval by the permitting authority.

d. If organisms are not cultured in-house, then concurrent testing with a reference toxicant shall be conducted. If organisms are cultured in-house, then monthly reference toxicant testing is sufficient. Reference toxicant

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tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.).

e. If either the reference toxicant or effluent toxicity tests do not meet all test acceptability criteria in the test methods manual, then the Discharger must resample and retest within 14 days.

f. If the discharged effluent is disinfected using chlorine, then total chlorine residual shall not be removed from the effluent sample prior to toxicity testing.

B. Chronic Whole Effluent Toxicity

1. Monitoring Frequency

The Discharger shall conduct chronic toxicity tests on 24-hour composite effluent samples (Table E-4). Once each calendar year, at a different time of year from the previous years, the Discharger shall split a 24-hour composite effluent sample and concurrently conduct three toxicity tests using a fish, an invertebrate, and an alga species. The Discharger shall then continue to conduct routine monthly toxicity testing using the single, most sensitive species.

Chronic toxicity test samples shall be collected at the designated NPDES sampling station for the effluent. A split of each toxicity sample should be analyzed for all other monitored parameters at the minimum frequency of analysis specified by the effluent monitoring program.

2. Marine and Estuarine Species and Test Methods

Species and short-term test methods for estimating the chronic toxicity of NPDES effluents are found in the first edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995) and applicable water quality standards; also see 40 CFR 122.41(j)(4) and 122.44(d)(1)(iv), and 40 CFR 122.21(j)(5)(viii) for POTWs.

The Discharger shall conduct a static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.0); a static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0); and a toxicity test with one of the following invertebrate species:

Static non-renewal toxicity test with the red abalone, *Haliotis rufescens* (Larval Shell Development Test Method);

Static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, or the sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0).

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If laboratory-held cultures of the topsmelt, *Atherinops affinis*, are not available for testing, then the Discharger shall conduct a static renewal toxicity test with the inland silverside, *Menidia beryllina* (Larval Survival and Growth Test Method 1006.0) in the third edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms* (EPA/821/R-02/014, 2002; Table IA, 40 CFR 136).

3. Quality Assurance

a. Quality assurance measures, instructions, and other recommendations and requirements are found in the chronic test methods manuals previously referenced. Additional requirements are specified, below.

b. For Discharge Point 001, a chronic dilution allowance is authorized such that the critical chronic instream waste concentration (IWC) is set at a percent effluent value lower than 100% effluent. The chronic IWC for Discharge Point 001 is 0.556% effluent. 0.556% effluent and a control shall be tested.

For Discharge Point 002, a chronic dilution allowance is authorized such that the critical chronic instream waste concentration (IWC) is set at a percent effluent value lower than 100% effluent. The chronic IWC for Discharge Point 002 is 2.703% effluent. A series of at least five effluent dilutions and a control shall be tested. At minimum, the dilution series shall include and bracket the IWC.

c. Effluent dilution water and control water should be prepared and used as specified in the test methods manual *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995) and/or *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms* (EPA/821/R-02/014, 2002). If the dilution water is different from test organism culture water, then a second control using culture water shall also be used. If the use of artificial sea salts is considered provisional in the test method, then artificial sea salts shall not be used to increase the salinity of the effluent sample prior to toxicity testing without written approval by the permitting authority.

d. If organisms are not cultured in-house, then concurrent testing with a reference toxicant shall be conducted. If organisms are cultured in-house, then monthly reference toxicant testing is sufficient. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.).

e. If either the reference toxicant or effluent toxicity tests do not meet all test acceptability criteria in the test methods manual, then the Discharger must resample and retest within 14 days.

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f. All chronic toxicity test results from multi-concentration tests required by this Order/Permit must be reviewed and reported according to guidance on the evaluation of concentration-response relationships found in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR 136)* (EPA/821/B-00-004, 2000).

g. For Discharge Point 002, because this Order/Permit requires multi-concentration sublethal hypothesis testing endpoints from test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995, within-test variability must be reviewed for acceptability and a variability criterion (upper %MDS bound) must be applied, as directed under each test method; a lower 10% PMSD bound shall be applied as directed in EPA 833-R-00-003, Table B-8b. Based on this review, only accepted effluent toxicity test results shall be reported on the DMR form. If excessive within-test variability invalidates a test result, then the Discharger must resample and retest within 14 days.

h. If the discharged effluent is disinfected using chlorine, then total chlorine residual shall not be removed from the effluent sample prior to toxicity testing.

i. pH drift during the toxicity test may contribute to artifactual toxicity when pH-dependent toxicants (e.g., ammonia, metals) are present in an effluent. To determine whether or not pH drift during the toxicity test is contributing to artifactual toxicity, the Discharger shall conduct three sets of parallel toxicity tests, in which the pH of one treatment is controlled at the pH of the effluent and the pH of the other treatment is not controlled, as described in Section 13.3.6 of the test methods manual, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms* (EPA/821/R-02/014, 2002). Toxicity is confirmed to be artifactual and due to pH drift when no toxicity above the chronic WET permit limit is observed in the treatments controlled at the pH of the effluent. If toxicity is confirmed to be artifactual and due to pH drift, then, following written approval by the permitting authority, the Discharger may use the procedures outlined in Section 13.3.6 of the test methods manual to control sample pH during the toxicity test.

C. Initial Investigation TRE Workplan

Within 90 days of the Order/Permit effective date, the Discharger shall prepare and submit a copy of their Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan (1-2 pages) to the permitting authority for review. This plan shall include steps the Discharger intends to follow if toxicity is measured above an acute or chronic WET permit limit and should include, at minimum:

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1. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

2. A description of methods for maximizing in-house treatment system efficiency, good housekeeping practices, and a list of all chemicals used in operations at the facility.

3. If a Toxicity Identification Evaluation (TIE) is necessary, an indication of who would conduct the TIEs (i.e., an in-house expert or outside contractor).

D. Accelerated Toxicity Testing and TRE/TIE Process

1. If an acute or chronic WET permit limit is exceeded and the source of toxicity is known (e.g., a temporary plant upset), then the Discharger shall conduct one additional toxicity test using the same species and test method. This test shall begin within 14 days of receipt of test results exceeding the WET permit limit. If the additional toxicity test does not exceed the WET permit limit, then the Discharger may return to their regular testing frequency.

2. If an acute or chronic WET permit limit is exceeded and the source of toxicity is not known, then the Discharger shall conduct six additional toxicity tests using the same species and test method, approximately every two weeks, over a 12 week period. This testing shall begin within 14 days of receipt of test results exceeding the WET permit limit. If none of the additional toxicity tests exceed the WET permit limit, then the Discharger may return to their regular testing frequency.

3. If one of the additional toxicity tests (in paragraphs D.1 or D.2) exceeds the WET permit limit, then, within 14 days of receipt of this test result, the Discharger shall initiate a TRE using as guidance, based on the type of treatment facility, USEPA manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/ 833/B-99/002, 1999). In conjunction, the Discharger shall develop and implement a Detailed TRE Workplan which shall include: further actions undertaken by the Discharger to investigate, identify, and correct the causes of toxicity; actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and a schedule for these actions.

4. The Discharger may initiate a Toxicity Identification Evaluation (TIE) as part of a TRE to identify the causes of toxicity using the same species and test method and, as guidance, USEPA test method manuals: *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents*, Phase I (EPA/600/6-91/005F, 1992); Methods *for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993);

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and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).

E. Analysis and Reporting of Acute and Chronic Toxicity Monitoring Results

1. For Discharge Point 001, a full laboratory report for all acute toxicity testing shall be submitted as an attachment to the SMR for the month in which the toxicity test was conducted. Reported results shall include: determination of "Pass" or "Fail", "relative difference of mean response (IWC and Control) (in %)", "IWC standard deviation" and "control standard deviation" following the Test of Significant Toxicity hypothesis testing approach in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010); the dates of sample collection and initiation of each toxicity test; all results for effluent parameters monitored concurrently with the toxicity test(s); and progress reports on TRE/TIE investigations.

The "relative difference of mean response (IWC and Control), in %" = ((Control mean response – IWC mean response) ÷ Control mean response)) ×100.

2. For Discharge Point 001, a full laboratory report for all chronic toxicity testing shall be submitted as an attachment to the SMR for the month in which the toxicity test was conducted. Reported results shall include: determination of "Pass" or "Fail", "relative difference of mean response (IWC and Control) (in %)", "IWC standard deviation" and "control standard deviation" following the Test of Significant Toxicity hypothesis testing approach in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010); the dates of sample collection and initiation of each toxicity test; all results for effluent parameters monitored concurrently with the toxicity test(s); and progress reports on TRE/TIE investigations.

3. For Discharge Point 002, a full laboratory report for all chronic toxicity testing shall be submitted as an attachment to the SMR for the month in which the toxicity test was conducted. Reported results shall include: the toxicity test results – NOEC and TUc = 100/NOEC for determining compliance with the WQBEL, and EC25 (or IC25) and TUc = 100/EC25 (or IC25) for additional evaluation by the Regional Water Board and USEPA – reported according to the test methods manual chapter on report preparation and test review; the dates of sample collection and initiation of each toxicity test; all results for effluent parameters monitored concurrently with the toxicity test(s); and progress reports on TRE/TIE investigations.

4. The Discharger shall notify the Regional Water Board and USEPA in writing within 14 days of exceedance of an acute or chronic WET permit limit. This notification shall describe actions the Discharger has taken or will take to investigate, identify, and correct the causes of toxicity; the status of actions

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required by this Order/Permit; and schedule for actions not yet completed; or reason(s) that no action has been taken.

VII. Effluent Mass Emission Benchmarks

The following mass emission benchmarks have been established for the effluent discharge. For each parameter with a mass emission benchmark, the Discharger shall report the annual mass emission, and the effluent concentrations and flows used to calculate the annual mass emission, in the annual pretreatment report and annual receiving water monitoring report (effluent chapter).

Table E-5. Average Annual Mass Emission Effluent Benchmarks

Parameter	Units[1]	Annual Mass Emission Effluent Benchmark
Ocean Plan Table B Protection of Marine Aquatic Life		
Arsenic, total recoverable	MT/yr	1.92
Cadmium, total recoverable	MT/yr	0.55
Chromium (VI), total recoverable	MT/yr	2.94
Copper, total recoverable	MT/yr	31.52
Lead, total recoverable	MT/yr	1.29
Mercury, total recoverable	MT/yr	0.08
Nickel, total recoverable	MT/yr	10.55
Selenium, total recoverable	MT/yr	1.92
Silver, total recoverable	MT/yr	2.67
Zinc, total recoverable	MT/yr	40.70
Cyanide[2]	MT/yr	7.75
Total chlorine residual	MT/yr	--
Ammonia (as N)	MT/yr	--
Acute toxicity, TST	--	--
Chronic toxicity, TST	--	--
Chronic toxicity, NOEC	--	--
Phenolic compounds (non-chlorinated)	MT/yr	218
Chlorinated phenolics	MT/yr	27.6
Endosulfan	MT/yr	0.23
Endrin	MT/yr	0.04
HCH*	MT/yr	0.30
Radioactivity	--	--

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Parameter	Units[1]	Annual Mass Emission Effluent Benchmark
Ocean Plan Table B Protection of Human Health – Noncarcinogens		
Acrolein	MT/yr	24.96
Antimony, total recoverable	MT/yr	19.20
Bis(2-chloroethoxy) methane	MT/yr	15.4
Bis(2-chloroisopropyl) ether	MT/yr	15.4
Chlorobenzene	MT/yr	1.91
Chromium (III), total recoverable	MT/yr	--
Di-n-butyl phthalate	MT/yr	15.39
Dichlorobenzenes*	MT/yr	15.4
Diethyl phthalate	MT/yr	13.65
Dimethyl phthalate	MT/yr	7.68
4,6-dinitro-2-methylphenol	MT/yr	76.81
2,4-dinitrophenol	MT/yr	76.81
Ethylbenzene	MT/yr	1.92
Fluoranthene	MT/yr	7.68
Hexachlorocyclopentadiene	MT/yr	15.4
Nitrobenzene	MT/yr	7.68
Thallium, total recoverable	MT/yr	3.84
Toluene	MT/yr	3.98
Tributyltin	--	--
1,1,1-trichloroethane	MT/yr	7.13
Ocean Plan Table B Protection of Human Health – Carcinogens		
Acrylonitrile	MT/yr	18.06
Aldrin	MT/yr	0.08
Benzene	MT/yr	3.23
Benzidine	MT/yr	76.81
Beryllium, total recoverable	MT/yr	1.92
Bis(2-chloroethyl) ether	MT/yr	15.4
Bis(2-ethylhexyl) phthalate	MT/yr	36.67
Carbon tetrachloride	MT/yr	1.92
Chlordane*[,3]	MT/yr	0.76
Chlorodibromomethane	MT/yr	--

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Parameter	Units[1]	Annual Mass Emission Effluent Benchmark
Chloroform	MT/yr	2.74
DDT*	MT/yr	0.26
1,4-dichlorobenzene	MT/yr	7.68
3,3-dichlorobenzidine	MT/yr	4.989
1,2-dichloroethane	MT/yr	1.92
1,1-dichloroethylene	MT/yr	1.92
Dichlorobromomethane	MT/yr	--
Dichloromethane	MT/yr	19.2
1,3-dichloropropene	MT/yr	1.92
Dieldrin	MT/yr	0.08
2,4-dinitrotoluene	MT/yr	7.68
1,2-diphenylhydrazine	MT/yr	15.4
Halomethanes*	MT/yr	13.44
Heptachlor + Heptachlor epoxide	MT/yr	0.08
Hexachlorobenzene	MT/yr	7.68
Hexachlorobutadiene	MT/yr	15.4
Hexachloroethane	MT/yr	7.68
Isophorone	MT/yr	7.68
N-nitrosodimethylamine	MT/yr	4.61
N-nitrosodi-N-propylamine	MT/yr	--
N-nitrosodiphenlamine	MT/yr	7.68
PAHs*	MT/yr	99.854
PCBs*	MT/yr	13.44
Individual PCB congeners[4]	MT/yr	--
TCDD equivalents*	MT/yr	19.21
1,1,2,2-tetrachloroethane	MT/yr	1.92
Tetrachloroethylene	MT/yr	1.92
Toxaphene	MT/yr	1.92
Trichloroethylene	MT/yr	1.92
1,1,2-trichloroethane	MT/yr	1.92
2,4,6-trichlorophenol	MT/yr	7.68

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Parameter	Units[1]	Annual Mass Emission Effluent Benchmark
Vinyl chloride	MT/yr	3.84

[1] The annual mass emission for each parameter shall be the sum of monthly emissions on a calendar year basis (January through December), computed as follows:

$$Annual\ Mass\ Emission, kg/year = \sum \left(Monthly\ Mass\ Emission\ Rates, kg/month \right)$$

For parameters with less than monthly monitoring, the annual mass emission shall be computed using the arithmetic average of available monthly mass emissions as follows:

$$Annual\ Mass\ Emission, kg/year = \left(\frac{\sum MonthlyMassEmission, kg/mo}{NumberofMonthlyMassEmissionsCalculated} \right) * 12 mo/year$$

where

$$Monthly\ Mass\ Emission, kg/mo = \left(\frac{0.003785}{N} \right) * \left(\sum_{i=1}^{N} Q_i C_i \right) * 30.5 = \frac{0.1154425}{N} * \left(\sum_{i=1}^{N} Q_i C_i \right)$$

and where

C_i = parameter concentration of each individual sample, µg/L
Q_i = Discharger flow rate on date of sample, million gallons per day (mgd)
N = number of samples collected during the month
0.003785 = conversion factor to convert (µg/L)*(mgd) into kg/day
30.5 = number of days in a standard month
0.1154425 = product of (conversion factor)·(number of standard days per month)

[2] **Cyanide.** If the Discharger can demonstrate to the satisfaction of the Regional Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met (or performance goals may be evaluated) by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometalic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR 136.

[3] **Chlordane.** The Discharger may temporarily suspend the monitoring requirements for alpha- and gamma-chlordene, if analytical standards for these compounds are not available. However, the Discharger is required to resume detection and quantification practices as soon as standards become available.

[4] **Individual PCB congeners.** To facilitate interpretation of sediment and fish tissue data, individual PCB congeners whose analytical characteristics resemble those of PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153/168, 156, 157, 167, 169, 170, 177, 180, 183, 187, 189, 194, 201, 206 (optional 8, 27, 29, 31, 33, 56, 60, 64, 95, 97, 141, 146, 158, 174, 198/199, 200, 203, 209) shall be individually quantified and reported.

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VIII. Receiving Water Core Monitoring

A. Water Quality Monitoring

1. Monitoring Locations – Monthly Water Quality Monitoring Stations (n=28)

The Discharger shall monitor the receiving water at the Monthly Water Quality Stations specified in Table E-2, as follows. Reference conditions shall be confirmed for each survey. Water column profiling protocols and analytical methods shall follow those described in *Orange County Sanitation District – Ocean Monitoring Program. Quality Assurance and Project Plan (QAPP)*, *Year 2012* (OCSD, in prep.; MRP QAPP) and *Orange County Sanitation District – Environmental Sciences Laboratory. Laboratory Operating Procedures Manual* (OCSD, 2010; Laboratory QAP).

Table E-6. Water Quality Monitoring

Parameter	Units	Sample Type	Sample Depth	Minimum Sampling Frequency	Required Analytical Test Method
Surface observations[1]	--	visual	surface	1/month	--
Salinity (calculated)	psu	profile	CTD sampling depths in Table E-2	1/month	[2]
Conductivity	S/m	profile		1/month	[2]
Temperature	°C	profile		1/month	[2]
Dissolved oxygen (DO)	mg/L	profile		1/month	[2]
Transmissivity	%	profile		1/month	[2]
Photosynthetically active radiation (PAR)	µEinsteins sec^{-1} cm^{-2}	profile		1/month	[2]
Chlorophyll-*a* fluorescence	ug/L	profile		1/month	[2]
pH	pH units	profile		1/month	[2]
Ammonia (NH_3-N)	mg/L	grab	discrete sampling depths in Table E-2	1/month	[2]

[1] Wind direction and speed, ocean surface temperature, weather, and sea and tidal condition shall be recorded, with the source(s) of the data documented. Tidal condition at 0800 hours shall also be recorded. Observations of unusual water color, turbidity, odor, oil and grease, or other physical evidence of waste discharge in the water shall be noted on the log sheet prepared at the time of sample collection. These observations shall be recorded whenever a station is sampled. In federal waters, the nature and extent of REC-1 activities shall be recorded and reported whenever a station is sampled.

[2] As specified in the 2011 edition of 40 CFR 136, or in the MRP QAPP and Laboratory QAP.

B. REC-1 Water Quality Monitoring (Offshore Zone)

The Regional Water Board has determined that only the top ten feet of the Offshore Zone is used for water contact recreation; however, the Regional Water Board and

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USEPA have also determined that it is appropriate to apply bacterial indicator standards throughout the water column in the Offshore Zone to assure that the discharge does not pose a threat to water contact recreation.

1. Monitoring Locations – Quarterly REC-1 Water Quality Monitoring Stations (Offshore Zone) (n=8)

The Discharger shall monitor the receiving water at the Quarterly REC-1 Water Quality Monitoring Stations (Offshore Zone) specified in Table E-2, as follows. Water column profiling protocols and analytical methods shall follow those described in the MRP QAPP and Laboratory QAP.

Table E-7. REC-1 Water Quality Monitoring (Offshore Zone)

Parameter	Units	Sample Type	Sample Depth	Minimum Sampling Frequency	Required Analytical Test Method
Surface observations[1]	--	visual	surface	5x/30-days/quarter (on any day, Monday – Friday) See Table E-2.	--
Salinity (calculated)	psu	profile	CTD sampling depths in Table E-2		[2]
Conductivity	S/m	profile			[2]
Temperature	°C	profile			[2]
Dissolved oxygen (DO)	mg/L	profile			[2]
Transmissivity	%	profile			[2]
Photosynthetically active radiation (PAR)	µEinsteins sec^{-1} cm^{-2}	profile			[2]
Chlorophyll-*a* fluorescence	ug/L	profile			[2]
pH	pH units	profile			[2]
Ammonia (NH_3-N)	mg/L	grab	discrete sampling depths in Table E-2		[2]
Total coliform density	MPN/ 100 mL	grab			[2]
Fecal coliform density (calculated)	MPN/ 100 mL	grab			[2]
Enterococcus density	MPN/ 100 mL	grab			[2]
E. coli density (converted to Fecal coliform density)	MPN/ 100 mL	grab			[2]

[1] Wind direction and speed, ocean surface temperature, weather, and sea and tidal condition shall be recorded, with the source(s) of the data documented. Tidal condition at 0800 hours shall also be recorded. Observations of unusual water color, turbidity, odor, oil and grease, or other physical evidence of waste discharge in the water shall be noted on the log sheet prepared at the time of sample collection. These observations shall be recorded whenever a station is sampled.

[2] As specified in the 2011 edition of 40 CFR 136, or in the MRP QAPP and Laboratory QAP. *E. coli* is analyzed using the Colilert method and *Enterococcus* is analyzed using the Enterolert method. Values for *E. coli* are multiplied by 110% to determine fecal coliform values.

C. Sediment Monitoring

1. Monitoring Locations – Semi-annual Benthic Monitoring Stations (n=29) and Annual Benthic Monitoring Stations (n=39)

Sediment Chemistry. Sediment samples collected for chemistry analyses shall be separate from sediment samples collected for benthic infauna community analyses or whole sediment toxicity testing. The Discharger shall monitor sediment chemistry at the Semi-annual and Annual Benthic Monitoring Stations specified in Table E-2, as follows. Sampling protocols and analytical methods (and reporting limits) shall follow those described in the MRP QAPP and Laboratory QAP. Sediment samples for chemistry analyses shall be collected using the top 2 cm of undisturbed surface material in 0.1^2 m grab samples (either Van Veen or box core). Results of chemistry analyses shall be reported on a dry weight basis.

Table E-8. Sediment Chemistry Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Miscellaneous				
Sediment grain size	phi	grab	See Table E-2.	[1]
Total organic carbon	%	grab		[1]
Dissolved sulfides	mg/kg	grab		[1]
Total nitrogen	mg/kg	grab		[1]
Total phosphorous	mg/kg	grab		[1]
Metals				
Aluminum, total recoverable	mg/kg	grab	See Table E-2.	[1]
Antimony, total recoverable	mg/kg	grab		[1]
Arsenic, total recoverable	mg/kg	grab		[1]
Barium, total recoverable	mg/kg	grab		[1]
Beryllium, total recoverable	mg/kg	grab		[1]
Cadmium, total recoverable	mg/kg	grab		[1]
Chromium, total recoverable	mg/kg	grab		[1]
Copper, total recoverable	mg/kg	grab		[1]
Iron, total recoverable	mg/kg	grab		[1]
Lead, total recoverable	mg/kg	grab		[1]
Mercury, total recoverable	mg/kg	grab		[1]
Nickel, total recoverable	mg/kg	grab		[1]

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Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Selenium, total recoverable	mg/kg	grab		[1]
Silver, total recoverable	mg/kg	grab		[1]
Zinc, total recoverable	mg/kg	grab		[1]
Pesticides				
2,4'-DDT	ug/kg	grab	See Table E-2.	[1]
4,4'-DDT	ug/kg	grab		[1]
2,4'-DDD	ug/kg	grab		[1]
4,4'-DDD	ug/kg	grab		[1]
2,4'-DDE	ug/kg	grab		[1]
4,4'-DDE	ug/kg	grab		[1]
4,4'-DDMU	ug/kg	grab		[1]
Aldrin	ug/kg	grab		[1]
Dieldrin	ug/kg	grab		[1]
cis-Chlordane[2]	ug/kg	grab		[1]
trans-Chlordane[2]	ug/kg	grab		[1]
trans-Nonachlor	ug/kg	grab		[1]
Heptachlor	ug/kg	grab		[1]
Heptachlor epoxide	ug/kg	grab		[1]
Endosulfan	ug/kg	grab		[1]
Endrin	ug/kg	grab		[1]
Hexachlorobenzene	ug/kg	grab		[1]
Lindane (gamma-BHC)	ug/kg	grab		[1]
Mirex	ug/kg	grab		[1]
Polychlorinated Biphenyl (PCB) Congeners				
Individual PCB congeners[3]	ug/kg	grab	See Table E-2.	[1]
Polycyclic Aromatic Hydrocarbons (PAHs) – Low Molecular Weight				
Acenaphthene	ug/kg	grab	See Table E-2.	[1]
Acenaphthylene	ug/kg	grab		[1]
Anthracene	ug/kg	grab		[1]
Biphenyl	ug/kg	grab		[1]
Fluorene	ug/kg	grab		[1]

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Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
2-Methylnapthalene	ug/kg	grab		[1]
1-Methylphenanthrene	ug/kg	grab		[1]
Naphthalene	ug/kg	grab		[1]
1-Methylnapthalene	ug/kg	grab		[1]
2,6-Dimethylnaphthalene	ug/kg	grab		[1]
1,6,7-Trimethyl-naphthalene	ug/kg	grab		[1]
Phenanthrene	ug/kg	grab		[1]
Polycyclic Aromatic Hydrocarbons (PAHs) – High Molecular Weight				
Benz[a]anthracene	ug/kg	grab	See Table E-2.	[1]
Benzo[a]pyrene	ug/kg	grab		[1]
Benzo[b]fluoranthene	ug/kg	grab		[1]
Benzo[e]pyrene	ug/kg	grab		[1]
Benzo[g,h,i]perylene	ug/kg	grab		[1]
Benzo[k]fluoranthene	ug/kg	grab		[1]
Chrysene	ug/kg	grab		[1]
Dibenz[a,h]anthracene	ug/kg	grab		[1]
Fluoranthene	ug/kg	grab		[1]
Indeno(1,2,3-c,d) pyrene	ug/kg	grab		[1]
Perylene	ug/kg	grab		[1]
Pyrene	ug/kg	grab		[1]
2,3,5-Trimethylnaphthalene	ug/kg	grab		[1]

[1] As specified in the MRP QAPP and Laboratory QAP.

[2] **Chlordane.** The Discharger may temporarily suspend the monitoring requirements for cis- and trans-chlordene, if analytical standards for these compounds are not available. However, the Discharger is required to resume detection and quantification practices as soon as standards become available.

[3] **Individual PCB congeners.** Individual PCB congeners whose analytical characteristics resemble those of PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153/168, 156, 157, 167, 169, 170, 177, 180, 183, 187, 189, 194, 201, 206 (optional 8, 27, 29, 31, 33, 56, 60, 64, 95, 97, 141, 146, 158, 174, 198/199, 200, 203, 209) shall be individually quantified and reported.

2. Monitoring Locations – Semi-annual Benthic Monitoring Stations (n=29) and Annual Benthic Monitoring Stations (n=39)

Benthic Infauna Community. Sediment samples collected for benthic infauna community analyses shall be separate from sediment samples collected for

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chemistry analyses or whole sediment toxicity testing. The Discharger shall monitor benthic infauna at the Semi-annual and Annual Benthic Monitoring Stations specified in Table E-2, as follows. Sampling protocols, including treatment, storage, and analyses, shall follow those described in the MRP QAPP and Laboratory QAP. Sediment samples for benthic infauna community analyses shall be washed and screened (1.0 mm mesh) from entire 0.1^2 m grab samples (either Van Veen or box core) and fixed and preserved for sorting. All retained organisms shall be counted and identified to as low a taxon as possible.

Table E-9. Benthic Infauna Community Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Number of species, per grab sample	--	grab	See Table E-2.	[1]
Number of individuals per species, per grab sample	--	grab		[1]
Number of individuals, per grab sample	--	grab		[1]
Benthic response index (BRI)	--	grab		[1]
Shannon-Weiner's diversity index (H')	--	grab		[1]
Swartz's 75% dominance index (SDI)	--	grab		[1]

[1] As specified in the MRP QAPP and Laboratory QAP.

3. Monitoring Locations – Semi-annual Benthic Monitoring Stations (n=9)

Whole Sediment Toxicity. Sediment samples collected for whole sediment toxicity testing shall be separate from sediment samples collected for chemistry analyses or benthic infauna community analyses. The Discharger shall annually monitor whole sediment toxicity at the nine Semi-annual Benthic Monitoring Stations specified in Table E-2, as follows. Sampling protocols and analyses shall follow those described in the MRP QAPP and Laboratory QAP. Sediment samples for sediment toxicity testing shall be collected using the top 2 cm of undisturbed surface material in 0.1^2 m grab samples (either Van Veen or box core).

Table E-10. Whole Sediment Toxicity Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Whole sediment acute toxicity	% of home	grab	See Table E-2.	[1]

[1] USEPA 10-day static amphipod (*Eohaustorius estuarius*) survival test: *Methods for Assessing the Toxicity of Sediment-Associated Contaminants with Estuarine and Marine Amphipods* (EPA/600/R-94/025, 1994).

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D. Demersal Fish and Epibenthic Invertebrate Monitoring

1. Monitoring Locations – Semi-annual Trawl Fish Monitoring Stations (n=6) and Annual Trawl Fish Monitoring Stations (n=8)

Demersal Fish and Epibenthic Invertebrate Communities. Trawl samples collected for demersal fish and epibenthic invertebrate community structure analyses may be the same as trawl samples collected for demersal fish tissue chemistry analyses. The Discharger shall monitor demersal fish and epibenthic invertebrates at the Semi-Annual and Annual Trawl Fish Monitoring Stations specified in Table E-2, as follows. Sampling and analysis protocols shall follow those described in the MRP QAPP and Laboratory QAP. At each station, a single trawl sample shall be collected using one standard semi-balloon otter trawl towed for 450 m along the isobath. Samples shall be processed with all demersal fish and epibenthic invertebrates, identified to species, counted, measured (fish only), and weighed.

Table E-11. Demersal Fish and Epibenthic Invertebrate Community Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Number of species, per trawl sample	--	trawl	See Table E-2.	[1]
Number of individuals per species, per trawl sample	--	trawl		[1]
Number of all individuals, per trawl sample	--	trawl		[1]
Wet weight of fish species, per trawl sample	mg/kg	trawl		[1]
Cm size classes of fish species, per trawl sample	cm	trawl		[1]
Shannon-Weiner's diversity index (H')	--	trawl		[1]
Swartz's 75% dominance index (SDI)	--	trawl		[1]
Fish Response Index (FRI)	--	trawl		[1]
Abnormalities and disease symptoms	--	trawl		[1]

[1] As specified in the MRP QAPP and Laboratory QAP.

2. Monitoring Locations – Semi-annual Trawl Fish Monitoring Stations (n=2)

Demersal Fish Tissue Chemistry. The trawl samples collected for demersal fish tissue chemistry analyses may be the same as trawl samples collected for demersal fish and epibenthic invertebrate community structure analyses. The Discharger shall annually monitor hornyhead turbot and English sole at the two Semi-annual Trawl Fish Monitoring Stations specified in Table E-2, as follows. Sampling and analysis protocols (including reporting limits) shall follow those

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described in the MRP QAPP and Laboratory QAP. At each station, a single trawl sample shall be collected using one standard semi-balloon otter trawl towed for 450 m along the isobath. A reasonable level of effort (i.e., five trawls per station) shall be used to reach the required number of individuals. Samples shall be processed and target fish identified to species, counted, measured to the nearest millimeter, weighed, and prepared for chemical analyses (focused on consistent size class).

Table E-12. Demersal Fish Tissue Chemistry Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Cm size classes of fish species, per trawl sample	cm	trawl	See Table E-2.	[1]
Percent lipid	%, wet g	muscle tissue and liver tissue, at least 10 individuals of each target species		[1]
Mercury (methylmercury)	ng/wet g	muscle tissue and liver tissue, at least 10 individuals of each target species		[1]
Sum of individual PCB congeners[2]	ng/wet g	muscle tissue and liver tissue, at least 10 individuals of each target species		[1]
Individual PCB congeners[2]	ng/wet g	muscle tissue and liver tissue, at least 10 individuals of each target species		[1]
Sum of individual DDT derivatives[3]	ng/wet g	muscle tissue and liver tissue, at least 10 individuals of each target species		[1]
Individual DDT derivatives[3]	ng/wet g	muscle tissue and liver tissue, at least 10 individuals of each target species		[1]
Sum of individual Chlordane derivatives[4]	ng/wet g	muscle tissue and liver tissue, at least 10 individuals of each target species		[1]
Individual Chlordane derivatives[4]	ng/wet g	muscle tissue and liver tissue, at least 10 individuals of each target species		[1]
Dieldrin	ng/wet g	muscle tissue and liver tissue, at least 10 individuals of each target species		[1]

[1] As specified in the MRP QAPP and Laboratory QAP.

[2] **Individual PCB congeners.** Individual PCB congeners whose analytical characteristics resemble those of PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153/168, 156, 157, 167, 169, 170, 177, 180, 183, 187, 189, 194, 201, 206 (optional 8, 27, 29, 31, 33, 56, 60, 64, 95, 97, 141, 146, 158, 174, 198/199, 200, 203, 209) shall be individually quantified and reported.

[3] **Individual DDT derivatives.** 2,4'- and 4,4'-isomers of DDT, DDE, and DDD, plus 4,4'-DDMU.

[4] **Individual Chlordane derivatives.** Cis- and trans-chlordane, cis- and trans-chlordene, hepatachlor, heptachlor epoxide, cis- and trans-nonachlor, and oxychlordane. The Discharger may temporarily

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suspend the monitoring requirements for cis- and trans-chlordene, if analytical standards for these compounds are not available. However, the Discharger is required to resume detection and quantification practices as soon as standards become available.

3. Monitoring Locations – Semi-annual Trawl Fish Monitoring Stations (n=2)

Demersal Fish Liver Histopathology. Once every five years, histopathological analyses shall be performed on liver tissues of 40 individuals per species per station from the outfall and farfield reference Semi-annual Trawl Fish Monitoring Stations specified in Table E-2. A reasonable level of effort (i.e., five trawls per location) shall be used to reach the required number of individuals. Target species are hornyhead turbot and English sole.

The continued frequency of histopathological analyses in this Order/Permit cycle (once every five years) is different from the annual analyses conducted by the Discharger for the 1985 Order/Permit. The analysis of 40 individuals per species is different from the 80 individuals per species requirement for the 1985 and 2004 Order/Permit. The required redirection of 1985 and 2004 effort from histopathological analyses to strategic process studies shall continue under this Order/Permit.

4. Monitoring Locations – Annual Rig Fishing Monitoring Zones (n=2)

Sport Fish Muscle Chemistry. The Discharger shall target for monitoring at least one species from each of three groups of fish (rockfish, kelpbass, and sandbass) at the Rig Fishing Monitoring Zones specified in Table E-2, as follows. For rockfish, scorpionfish (*Scorpaena guttata*) is the preferred species, followed by any other abundant and preferably benthic rockfish species (e.g., vermillion rockfish). Sampling and analysis protocols (including reporting limits) shall follow those described in the MRP QAPP and Laboratory QAP. Samples shall be processed and target fish identified to species, counted, measured and size classed, weighed, and prepared for chemical analyses (focusing on consistent size class).

Table E-13. Sport Fish Muscle Chemistry Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Cm size classes of fish species representing legal sport fish take, per trawl sample	cm	trawl (or other gear)	See Table E-2.	[1]
Percent lipid	%, wet g	muscle tissue, at least 10 individuals of each target species		[1]
Arsenic, total	ng/wet g	muscle tissue, at least 10 individuals of each target species		[1]

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Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Mercury (methylmercury)	ng/wet g	muscle tissue, at least 10 individuals of each target species		[1]
Selenium, total	ng/wet g	muscle tissue, at least 10 individuals of each target species		[1]
Sum of individual PCB congeners[2]	ng/wet g	muscle tissue, at least 10 individuals of each target species		[1]
Individual PCB congeners[2]	ng/wet g	muscle tissue, at least 10 individuals of each target species		[1]
Sum of individual DDT derivatives[3]	ng/wet g	muscle tissue, at least 10 individuals of each target species		[1]
Individual DDT derivatives[3]	ng/wet g	muscle tissue, at least 10 individuals of each target species		[1]
Sum of individual Chlordane derivatives[4]	ng/wet g	muscle tissue, at least 10 individuals of each target species		[1]
Individual Chlordane derivatives[4]	ng/wet g	muscle tissue, at least 10 individuals of each target species		[1]
Dieldrin	ng/wet g	muscle tissue, at least 10 individuals of each target species		[1]

[1] As specified in the MRP QAPP and Laboratory QAP.

[2] **Individual PCB congeners.** Individual PCB congeners whose analytical characteristics resemble those of PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153/168, 156, 157, 167, 169, 170, 177, 180, 183, 187, 189, 194, 201, 206 (optional 8, 27, 29, 31, 33, 56, 60, 64, 95, 97, 141, 146, 158, 174, 198/199, 200, 203, 209) shall be individually quantified and reported.

[3] **Individual DDT derivatives.** 2,4'- and 4,4'-isomers of DDT, DDE, and DDD, plus 4,4'-DDMU.

[4] **Individual Chlordane derivatives.** Cis- and trans-chlordane, cis- and trans-chlordene, hepatachlor, heptachlor epoxide, cis- and trans-nonachlor, and oxychlordane. The Discharger may temporarily suspend the monitoring requirements for cis- and trans-chlordene, if analytical standards for these compounds are not available. However, the Discharger is required to resume detection and quantification practices as soon as standards become available.

IX. Receiving Water Regional Monitoring

Discharger participation in regional monitoring programs is a required condition of this Order/Permit. The Discharger shall participate in regional monitoring activities coordinated by the Southern California Coastal Water Research Project (SCCWRP), County of Orange Health Care Agency (HCA), the Southern California Coastal Ocean

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Observation System (SCCOOS), and other appropriate agencies approved by the Regional Water Board and USEPA.

The regional monitoring programs which must be conducted under this Order/Permit include:

A. Southern California Bight Regional Monitoring Program. Future Southern California Bight regional surveys, including benthic infauna, sediment chemistry, fish communities, and fish predator risk.

The Discharger shall participate in Southern California Bight regional monitoring program studies, such as those activities coordinated through the Southern California Coastal Water Research Partnership (e.g., the 1994 Southern California Bight Pilot Project, Bight'98, Bight'03, and Bight'08).

Participation in the in Southern California Bight regional monitoring program shall include aspects of the program relevant to understanding regional trends and answering regional questions related to public health (i.e., bacterial contamination), water quality, sediment geochemistry, biological communities, and seafood safety (e.g., fish tissue contamination) in the receiving waters environment. For sediment chemistry and benthic infauna communities, this effort shall include a resource exchange equivalent to the 39 annual summer samples. For trawls, participation shall include a minimum resource exchange equivalent to the eight annual summer samples. In both cases (i.e., the benthic and trawl programs), the 29 benthic and six trawl stations identified in the semi-annual monitoring program should continue to be sampled, even during regional monitoring program events, to assess compliance and trends near the discharge.

The Discharger shall complete collection, analysis, and reporting of samples in accordance with the schedules established by the next Bight regional program development committee(s). Previous participation included method development, research, and monitoring activities involving microbiology, water quality data, marine sediments, fish/macrobenthic assemblages, fish tissue contamination, and harmful algal blooms related to point and nonpoint discharges to the marine environment. Levels of participation and areas of study are dependent upon the final study plans established by Bight regional program development committees, but will be equivalent to that provided by the Discharger in previous regional surveys conducted in 1994, 1998, 2003, and 2008. For Bight'08 this involved:

1. Participation in regional microbiological studies testing rapid methods and developing rapid methods for detection of fecal indicator bacteria in beach sands.

2. Collection and analysis of water quality samples for analyzing the relationship between nutrients discharged through POTW outfalls, upwelling, and harmful algal blooms.

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3. Collection and analysis of sediment grab samples for chemistry and benthic infauna at approximately 40 benthic stations.

4. Collection and analyses of fish and macroinvertebrate community structure at approximately 15 trawl stations.

5. Collection and analysis of fish tissue from approximately two zones or the equivalent of 40 tissue samples for chemical contaminants (organics and mercury), and analysis of selected biomarkers at a subset of these stations.

B. Central Bight Water Quality Cooperative Program. The Central Bight Water Quality Cooperative Program is coordinated quarterly receiving water quality monitoring conducted by Orange County Sanitation District, County Sanitation Districts of Los Angeles County, the City of Los Angeles, and the City of Oxnard, through appropriate agencies for water quality monitoring.

1. Monitoring Locations – Quarterly Central Bight Water Quality Monitoring Stations (n=66)

The Discharger shall monitor the receiving water at the Quarterly Central Bight Water Quality Monitoring Stations specified in Table E-2. The Discharger shall complete collection and analysis of samples. Results shall be report in the annual receiving water monitoring report and uploaded, as available, to www.sccoos.org. The level of participation shall be similar to that provided by the Discharger in previous quarterly regional surveys.

Table E-14. Central Bight Water Quality Monitoring

Parameter	Units	Sample Type	Sample Depth	Minimum Sampling Frequency	Required Analytical Test Method
Surface observations[1]	--	visual	surface	1/quarter	--
Salinity (calculated)	psu	profile	CTD sampling depths in Table E-2	1/quarter	[2]
Conductivity	S/m	profile		1/quarter	[2]
Temperature	°C	profile		1/quarter	[2]
Dissolved oxygen (DO)	mg/L	profile		1/quarter	[2]
Transmissivity	%	profile		1/quarter	[2]
Photosynthetically active radiation (PAR)	µEinsteins sec^{-1} cm^{-2}	profile		1/quarter	[2]
Chlorophyll-*a* fluorescence	ug/L	profile		1/quarter	[2]
pH	pH units	profile		1/quarter	[2]

[1] Wind direction and speed, ocean surface temperature, weather, and sea and tidal condition shall be recorded, with the source(s) of the data documented. Tidal condition at 0800 hours shall also be recorded. Observations of unusual water color, turbidity, odor, oil and grease, or other physical

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evidence of waste discharge in the water shall be noted on the log sheet prepared at the time of sample collection. These observations shall be recorded whenever a station is sampled.

[2] As specified in the 2011 edition of 40 CFR 136, or in the MRP QAPP and Laboratory QAP.

C. Central Regional Kelp Survey. The Discharger shall continue its current level of participation in the Central Regional Kelp Survey Consortium, a group of private and public agencies that monitor quarterly the health and standing crop of kelp beds using aerial imaging of kelp bed canopy cover within the central Bight.

D. Orange County Regional Shoreline REC-1 Cooperative Monitoring Program. This regional program is coordinated shoreline REC-1 water quality monitoring conducted by County of Orange Health Care Agency, the Discharger, South Orange County Wastewater Authority, and Orange County Public Works (OC Watersheds), along Orange County's coastal shoreline. This Order/Permit requires a minimum level of participation in microbiological regional monitoring.

1. Monitoring Locations – Monthly REC-1 Water Quality Monitoring Stations (Nearshore Zone) (n=38)

The Discharger shall monitor the receiving water at the Monthly REC-1 Water Quality Monitoring Stations (Nearshore Zone) specified in Table E-2, as follows. The Discharger shall complete collection, analysis, and reporting of the regional samples required under this Order/Permit. Results shall be reported in the annual receiving water monitoring report, except that microbiological results shall continue to be reported on a timely basis (approximately daily) to the County of Orange Health Care Agency, Environmental Health and placed on the Internet each month. During any month that the effluent disinfection system does not continuously operate for a period of 24-hours or longer, the Discharger shall report Nearshore Zone microbiological monitoring results monthly, to the Regional Water Board and USEPA.

Table E-15. REC-1 Water Quality Monitoring (Nearshore Zone)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Surface observations	--	visual	See Table E-2.	[2]
Grease observations/ number of grease particles (at high tide line)[1]	--	visual		[2]
Total coliform density	CFU/100 mL	grab		[2]
Fecal coliform density	CFU/100 mL	grab		[2]
Enterococcus density	CFU/100 mL	grab		[2]

[1] Wind direction and speed, ocean surface temperature, weather, and sea and tidal condition shall be recorded, with the source(s) of the data documented. Tidal condition at 0800 hours shall also be recorded. Observations of unusual water color, turbidity, odor, oil and grease, or other physical evidence of waste discharge in the water shall be noted on the log sheet prepared at the time of sample collection. These observations shall be recorded whenever a station is sampled.

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[2] As specified in the 2011 edition of 40 CFR 136, or in the MRP QAPP and Laboratory QAP. *Enterococcus* is analyzed using USEPA Method 1600.

X. Strategic Process Studies

A. Constituents of Emerging Concern. The Discharger shall investigate constituents of emerging concern (CEC) in the discharge following its approved CEC special study workplan. Within six months of the effective date of this Order/Permit, the Discharger shall submit for Executive Officer/Director approval a CEC special study workplan. This workplan shall include (but is not limited to):

1. Identification of CEC for discharge monitoring, sample type, minimum sampling frequency, and analytical test method considering sensitivity, accuracy, availability, and cost. When the State Water Board Advisory Panels for CEC in recycled water and in freshwater, coastal, and marine ecosystems recommended list for CEC monitoring in ocean waters is finalized, the parameters in Table E-16 may be re-evaluated and modified by the Executive Officer/Director. The workplan may also proposed surrogate or indicator CEC that may better characterized discharged CEC.

Table E-16. CEC Discharge Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Hormones				
17a-Ethynyl estradiol	ng/L	24-hr composite	1/year	[1]
17a-Estradiol	ng/L	24-hr composite	1/year	[1]
17b-Estradiol	ng/L	24-hr composite	1/year	[1]
Estriol	ng/L	24-hr composite	1/year	[1]
Estrone	ng/L	24-hr composite	1/year	[1]
Oxybenzone	ng/L	24-hr composite	1/year	[1]
Progesterone	ng/L	24-hr composite	1/year	[1]
Testosterone	ng/L	24-hr composite	1/year	[1]
Industrial Endocrine Disrupting Compounds (IEDCs)				
Bisphenol A	ng/L	24-hr composite	1/year	[1]
Nonylphenol	ng/L	24-hr composite	1/year	[1]
Nonylphenol diethoxylate	ng/L	24-hr composite	1/year	[1]
Nonylphenol monoethoxylate	ng/L	24-hr composite	1/year	[1]
Octylphenol	ng/L	24-hr composite	1/year	[1]
Octylphenol diethoxylate	ng/L	24-hr composite	1/year	[1]
Octylphenol monoethoxylate	ng/L	24-hr composite	1/year	[1]

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Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Pharmaceuticals and Personal Care Products (PPCPs)				
Acetominophen	ng/L	24-hr composite	1/year	[1]
Azithromycin	ng/L	24-hr composite	1/year	[1]
Caffeine	ng/L	24-hr composite	1/year	[1]
Carbamazepine	ng/L	24-hr composite	1/year	[1]
DEET	ng/L	24-hr composite	1/year	[1]
Erythromycin	ng/L	24-hr composite	1/year	[1]
Fluoxetine	ng/L	24-hr composite	1/year	[1]
Gemfibrozil	ng/L	24-hr composite	1/year	[1]
Ibuprofen	ng/L	24-hr composite	1/year	[1]
Primidone	ng/L	24-hr composite	1/year	[1]
Salicylic acid	ng/L	24-hr composite	1/year	[1]
Sulfamethoxazole	ng/L	24-hr composite	1/year	[1]
Triclosan	ng/L	24-hr composite	1/year	[1]
Flame Retardants				
BDE 28	ng/L	24-hr composite	1/year	[1]
BDE 47	ng/L	24-hr composite	1/year	[1]
BDE 100	ng/L	24-hr composite	1/year	[1]
BDE 99	ng/L	24-hr composite	1/year	[1]
BDE 85	ng/L	24-hr composite	1/year	[1]
BDE 154	ng/L	24-hr composite	1/year	[1]
BDE 153	ng/L	24-hr composite	1/year	[1]
BDE 183	ng/L	24-hr composite	1/year	[1]
BDE 209	ng/L	24-hr composite	1/year	[1]

[1] USEPA Methods 1694 and 1698, or other methodologies utilized by the U.S. Geological Survey, California Department of Public Health, or other federal or State agencies.

2. The Discharger shall characterize existing CEC monitoring data for its effluent and receiving waters, using previously collected monitoring data and monitoring data collected for this special study. At minimum, this characterization shall include: identification of all monitored CEC, monitoring dates, frequency and duration; QA/QC information; reporting limits, minimum levels, and minimum detection limits achieved for each methodology; and an analysis of trends.

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3. A summary of CEC monitoring efforts and results for the previous calendar year shall be described and summarized in the annual receiving water monitoring report.

XI. OTHER MONITORING REQUIREMENTS

A. Special Study – Receiving Water Monitoring at Discharge Point 002 during "Outfall Land Section and Ocean Outfall Booster Pump Station Piping Rehabilitation" Project

During diversion of effluent to Discharge Point 002, receiving water monitoring to determine compliance with water quality standards—and modeling necessary to interpret effluent and receiving water quality monitoring data—shall be conducted and reported to the Regional Water Board and USEPA, following an approved monitoring program.

During the 2012 rehabilitation project (referred to as J-112), this monitoring requirement shall be satisfied through implementation of a special study that follows the intensive short-term modeling and monitoring programs outlined in Mitigation Measures 4.10-4 and 4.10-6b of *Attachment 1: Mitigation Monitoring and Reporting Program* of the Discharger's final environmental impact report, *Outfall Land Section and OOBS Piping Rehabilitation, Final Environmental Impact Report* (Environmental Science Associates, 2012). After completion of the 2012 rehabilitation project and associated receiving water monitoring, the Discharger shall produce a review and critique of field monitoring efforts and prepare and submit a final summary report, by nine months following the successful completion of the project, to the Regional Water Board and USEPA. Based on these results, by 18 months following the successful completion of the project, the Discharger shall propose to the Regional Water Board and USEPA a receiving water core monitoring program for Discharge Point 002 during periods of non-operation and operation. This Order/Permit will be reopened and modified to incorporate receiving water core monitoring program changes for Discharge Point 002 approved by the Regional Water Board and USEPA.

B. Outfall and Diffuser Systems Inspection

The Discharger shall externally inspect each ocean outfall a minimum of once every five years. Inspections shall include general observations and videographic/photographic records of the outfall pipes and adjacent ballast material. The inspections may be conducted remotely operated vehicle, diver, or manned submarine. A summary report of the inspection findings shall be provided in the annual receiving water monitoring report.

XII. GENERAL MONITORING AND REPORTING REQUIREMENTS

A. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

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B. The Regional Water Board and USEPA may specify test procedures which are more sensitive than those in 40 CFR 136 (or 503). For monitoring performed with no procedures specified in 40 CFR or this Order/Permit, the parameter and procedure must be reported.

C. Laboratories analyzing monitoring samples shall be certified by the Department of Health Services, in accordance with the provision of CWC section 13176, and must include QA/QC data with their reports.

D. QA/QC data associated with a sample must be reported when requested by the Regional Water Board or USEPA. The Regional Water Board and USEPA will reject laboratory data if quality control data is unavailable or unacceptable.

E. The Discharger shall have and implement an acceptable written NPDES monitoring and reporting program QAPP for all monitoring and analyses required under this Order/Permit. For each target analyte, matrix spike duplicates shall be conducted on a minimum of ten percent of the samples, or at least one sample per month, whichever is greater. (Matrix spike duplicates are used to assess the precision and bias of a method for a given sample in a given matrix.) A comprehensive QA/QC report for all monitoring and analysis required under this Order/Permit shall be submitted annually, by March 15, for the previous fiscal year.

F. When requested by the Regional Water Board or USEPA, the Discharger shall participate in the NPDES DMR QA performance study.

G. The results of all monitoring data for this Order/Permit shall be reported in a tabulated format, acceptable by the Regional Water Board and USEPA, that allows direct comparison with the limitations and conditions of this Order/Permit and clearly illustrates compliance or noncompliance. Specific reporting formats may include preprinted reporting forms and/or electronic media.

Receiving water monitoring raw data files should be stored in a SWAMP-comparable electronic format which is uploadable into CEDEN, or an alternative electronic format specified by the Regional Water Board and USEPA.

H. By March 15 of each year, the Discharger shall submit an annual receiving water monitoring report for monitored activities during the previous fiscal year (July 1 through June 30), to the Regional Water Board and USEPA. The report shall contain both tabular and graphical summaries of receiving water monitoring data. In addition, the report shall discuss the compliance record and 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 be in compliance. Receiving water core monitoring results, including annotated QA/QC findings, shall be described and summarized. Separate report chapters for receiving water regional monitoring and strategic process studies shall provide summaries of monitored activities during the previous fiscal year.

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I. In addition to the standard provisions specified in Attachment D section IV.B, records of monitoring information shall also include:

1. The laboratory which performed the analyses;

2. Modifications to the analytical techniques or methods used;

3. Analyses results, including:

a. Units of measurement;

b. Reported minimum level (RL) for the analysis;

c. Results less than the reported minimum level but above the method detection limit (MDL);

d. Data qualifiers and a description of the qualifiers;

e. QC test results (and a written copy of the laboratory QA plan);

f. Dilution factors, if used; and

g. Sample matrix type.

4. Electronic data and information regarding influent and effluent flow, pH and other constituents subject to monitoring or effluent limitations generated by the Supervisory Control and Data Acquisition (SCADA) System;

5. All monitoring equipment calibration and maintenance records;

6. All original strip charts from continuous monitoring devices;

7. All data used to complete the application for this Order/Permit; and

8. Copies of all reports required by this Order/Permit.

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

K. Monitoring shall be in accordance with the following:

1. “1/week” samples shall be collected so that each day of the week is represented every two months.

2. “5/month” samples shall be collected so that each day of the week is represented every two months and that every week is represented each month, unless otherwise specified in this Order/Permit.

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3. "7/month" samples shall be collected so that each day of the week is represented and that every week is represented each month.

4. "1/month" samples shall be collected on any representative day of each month, unless otherwise specified in this Order/Permit.

5. "1/quarter" samples shall be collected on any representative day in January, April, July, and October, unless otherwise specified in this Order/Permit.

6. "2/year" samples shall be collected on any representative day in January and July, unless otherwise specified in this Order/Permit.

7. "1/year" samples shall be collected on any representative day in July, unless otherwise specified in this Order/Permit.

L. Dischargers are to instruct their laboratories to establish calibration standards so that the ML (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve. In accordance with Ocean Plan section III.C.5.b, the Discharger's laboratory may employ a calibration standard lower than the ML in Appendix II of the Ocean Plan.

M. Self Monitoring Reports (SMRs)

1. The Discharger shall electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program web site (http://www.waterboards.ca.gov/ciwqs/index.html).

2. The Discharger shall report in the SMR the results for all monitoring specified in this Order/Permit. The Discharger shall submit SMRs monthly including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order/Permit. If the Discharger monitors any pollutant more frequently than required by this Order/Permit, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-17. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR/DMR Due Date
Continuous	Effective date	All	Submit with monthly report
Hourly	Effective date	Hourly	Submit with monthly report
Daily	Effective date	Midnight through 11:59 pm, or any 24-hr period that reasonably	Submit with monthly report

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Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR/DMR Due Date
		represents a calendar day for sampling purposes	
Weekly	Sunday following effective date, or on effective date if Sunday	Sunday through Saturday	Submit with monthly report
Monthly	First day of calendar month following effective date, or on effective date if first day of month	1st day of calendar month through last day of calendar month	15th day of 2nd month following the monitoring period, submit as monthly report
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 15, August 15, November 15, February 15, submit with monthly report
Semi-annually	Closest of January 1 or July 1 following (or on) effective date	January 1 through June 30 July 1 through December 31	August 15, February 15, submit with monthly report
Annually	January 1 following (or on) effective date	January 1 through December 31	February 15, submit with monthly report
Other	On date specified in Order/Permit	As specified in Order/Permit	Submit with monthly report

4. The Discharger shall submit SMRs 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. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. If CIWQS does not provide for entry into a tabular format within the system, then the Discharger shall electronically submit the tabular format data as an attachment (e.g., receiving water monitoring data). The Discharger shall electronically submit required written reports as an attachment (e.g., annual receiving water monitoring report).

b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the Order/Permit; 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.

c. SMRs must be signed and certified as required by the Standard Provisions (Attachment D).

This is a federal permit. SMRs submitted to the State that are not DMRs shall also be submitted to USEPA at the following address, unless another USEPA

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address is specified in this Order/Permit. Signed and certified written reports and receiving water monitoring data may be submitted on a CD-ROM, with a signed cover letter.

U.S. EPA, Region 9
ATTN: NPDES Data Team (WTR-1)
75 Hawthorne Street
San Francisco, CA 94105-3901

N. Discharge Monitoring Reports (DMRs)

1. DMRs are not SMRs. At any time during the term of this Order/Permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of DMRs to the State. Until such notification is given by the State, the Discharger shall submit DMRs in accordance with the requirements described below.

2. All DMRs must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of EPA Form 3320-1.

3. DMRs must be signed and certified as required by the Standard Provisions (Attachment D). The Discharger shall submit the original hard-copy DMR with original wet signature to one of the State Water Board addresses listed below.

Table E-18. Addresses for DMR Submittal

Standard Mail	FedEx/UPS/Other Private Carriers
State Water Resources Control Board Division of Water Quality NPDES Unit, 15-35A ATTN: DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality NPDES Unit, 15-35A ATTN: DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

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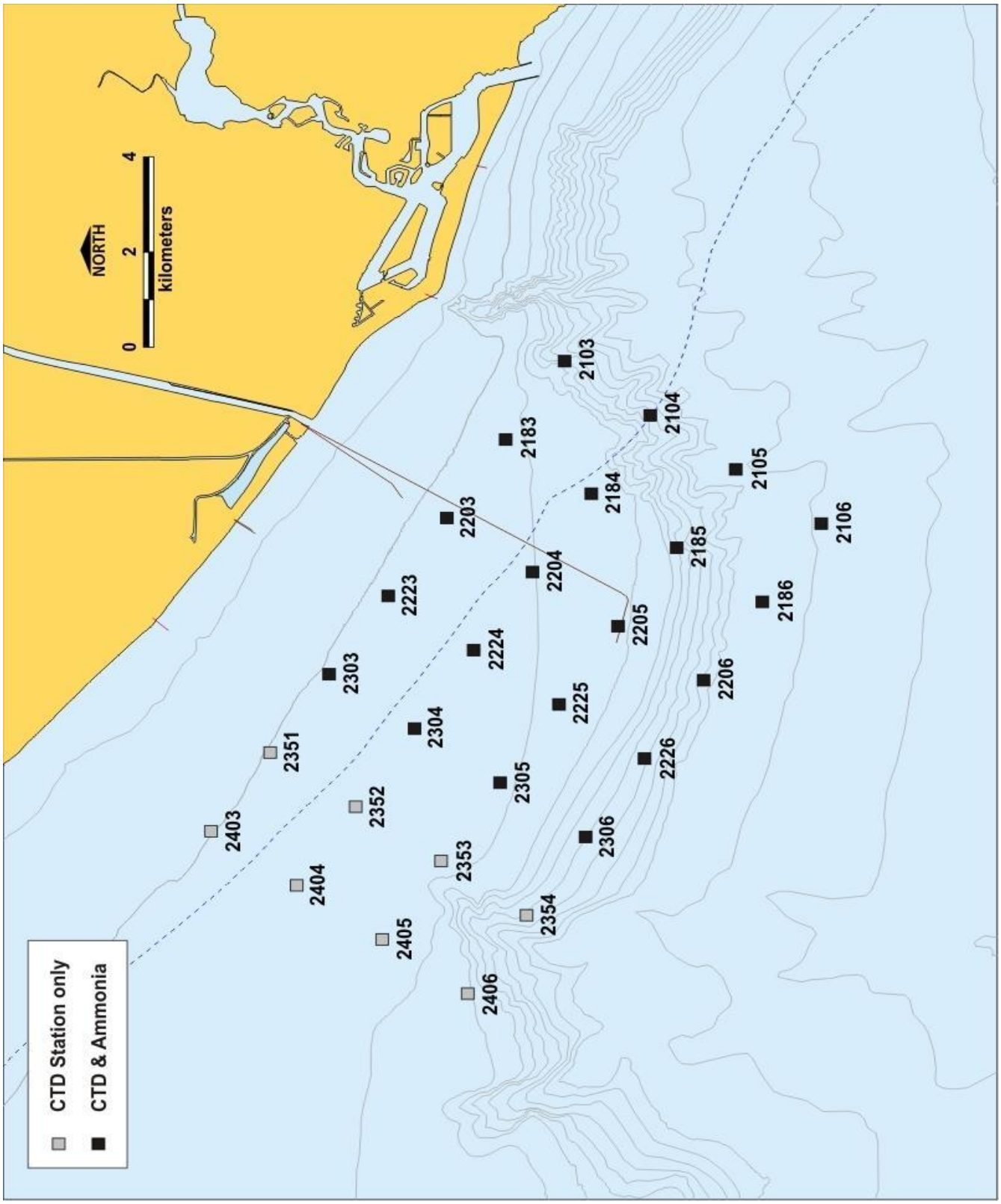
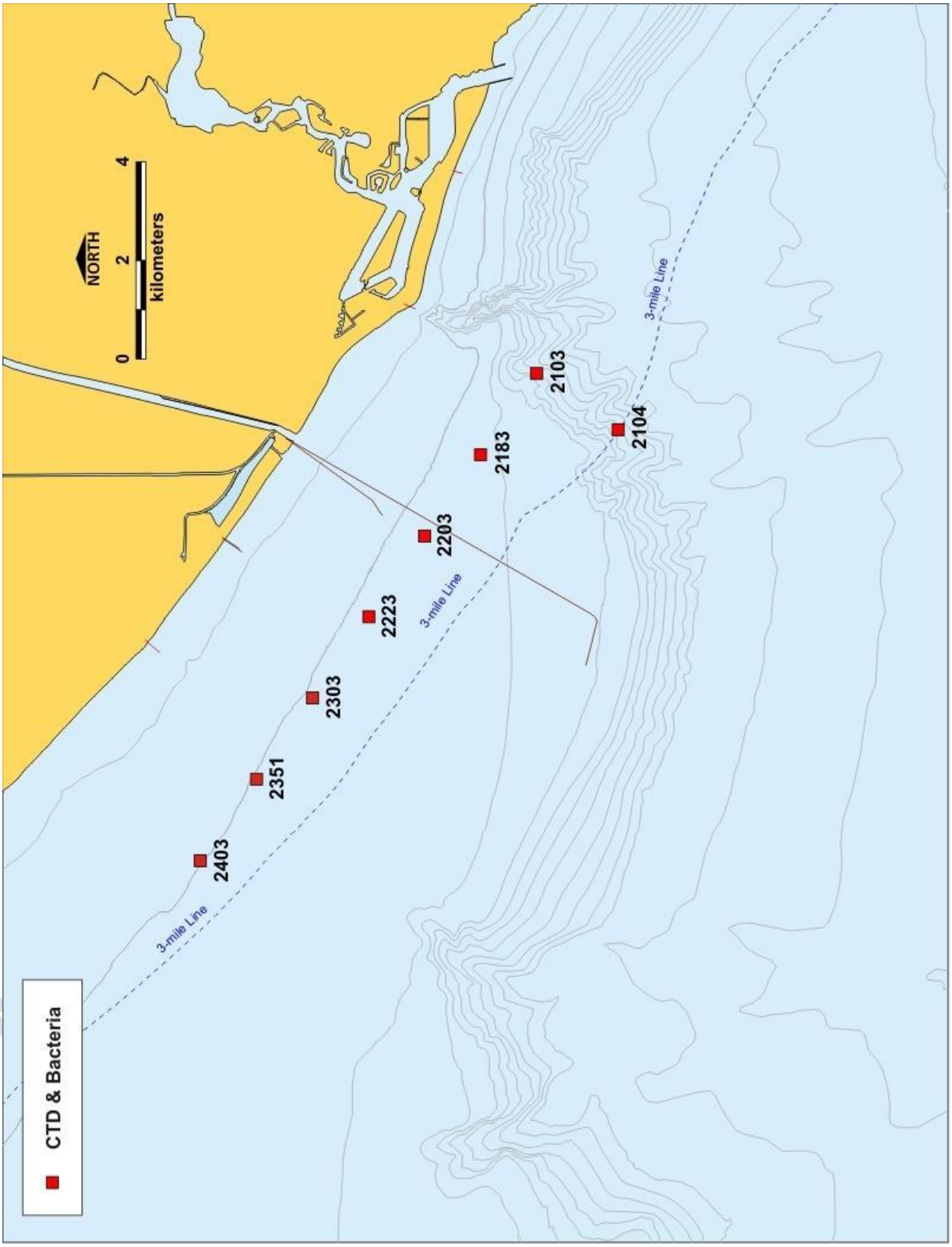
Receiving Water Core Monitoring Stations –

Figure 1. Monthly Water Quality Monitoring Stations (n=28)



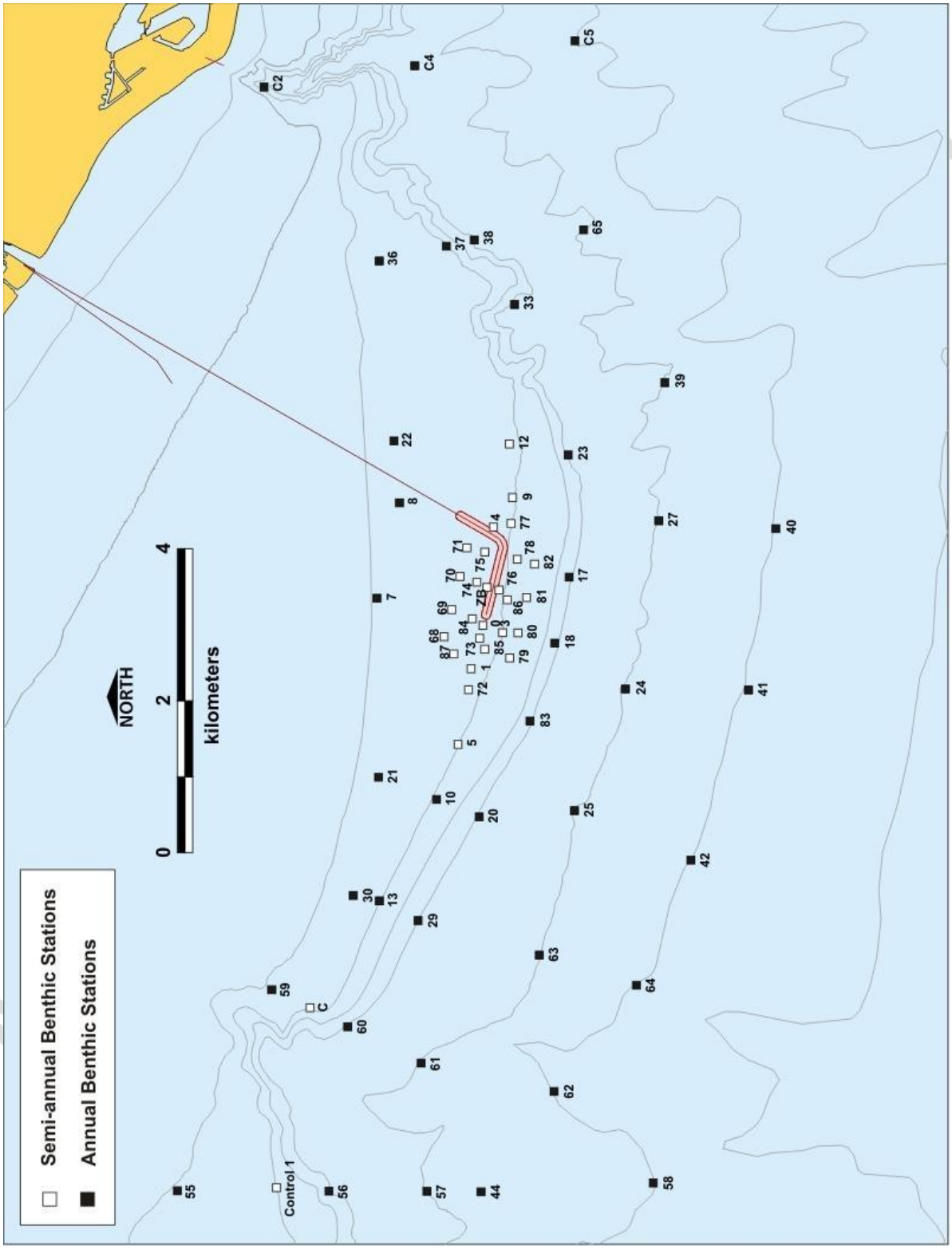
Receiving Water Core Monitoring Stations –

Figure 2. Quarterly REC-1 Water Quality Monitoring Stations (Offshore Zone) (n=8)



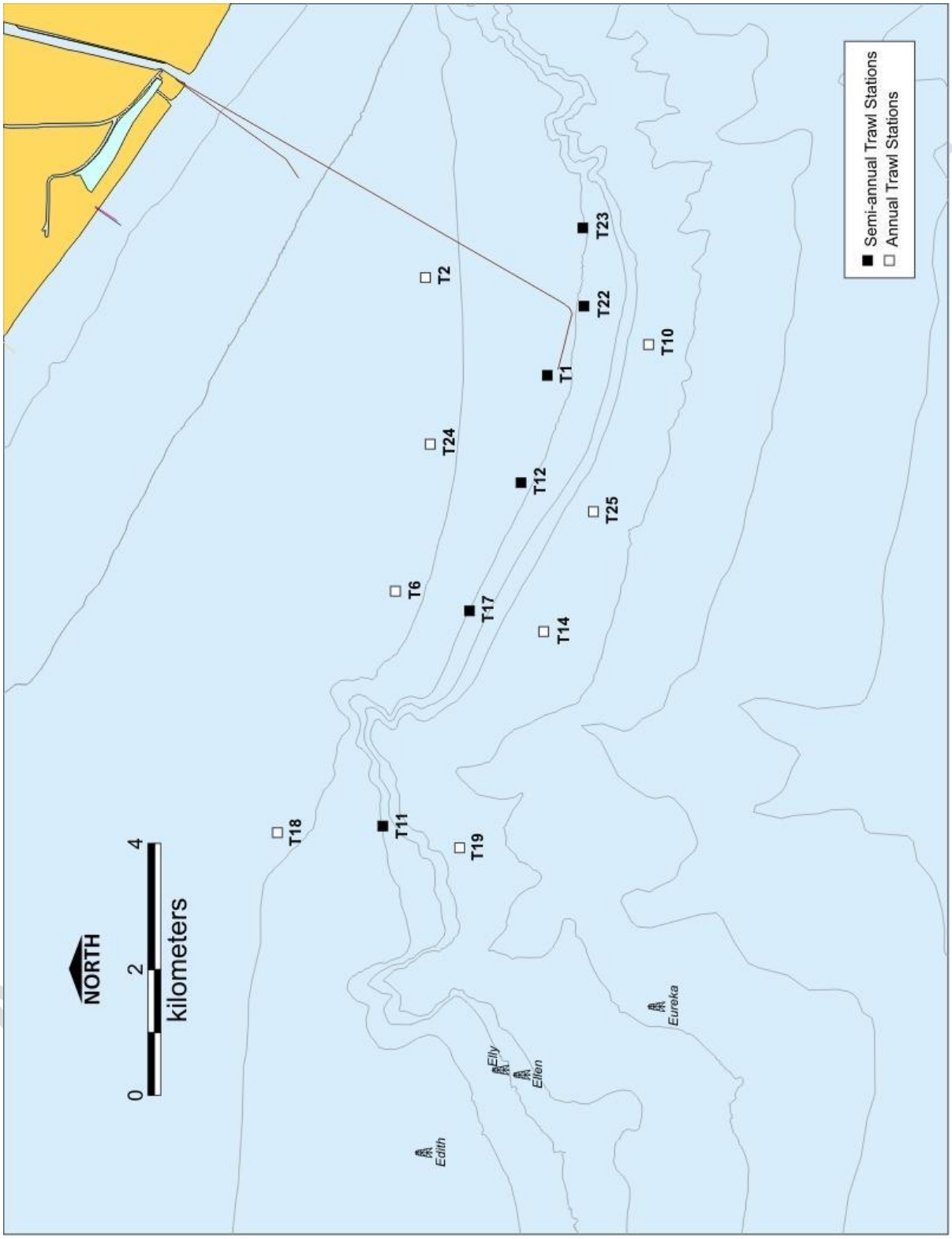
Receiving Water Core Monitoring Stations –

Figure 3. Semi-annual Benthic Monitoring Stations (n=29) and Annual Benthic Monitoring Stations (n=39)



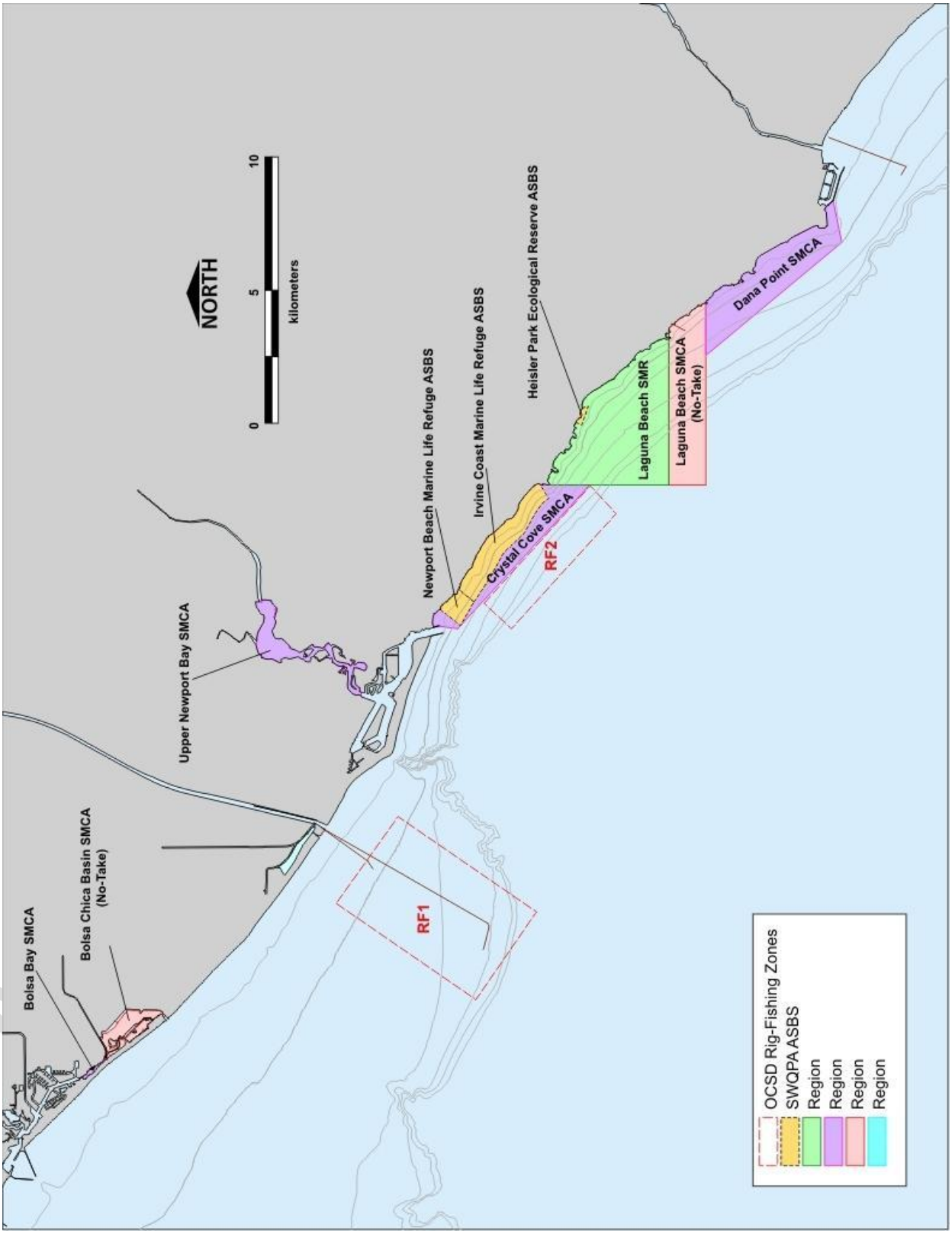
Receiving Water Core Monitoring Stations –

Figure 4. Semi-annual Trawl Fish Monitoring Stations (n=6) and Annual Trawl Fish Monitoring Stations (n=8)



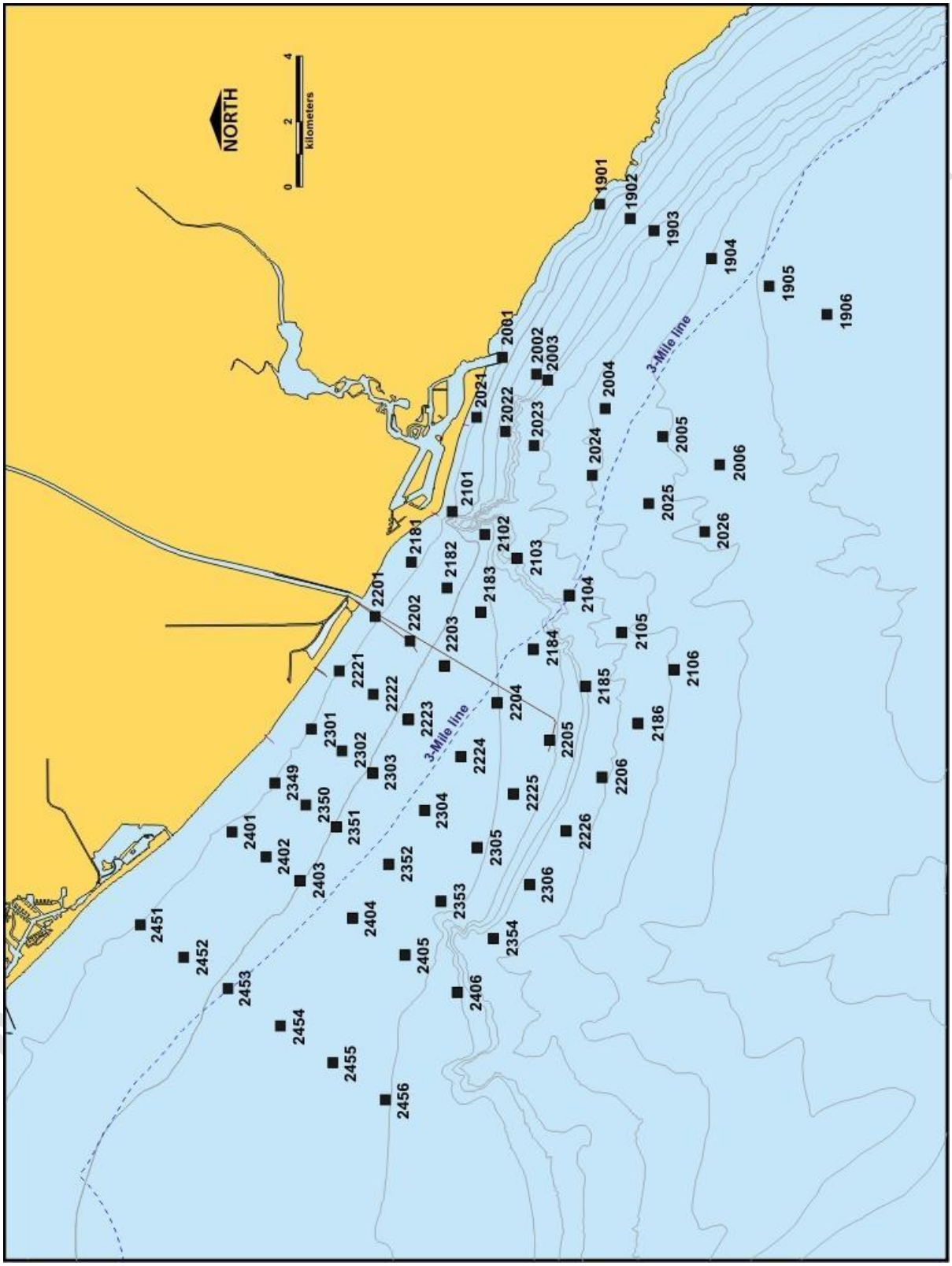
Receiving Water Core Monitoring Stations –

Figure 5. Annual Rig Fish Monitoring Zones (n=2)



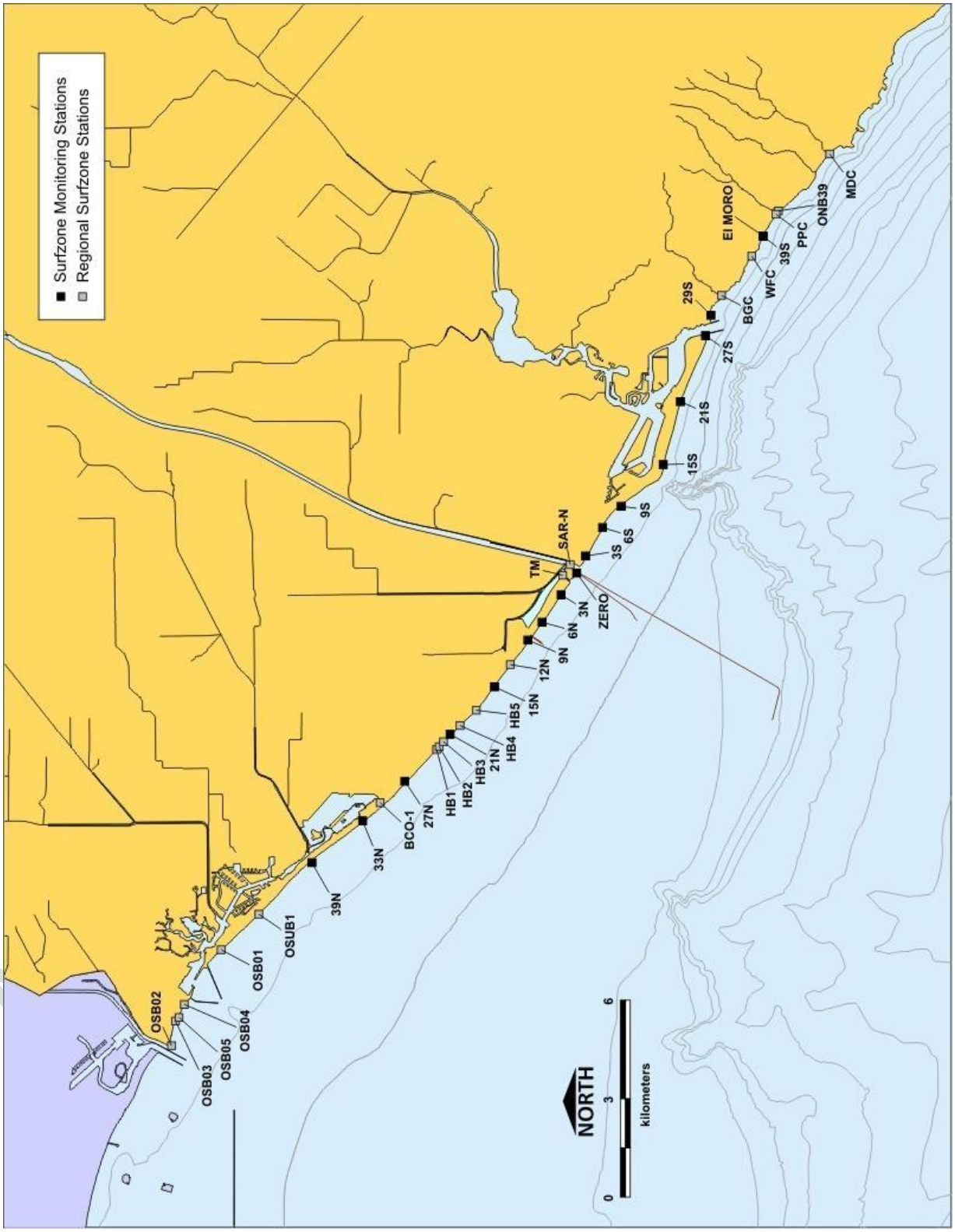
Receiving Water Regional Monitoring Stations –

Figure 6. Quarterly Central Bight Water Quality Monitoring Stations (n=66)



Receiving Water Regional Monitoring Stations –

Figure 7. Monthly REC-1 Water Quality Monitoring Stations (Nearshore Zone) (n=38)



ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in Section II of this Order/Permit, the Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order/Permit. This Order/Permit has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California.

I. PERMIT INFORMATION

A. The following table summarizes administrative information related to the Order/Permit.

Table F-1. Permit Information

WDID	8 300110002	
Discharger/Operator	Orange County Sanitation District	
Name of Facility	Reclamation Plant No. 1 and Treatment Plant No. 2, collection system, and outfalls (and POTW)	
Facility Address	Reclamation Plant No. 1	Treatment Plant No. 2
	10844 Ellis Avenue	22212 Brookhurst Street
	Fountain Valley, CA 92708-7018	Huntington Beach, CA 92646-8406
	Orange County	
Discharger Contact, Title, and Phone	James Ruth, General Manager (714) 593-7101	
Mailing Address	10844 Ellis Avenue Fountain Valley, CA 92708-7018	
Billing Address	Same	
Type of Facility	Publicly Owned Treatment Works (POTW)	
Major or Minor Facility	Major	
Threat to Water Quality	1	
Complexity	A	
Pretreatment Program	Yes	
Reclamation Requirements	None	
Facility Design Flow	332 mgd total secondary, average daily dry weather flow 591 mgd total secondary, average daily wet weather flow	
Receiving Water	Pacific Ocean	
Receiving Water Type	Ocean Waters	

B. Orange County Sanitation District (hereinafter Discharger) owns and operates its regional collection system, treatment facilities, and outfalls (hereinafter POTW).

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For the purposes of this Order/Permit, references to the "discharger" or "permittee" in applicable federal and State laws, regulations, plans, or policies are held to be equivalent to references to the Discharger herein.

C. The POTW discharges wastewater to the Pacific Ocean, a water of the United States, and is currently regulated by Order No. R8-2004-0062 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0110604 which was adopted on September 17, 2004, issued on September 29, 2004, and expired on September 28, 2009. Compliance with secondary treatment standards governing the OCSD discharge are addressed in a consent decree (Civil Action No. SACV04-1317AHS) and a time schedule order (Time Schedule Order No. R8-2004-0067). Final compliance with full secondary treatment must be achieved by December 31, 2012. The terms and conditions of the existing Order/Permit have been automatically continued and remain in effect until new Waste Discharge Requirements and NPDES permit are adopted pursuant to this Order/Permit.

D. The Discharger filed a Report of Waste Discharge and applied for renewal of its Waste Discharge Requirements and NPDES permit renewal to discharge disinfected secondary treated wastewater from Reclamation Plant No. 1 (in Fountain Valley) and Treatment Plant No. 2 (in Huntington Beach) (hereinafter treatment facilities) on April 22, 2009.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment/Controls

The Discharger's POTW serves approximately 471 square miles of central and northern Orange County, California. Currently, the POTW consists of approximately 650 miles of trunk sewer systems and force mains, 16 pump stations, two wastewater treatment plants, and three outfalls. In addition to the domestic, commercial, and industrial wastewater received from this service area, influent flows are contributed by the Santa Ana Watershed Project Authority, Irvine Ranch Water District, and Stringfellow Superfund Site (EPA ID #CAT080012826). During dry weather conditions, the Discharger also accepts small volumes (less than 5 mgd) of dry weather urban runoff.

The Groundwater Replenishment System (GWRS), a major regional wastewater reclamation project owned and operated by the Orange County Water District (OCWD), is located adjacent to Reclamation Plant No. 1 and can divert up to 100 mgd of the Discharger's secondary treated wastewater for advanced treatment and reuse. Advanced treatment for the GWRS includes microfiltration, reverse osmosis, and ultraviolet. Part of OCWD's advanced treatment process generates filter backwash and concentrates high in salts, ammonia nitrogen, and trace metals. These wastestreams are returned to OCSD for treatment and/or ocean disposal.

Plant No. 1 and Treatment Plant No. 2 are constructed to together treat 372 mgd of primary treated wastewater and 332 mgd of secondary treated wastewater. Fiscal Year 2011-2012 average daily ocean discharge under dry weather conditions was

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207 mgd without (and 152 mgd with) reclamation. The projected (2017) average daily ocean discharge under dry weather conditions is 253 mgd without (and 158 mgd with) reclamation. The projected (2017) peak dry weather flow for ocean discharge is 321 mgd without (and 226 mgd with) reclamation. The projected (2017) peak wet weather flow for ocean discharge is 552 mgd without (and 457 mgd with) reclamation. Raw wastewater entering the two treatment facilities passes through metering and diversion structures and continues to headworks facilities for preliminary treatment. Preliminary treatment includes grit and screenings removal. Ferric chloride and polymer can be added to provide enhanced primary treatment. The wastewater then receives primary treatment in primary sedimentation facilities. The primary effluent is routed to trickling filters and activated sludge facilities for secondary treatment or for ocean discharge. Secondary treated effluent is either discharged to the ocean, or delivered from Reclamation Plant No. 1 to OCWD for further treatment and reclamation. OCWD waste streams are recycled back into OCSD's primary or secondary treatment facilities, except for reverse osmosis backwash (brine) which is blended with other treated waste streams in the interplant lines and the final effluent stream prior to ocean discharge. Chlorine bleach (sodium hypochlorite) is fed to the primary influent, primary effluent, and secondary effluent streams. After effluent disinfection with chlorine bleach, sodium bisulfite is used to ensure that no excess residual chlorine is discharged into the ocean. The effluent is discharged through an ocean outfall system to the Pacific Ocean, a water of the United States.

Solids are shipped offsite to other facilities providing conversion to e-fuel for use in a local cement kiln, composting for agricultural use, land application for agricultural use, or disposed of in a municipal solid waste landfill. Attachment B provides a map of the area around the treatment facilities. Attachment C provides flow schematics of the full secondary treatment facilities.

B. Discharge Points and Receiving Waters

Authorized discharge points are described as follows. Discharge Point 001 (120" outfall) is the primary discharge point to the Pacific Ocean terminating in a multi-port diffuser, approximately 4.5 miles offshore from the mouth of the Santa Ana River, at a depth of about 195 feet (60 meters). The Ocean Plan minimum probable initial dilution (Dm = 180) for this outfall is 181:1. Discharge Point 002 (78" outfall) is an emergency discharge point (deactivated ocean outfall) to the Pacific Ocean terminating in a multi-port diffuser, approximately 1 mile offshore from the mouth of the Santa Ana River, at a depth of about 65 feet (20 meters); it is also the primary discharge point, during periods of essential maintenance of the 120" outfall conducted under 40 CFR 122.41(m)(2). The Ocean Plan minimum probable initial dilution (Dm = 36) for this outfall is 37:1. Discharge Point 003 is two extreme emergency discharge points (overflow) to the Pacific Ocean at the Santa Ana River and the capacity is approximately 605 mgd.

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Table F-2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Disinfected secondary treated effluent	33°34'36" N	118°00'36" W	Pacific Ocean
002	Disinfected secondary treated effluent	33°36'56" N	117°58'13" W	Pacific Ocean
003	Disinfected secondary treated effluent	33°38'06" N	117°57'20" W	Santa Ana River

C. Summary of Existing Requirements and Monitoring Data

Effluent limitations contained in the existing Order/Permit for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Order/Permit are as follows.

Table F-3. Historic Effluent Limitations and Discharge Monitoring Data Based on Secondary Treatment Standards and/or Ocean Plan Table A Effluent Limitations

Parameter	Units	Order No. R4-2004-0062 Effluent Limitation			Discharge Monitoring Data (January 2009 – December 2011)		
		Average Monthly	Average Weekly	Maximum Daily (or Instantaneous Maximum*)	Highest Average Monthly	Highest Average Weekly	Highest Daily
Secondary Treatment Standards and/or Ocean Plan Table A Effluent Limitations – Compliance with secondary treatment standards governing the OCSD discharge are addressed in a consent decree (Civil Action No. SACV04-1317AHS) and a time schedule order (Time Schedule Order No. R8-2004-0067). Final compliance with full secondary treatment must be achieved by December 31, 2012.							
Biochemical oxygen demand 5-day @ 20˚C	mg/L	30	45	--	48	35	--
	% removed	85	--	--	--	--	--
Carbonaceous biochemical oxygen demand 5-day @ 20˚C	mg/L	20	40	--	33	37	--
Total suspended solids	mg/L	30	45	--	36	40	--
	% removed	85	--	--	--	--	--
pH	standard units	6.0 to 9.0 (instantaneous minimum/maximum)			7.4 – 7.8 (minimum/maximum)		
Oil and grease	mg/L	25	40	75*	10.8	10.8	10.8
Settleable solids	ml/L	1.0	1.5	3.0*	0.51	0.93	12
Turbidity	NTU	75	100	225*	38	38	38

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Table F-4. Historic Effluent Limitations and Monitoring Data for Ocean Plan Table B Water Quality Objectives

Parameter	Units	Order No. R8-2004-0062 Effluent Limitation			Discharge Monitoring Data (January 2009 – December 2011)			
		6-Month Median (or Average Monthly*)	Maximum Daily	Instantaneous Maximum	Minimum Non-detect	Maximum Non-detect	Minimum Detected	Maximum Detected
Ocean Plan Table B Protection of Marine Aquatic Life								
Total chlorine residual	mg/L	0.36	1.45	10.86	--	<0.02	0.02	2.04
Acute toxicity, LC-50	TUa	--	5.7	--	--	<1.43	1.64	3.04
Chronic toxicity, NOEC	TUc	--	181	--	--	--	55.56	100.00
Radioactivity	pCi/L	Not to exceed limits specified in title 17, division 1, chapter 5, subchapter 4, group 3, article 3, section 30253 of the California Code of Regulations. Reference to section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.			--	--	12.0	55.6
Ocean Plan Table B Protection of Human Health – Carcinogens								
Benzidine	ug/L	0.01249	--	--	<2.5	<2.5	--	--
Chlordane*	ug/L	0.00416	--	--	<0	<0.4	--	--
3,3-dichlorobenzidine	ug/L	1.4661	--	--	<0.49	<0.49	--	--
Hexachlorobenzene	ug/L	0.0380	--	--	<0.008	<0.43	--	--
PAH*	ug/L	1.5928	--	--	<0	<0	--	--
PCBs*	ug/L	0.0034	--	--	<0	<0	--	--
TCDD equivalents*	pg/L	1.637	--	--	<0	<0	0.013	0.426
Toxaphene	ug/L	0.03801	--	--	<0	<1.2	--	--

* For definitions indicated by "*", see Attachment A – Definitions.
< Not detected at that concentration level.

D. Compliance Summary

No significant compliance issues have been identified over the term of the current permit term.

OCSD has not officially declared the POTW at full secondary treatment; however, as of May 2011, all flows have received secondary treatment and remained below the 30/30 effluent limitations in the Order/Permit. OCSD will not officially declare the POTW at full secondary treatment until commissioning of the new secondary treatment process at Reclamation Plant 1 (Summer 2012) and final tie-in to new headworks at Treatment Plant 2 (Fall 2012).

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E. Planned Changes

Secondary Treatment Projects. The Discharger has provided a summary of the Secondary Treatment Projects that are completed or currently underway to achieve compliance with federal secondary treatment standards for BOD5 and TSS.

Reclamation Plant No. 1

- New Activated Sludge System. The project constructed six aeration basins, six circular clarifiers, a blower building, and a power building. The project added 60 mgd of secondary treatment capacity and was commissioned in May 2012 and is anticipated to be completed in Fall 2012.

- Trickling Filter Rehabilitation and New Trickling Filter Clarifiers. The project included removal of four existing trickling filters, the addition of two new clarifiers, and a power building. Additionally, two effluent lines were constructed: one to the GWRS inlet structure and one to the Discharger's 66" interplant pipeline. The project was completed in February 2006.

Treatment Plant No. 2

- New Trickling Filter. The project added 60 mgd of secondary treatment capacity. Major components include construction of three trickling filters, eight solids contact and sludge re-aeration basins, six secondary clarifiers, and a pump station to transport primary effluent to the new facility. The project is anticipated to be completed in December 2012.

- Activated Sludge Plant Rehabilitation. The project provides for rehabilitation of the Activated Sludge Plant and necessary improvements to provide for reliability and redundancy of the existing secondary treatment system. Major work elements included replacement of aerator impellers, sluice gates, recoating of large-diameter pipelines, scum and inlet gate actuators, odor control, and small process piping. The project was completed in April 2008.

Outfall Land Section and Ocean Outfall Booster Pump Station Piping Rehabilitation. During the term of this Order/Permit, the Discharger is proposing to rehabilitate its outfall system within Treatment Plant No. 2, in Huntington Beach, and its Junction Box (Beach Box), at Huntington State Beach. The Discharger has conducted several studies on the condition of its outfall systems and has performed necessary repairs. To date, the outfall system has only required minimal maintenance. However, an engineering report by the Discharger revealed that the steel bulkhead walls on the east and west sides of the Beach Box may be experiencing severe corrosion and may be structurally deficient. The report recommended that the Beach Box be rehabilitated as soon as possible to avoid any potential risk of Beach Box failure. Bulkheads separating the 120" outfall (Discharge Point 001) and the 78" outfall (Discharge Point 002) compartments and another at the east end of the 120" outfall compartment require that the 120" outfall be taken out of service for access, proper inspection, and rehabilitation. Until this occurs, it

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remains difficult to assess the condition of these bulkheads or conduct the necessary rehabilitation. Additionally, the Discharger's outfall facilities are approximately 40 years old and concurrent internal/external inspections on the 120" outfall are also needed.

The Discharger has conducted an environmental impact report for the project and, during the term of this Order/Permit, is planning to conduct essential maintenance to assure efficient operation of the 120"outfall. The project will consist of inspection, condition assessment, and rehabilitation of corroded components of the land section of the 120" outfall, extending from Surge Tower No. 2 within Treatment Plant No. 2 to the Beach Box located on Huntington State Beach. The project includes five elements: rehabilitation of Surge Tower 2; rehabilitation of the land 120" outfall; abandonment of the 120" outfall metering ports and vaults; replacement of the existing effluent flow meter on the 120" outfall; and rehabilitation of the Beach Box.

This Order/Permit authorizes discharge to the 78" outfall (Discharge Point 002) and bypass of the 120" outfall which does not cause effluent limitations to be exceeded during essential maintenance to assure efficient operation of the 120" outfall (40 CFR 122.41(m)(2)). During the project, discharge through the 78" outfall will occur for four to six weeks.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order/Permit is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by USEPA and chapter 5.5, division 7, of the California Water Code (commencing with section 13370). This Order shall serve as a jointly-issued NPDES permit for point source discharges from this POTW to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7, of the California Water Code (commencing with section 13260). Although Discharge Point 001 is beyond the limit of State-regulated ocean waters, effluent plume migration into State waters warrants joint regulation of the discharge by USEPA and the Regional Water Board.

B. California Environmental Quality Act (CEQA)

Under California Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.

C. State and Federal Regulations, Policies, and Plans

1. **Santa Ana Region Basin Plan.** In 1995, the Regional Water Board adopted Water Quality Control Plan, Santa Ana River Basin (hereinafter Basin Plan), as

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amended, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Offshore Zone and Nearshore Zone of the Pacific Ocean and the Tidal Prism of the Santa Ana River. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63 which established State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Basin Plan beneficial uses applicable to the Pacific Ocean and/or the Santa Ana River tidal prism are shown in Table F-5. Requirements of this Order/Permit implement the Basin Plan.

Table F-5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001	Pacific Ocean, Offshore Zone	**Offshore Zone:** Industrial service supply; navigation; water contact recreation; non-contact water recreation; commercial and sportfishing; wildlife habitat; rare, threatened, or endangered species; spawning, reproduction, and development; and marine habitat. **Nearshore Zone:** Industrial service supply; navigation; water contact recreation; non-contact water recreation; commercial and sportfishing; wildlife habitat; rare, threatened, or endangered species; spawning, reproduction, and development; marine habitat; and shellfish harvesting. **Santa Ana River, Reach 1:** Water contact recreation (access prohibited); non-contact water recreation; warm freshwater habitat; and wildlife habitat.
002	Pacific Ocean, Offshore and Nearshore Zones	
003	Santa Ana River, Reach 1 and Nearshore Zone	

2. **California Thermal Plan.** In 1972, the State Water Board adopted Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (hereinafter Thermal Plan), as amended. This plan contains temperature objectives for coastal and inland surface waters. Requirements of this Order/Permit implement the Thermal Plan.

3. **California Ocean Plan.** In 1972, the State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (hereinafter Ocean Plan), as amended. The latest amendment became effective on October 8, 2010. The Ocean Plan is applicable, in its entirety, to point source discharges into ocean waters of the State. Beneficial uses applicable to ocean waters of the State are shown in Table F-6. To protect the beneficial uses in ocean waters, the Ocean Plan establishes Table B water quality objectives and a program of implementation. Requirements of this Order/Permit implement the Ocean Plan.

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Table F-6. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001, 002, and 003	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance; rare and endangered species; marine habitat; fish migration; fish spawning and shellfish harvesting.

4. **Alaska Rule.** USEPA has revised its regulation that specifies when new and revised State and tribal water quality standards become effective for CWA purposes. (40 CFR 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (hereinafter Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000 must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

5. **Stringency of Requirements for Individual Pollutants.** This Order/Permit contains technology-based effluent limitations and WQBELs for individual pollutants. Technology-based effluent limitations consist of restrictions on biochemical oxygen demand (5-day), carbonaceous biochemical oxygen demand (5-day), total suspended solids, and pH which implement the minimum, applicable federal technology-based requirements for POTWs. Also, effluent limitations consisting of restrictions on oil and grease, settleable solids, and turbidity more stringent than federal technology-based limitations are necessary to implement State treatment standards in Ocean Plan Table A. Discharge Point 001 WQBELs consisting of restrictions on total chlorine residual, acute toxicity, chronic toxicity, radioactivity, benzidine, hexachlorobenzene, PCBs, TCDD equivalents, and toxaphene more stringent than federal technology-based limitations are necessary to meet State water quality standards in the Ocean Plan. Discharge Point 002 WQBELs consisting of restrictions on total coliform density, fecal coliform density, *Enterococcus* density, total chlorine residual, chronic toxicity, radioactivity, and TDCC equivalents more stringent than federal technology-based limitations are necessary to meet State water quality standards in the Ocean Plan. All effluent limitations are discussed in the Fact Sheet. Collectively, the restrictions on individual pollutants in this Order/Permit are no more stringent than required by the CWA.

6. **Antidegradation Policy.** 40 CFR 131.12 requires that State water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. This resolution incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements and incorporates by reference both the

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State and federal antidegradation policies. As discussed in the Fact Sheet, the discharge is consistent with 40 CFR 131.12 and State Water Board Resolution No. 68-16.

7. **Anti-backsliding Requirements.** CWA section 402(o)/303(d)(4) and 40 CFR 122.44(l) prohibit backsliding and require effluent limitations, permit conditions, and standards in a reissued NPDES permit to be as stringent as those in the previous permit, with some exceptions where limitations and conditions may be relaxed. All effluent limitations and conditions in this Order/Permit are at least as stringent as those in the previous Order/Permit.

D. Impaired Water Bodies on CWA 303(d) List

On October 11, 2011, USEPA issued a final decision regarding California's 2010-2010 CWA section 303(d) List of Water Quality Limited Segments. The list (hereinafter 303(d) list) identifies water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limits by point sources. Huntington Beach State Park is included on the 303(d) list for PCBs (polychlorinated biphenyls); the source is unknown and the expected TMDL completion date is 2019. The offshore and nearshore zones off Huntington Beach State Park are the immediately affected receiving waters of discharges from the Facility.

E. Other Plans, Policies and Regulations

1. **Federal Secondary Treatment Standards.** Prior to reissuance of the 2004 Order/Permit, the Discharger operated under an NPDES permit which incorporated a variance from federal secondary treatment standards for BOD_5 and TSS. On December 2, 2002, the Discharger submitted a timely NPDES permit renewal application reflecting the OCSD Board of Directors' July 17, 2002 decision to withdraw the Discharger's CWA 301(h) variance and achieve full compliance with federal secondary treatment standards at the earliest possible date. Compliance with secondary treatment standards and interim effluent limitations governing the OCSD discharge are addressed in a consent decree (Civil Action No. SACV04-1317AHS) and a time schedule order (Time Schedule Order No. R8-2004-0067). Both enforcement actions remain in effect at the time of this Order/Permit reissuance.

2. **Industrial Storm Water Requirements.** Sewage treatment works with a design flow of 1.0 mgd or greater are required to comply with Water Quality Order No. 97-03-DWQ (NPDES General Permit No. CAS000001), WDRs for Dischargers of Storm Water Associated with Industrial Activity, Excluding Construction Activities. The Discharger has provided certification to the Regional Water Board that industrial stormwater is managed by internal drainage systems at Reclamation Plant No. 1 and Treatment Plant No. 2, where stormwater is captured, treated, and discharged with the treated wastewater regulated under this Order/Permit. This Order/Permit requires the

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Discharger to submit and implement a Stormwater Management Plan to address onsite stormwater quality.

3. **Sanitary Sewer Overflows.** The State Water Board issued Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General Order) on May 2, 2006, as amended. The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions. Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating SSOs. The Discharger's collection system is part of the POTW that is subject to this Order/Permit. The Discharger must comply with both the General Order and this Order/Permit.

4. **Sewage Sludge/Biosolids Requirements.** Section 405 of the CWA and implementing regulations at 40 CFR 503 require that producers of sewage sludge/biosolids meet certain reporting, handling, and use or disposal requirements. The State has not been delegated the authority to implement this program; therefore, USEPA is the implementing agency. This Order/Permit contains sewage sludge/biosolids requirements pursuant to 40 CFR 503 that are applicable to the Discharger.

5. **Pretreatment Requirements.** In compliance with 40 CFR 403, OCSD has developed an approved Pretreatment Program for the POTW that it owns and operates. This Order/Permit includes the Discharger's approved Pretreatment Program and requires the Discharger to continue implementation and control of the Program throughout the service area of its POTW, including contributing jurisdictions.

   The POTW, as Control Authority, may exercise its authority over the entire service area directly, as provided by State law, or may elect to enter into contracts or other multi-jurisdictional agreements with contributing jurisdictions. In case the POTW elects to enter into inter-jurisdictional agreements, the POTW must ensure that discharges received from entities outside of its political boundaries are regulated to the same extent as are discharges within its political boundaries. OCSD applies one set of local limits to all discharges to its treatment facilities.

6. **Federal Permit Renewal Contingency.** The Discharger's federal permit renewal is contingent upon: (1) determination by the U.S. Fish and Wildlife Service and NOAA National Marine Fisheries Service that the proposed discharge is consistent with the federal Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.) and (2) the Regional Water Board's certification/concurrence that the discharge will comply with applicable State water quality standards. Joint issuance of an NPDES permit which

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incorporates both federal requirements and State waste discharge requirements will serve as the State's concurrence that the proposed discharge complies with applicable State water quality standards. USEPA has determined that issuance of this Order/Permit may affect, but is not likely to adversely affect species listed under the federal ESA and is requesting the Services' concurrence with this determination. The California Coastal Commission has indicated that it is not necessary to obtain a consistency certification pursuant to the Coastal Zone Management Act (16 U.S.C. 1451 et seq.) for the issuance of a federal NPDES permit containing secondary treatment standards.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Discharge Prohibitions

Discharge Prohibitions in this Order/Permit are based on Ocean Plan discharge prohibitions, Basin Plan discharge prohibitions, and discharge prohibitions in the existing Order/Permit.

B. Technology-based Effluent Limitations (TBELs)

1. Scope and Authority

Section 301(b) of the CWA and implementing regulations at 40 CFR 122.44 require that NPDES permits include limitations and conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations and conditions necessary to meet applicable water quality standards. The discharge authorized by this Order/Permit must meet minimum federal technology-based effluent limitations (TBELs) based on secondary treatment standards for POTWs at 40 CFR 133 and Ocean Plan Table A effluent limitations.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and nonconventional pollutants.

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b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and nonconventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD_5, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in 40 CFR 125.3.

40 CFR 125.3(a)(1) requires TBELs for municipal dischargers to be placed in NPDES permits based on Secondary Treatment Standards. The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTWs (defined in CWA section 304(d)(1)). Section 301(b)(1)(B) of the CWA requires that such treatment works must, at minimum, meet effluent limitations based on secondary treatment standards as defined by the USEPA Administrator. Based on this statutory requirement, USEPA developed secondary treatment regulations at 40 CFR 133. These technology-based requirements apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD_5, TSS, and pH.

Table F-7. Federal Secondary Treatment Standards

Parameter	Units	30-day Average	7-day Average
BOD_5	mg/L	30	45
	influent % removal	not less than 85	--
TSS	mg/L	30	45
	influent % removal	not less than 85	--

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Parameter	Units	30-day Average	7-day Average
pH	standard units	6.0 – 9.0 at all times	

On May 13, 2004, the Discharger requested the inclusion of effluent limitations for five-day carbonaceous biochemical oxygen demand ($CBOD_5$), as allowed by 40 CFR 133.102(a)(4), for the period following completion of expanded secondary treatment facilities. In the 2004 Order/Permit, $CBOD_5$ effluent limitations were applied to the final effluent during partial or full nitrification at the Discharger's secondary treatment facilities, where effluent nitrification is used to reduce ammonia toxicity associated with wastewater treatment and brine reject flow from the Groundwater Replenishment System. As nitrifying bacteria use oxygen to degrade nitrogenous compounds otherwise not significantly removed in the secondary treatment process, higher oxygen demand values for the final effluent result. Consequently, the use of $CBOD_5$ effluent limits have been found to ensure that federal secondary treatment standards for POTWs are achieved while allowing the Discharger to use the treatment process of nitrification to reduce ammonia toxicity in the discharged effluent and comply with Ocean Plan requirements for acute and chronic toxicity. $CBOD_5$ effluent limitations have been carried over to this Order/Permit.

Table A of the Ocean Plan establishes technology based effluent limitations for POTWs, and industrial discharges for which effluent limitation guidelines have not been established. Table A effluent limitations are summarized, as follows.

Table F-8. Ocean Plan Table A Effluent Limitations

Parameter	Units	30-day Average	7-day Average	Instantaneous Maximum
Grease and Oil	mg/L	25	40	75
Suspended Solids	mg/L	--	--	--
	influent % removal	not less than 75	--	--
Settleable Solids	ml/L	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH	standard units	6.0 – 9.0 at all times		

Compliance with mass emission effluent limitations for TBELs must be met end-of-pipe after Reclamation Plant No. 1 and Treatment Plant No. 2 effluents have commingled. The 2004 Order/Permit established mass emission effluent limitations based on the average daily influent flow of 278 mgd projected for 2009. This Order/Permit establishes mass emission effluent limitations for TBELs based on the average daily influent flow of 274 mgd projected for 2017, taken from the Discharger's 2009 Master Plan.

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2. Applicable Technology-based Effluent Limitations

A summary of the applicable technology-based effluent limitations is shown in Table F-13, in section IV.D.1 of this Fact Sheet.

C. Water Quality-based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and 40 CFR 122.44(d) require that NPDES permits include limitations more stringent than applicable technology-based requirements where necessary to achieve water quality standards and State requirements. 40 CFR 122.44(d)(1) requires that permits include WQBELs for all pollutants which are or may be discharged at levels having the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives or criteria within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric objective or criterion for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed State criterion or policy interpreting the State's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi). USEPA has applied CWA section 403(c) and 40 CFR 125, Subpart M, following 40 CFR 122.

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

Applicable beneficial uses designated within the Basin Plan and Ocean Plan are listed in Tables F-5 and F-6, in section III.C of this fact sheet.

The Ocean Plan establishes applicable water quality objectives for the protection of marine aquatic life and human health. The Ocean Plan also includes water quality objectives for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity.

The 2004 Order/Permit contains WQBELs for pollutant parameters based on Table B of the 2001 Ocean Plan. For this Order/Permit, the need for WQBELs based on water quality objectives in Table B of the 2009 Ocean Plan was statistically re-evaluated in accordance with 40 CFR 122.44(d) and the Ocean Plan Reasonable Potential Analysis (RPA) procedure adopted by the State

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Water Board in 2005. This procedure combines knowledge of effluent variability with the uncertainty due to a limited amount of pollutant effluent data to estimate a maximum effluent value (i.e., the one-sided, upper 95 percent tolerance bound for the 95th percentile of the effluent distribution) after minimum probable initial dilution. This estimated maximum value is then directly compared to applicable water quality objectives to determine the potential for exceedance and the need for WQBELs. The Ocean Plan RPA procedure can result in three endpoints: Endpoint 1, an effluent limitation must be developed for the pollutant; Endpoint 2, an effluent limitation is not required for the pollutant , but the Regional Water Board may require pollutant monitoring; or Endpoint 3, the RPA is inconclusive and pollutant monitoring is required, while the existing effluent limitation is retained and a permit reopener condition is used to allow inclusion of effluent limitations based on future monitoring.

The Discharger conducted RPAs using the State Water Board's RPcalc 2.0 software tool and minimum probable initial dilution values (Dm) for Discharge Point 001 (Dm = 180) and Discharge Point 002 (Dm = 36). Effluent data provided in the Discharger's monitoring reports from January 2008 to December 2010 were used in the analyses. The results of these RPAs are summarized in Table F-9 for Discharge Point 001 and Table F-10 for Discharge Point 002.

Based on the RPA for Discharge Point 001, Endpoint 2 is established for the majority of detected Table B pollutants. Consequently, WQBELs for these pollutants are not included in the Order/Permit and periodic effluent monitoring for all Endpoint 2 pollutants is required. For receiving waters where water quality equals or exceeds that necessary to protect beneficial uses and otherwise comply with water quality standards, WQBELs may be revised if consistent with USEPA and State antidegradation policies. Existing water quality is expected to be maintained for these pollutants. Therefore, removal of existing WQBELs for Endpoint 2 parameters is consistent with anti-backsliding requirements and antidegradation policies. Based on the RPA for Discharge Point 001, Endpoint 1 is established for TCDD equivalents. Consequently, a WQBEL for this pollutant is included in the Order/Permit and periodic effluent monitoring is required. Endpoint 3 was established for eight Table B pollutants. Consequently, existing WQBELs for benzene, hexachlorobenzene, PCBs, and toxaphene are carried over into this Order/Permit and periodic effluent monitoring is required.

Based on the RPA for Discharge Point 002, Endpoint 2 is established for the majority of detected Table B pollutants. Consequently, WQBELs for these pollutants are not included in the Order/Permit and periodic effluent monitoring for all Endpoint 2 pollutants is required. Based on the RPA for Discharge Point 002, Endpoint 1 is established for TCDD equivalents. Consequently, a WQBEL for this pollutant is included in the Order/Permit and periodic effluent monitoring is required. Endpoint 3 was established for ten Table B pollutants and periodic effluent monitoring is required. The Regional Water Board has determined that

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any reduction in receiving water quality—resulting from four-to-six weeks of diversion of effluent that complies with applicable water quality standards to Discharge Point 002 during the 120" outfall rehabilitation project—will be temporally limited and will not result in any long-term deleterious effects on water quality. Consequently, a complete antidegradation analysis is not required and this simple antidegradation analysis is sufficient. (*Antidegradation Policy Implementation for NPDES Permitting*, State Water Resources Control Board APU Number 90-004, 1990.)

Step 13 of the Ocean Plan RPA authorizes RPA based on best professional judgment. Information may include the facility type, discharge type, solids loading analysis, lack of dilution, history of compliance problems, potential toxic impact of discharge, fish tissue residue data, water quality and beneficial uses of the receiving water, CWA 303(d) listing for the pollutant, the presence of endangered or threatened species or critical habitat, and other information. Based on Step 13, the reasonable potential to exceed water quality objectives for total chlorine residual, chronic toxicity, and acute toxicity have been established for Discharge Point 001. Based on Step 13, the reasonable potential to exceed water quality objectives for total chlorine residual and chronic toxicity have been established for Discharge Point 002.

The operation of effluent disinfection using chlorination/dechlorination constitutes reasonable potential for the discharge to exceed Ocean Plan Table B objectives for total chlorine residual. Thus, WQBELs for total chlorine residual are included in the Order/Permit.

Reasonable potential for chronic and acute toxicity has been established because toxicity levels at POTWs can exceed applicable water quality standards, and numerical water quality objectives/criteria for the majority of chemical pollutants have not been established. Thus, WQBELs for chronic and acute toxicity at Discharge Point 001 and a WQBLEL for chronic toxicity at Discharge Point 002 are included in this Order/Permit.

Table F-9. RPA Summary Results for Discharge Point 001

Parameter	# of Samples	# of Non-detect Values*	Maximum Reported DL (ug/L)	Maximum Reported Effluent Value (ug/L)	UCB95 (Dm = 180)	Limiting Ocean Plan Table B WQO (ug/L)	Effluent Limitation Required?
Antimony	75	0	0.23	1.97	3.58308E-05	1,200	No
Arsenic	75	0	0.47	5.46	9.255841973	8	No
Beryllium	75	0	0.06	0.03	2.26837E-08	0.033	No
Cadmium	202	0	0.07	0.035	8.86857E-08	1	No
Chromium	202	0	0.21	5.05	0.000126401	2	No
Copper	202	0	0.52	47.6	4.198541691	3	No

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Parameter	# of Samples	# of Non-detect Values*	Maximum Reported DL (ug/L)	Maximum Reported Effluent Value (ug/L)	UCB95 (Dm = 180)	Limiting Ocean Plan Table B WQO (ug/L)	Effluent Limitation Required?
Lead	202	0	0.86	1.98	6.62245E-06	2	No
Mercury	61	0	0.012	0.052	3.18772E-07	0.04	No
Nickel	202	0	1.62	24.7	0.006273007	5	No
Selenium	75	0	0.32	18.1	0.048696103	15	No
Silver	202	0	0.05	0.8	0.031120798	0.7	No
Thallium	75	0	0.02	0.49	4.00124E-09	2	No
Zinc	202	0	1.52	74.5	53.92372998	20	No
Cyanide	36	0	4.88	7.62	3.69583E-05	1	No
Acrolein	38	0	3.7	1.85	2.11476E-05	220	No
Acrylonitrile	38	0	0.69	0.345	4.36281E-07	0.1	No
Benzene	38	0	0.07	0.61	9.45214E-08	5.9	No
Carbon tetrachloride	38	0	0.28	0.14	1.68813E-07	0.9	No
Chlorobenzene	38	0	0.11	0.16	2.2053E-08	570	No
Chlorodibromo-methane	38	0	0.18	1.78	2.41101E-06	8.6	No
Chloroform	38	0	0.17	14.6	0.001002475	130	No
Bromodichloro-methane	38	0	0.11	4.1	1.64207E-05	6.2	No
1,2-dichloroethane	38	0	0.06	0.03	6.09474E-09	28	No
1,1-dichloroethene	38	0	0.72	0.36	1.01113E-06	0.9	No
cis-1,3-dichloropropene	38	0	0.91	0.455	1.5903E-06	8.9	No
Ethylbenzene	38	0	0.12	0.7	6.96912E-08	4,100	No
Methylene chloride	38	0	0.61	6.47	1.29242E-05	450	No
1,1,2,2-tetrachloroethane	38	0	0.12	0.06	2.81248E-08	2.3	No
Tetrachloroethene	38	0	0.17	2.24	7.54966E-07	2	No
Toluene	38	0	0.07	4.17	6.97656E-06	85,000	No
1,1,1-trichloroethane	38	0	0.3	0.15	1.75533E-07	540,000	No
1,1,2-trichloroethane	38	0	0.1	0.05	1.75433E-08	9.4	No
Trichloroethene	38	0	0.17	0.34	9.13122E-08	27	No

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Parameter	# of Samples	# of Non-detect Values*	Maximum Reported DL (ug/L)	Maximum Reported Effluent Value (ug/L)	UCB95 (Dm = 180)	Limiting Ocean Plan Table B WQO (ug/L)	Effluent Limitation Required?
Vinyl chloride	38	0	0.6	0.3	8.15223E-07	36	No
2-methyl, -4,6-dinitrophenol	36	0	0.63	0.315	1.04821E-06	220	No
2,4-dinitrophenol	36	0	0.84	0.42	1.9552E-06	4	No
2,4,6-trichlorophenol	36	0	0.86	0.43	2.05748E-06	0.29	No
Benzidine	36	0	2.5	1.25	2.07785E-05	0.000069	Endpoint 3**; WQBEL carried forward
Bis(2-chloroethoxy) methane	36	0	0.73	0.365	1.44244E-06	4.4	No
Bis(2-chloroethyl) ether	36	0	0.92	0.46	2.38126E-06	0.045	No
Bis (2-chloroisopropyl) ether	36	0	0.73	0.365	1.44244E-06	1,200	No
Bis(2-ethylhexyl) phthalate	36	0	3.1	4.2	3.84436E-05	3.5	No
Dichlorobenzenes	36	0	0.41	0.205	4.1322E-07	5,100	No
1,4-dichlorobenzene	36	0	0.69	0.345	1.27663E-06	18	No
3,3-dichlorobenzidine	36	0	0.49	0.245	6.08042E-07	0.0081	No
Diethyl phthalate	36	0	1.3	4.1	0.000111769	33,000	No
Dimethyl phthalate	36	0	0.54	0.27	7.50543E-07	820,000	No
Di-n-butyl phthalate	36	0	0.75	1.4	1.92792E-06	3,500	No
2,4-dinitrotoluene	36	0	0.62	0.31	1.01249E-06	2.6	No
1,2-diphenylhydrazine	36	0	0.6	0.3	9.43045E-07	0.16	No
Fluoranthene	36	0	0.49	0.245	6.08042E-07	15	No
Hexachlorobenzene	65	0	0.43	0.215	3.52764E-08	0.00021	Endpoint 3**; WQBEL carried forward
Hexachlorobutadiene	36	0	0.33	0.165	2.58166E-07	14	No
Hexachlorocyclo-pentadiene	36	0	1.1	0.55	3.50733E-06	58	No
Hexachloroethane	36	0	0.6	0.3	9.43045E-07	2.5	No
Isophorone	36	0	0.77	0.385	1.61921E-06	730	No

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Parameter	# of Samples	# of Non-detect Values*	Maximum Reported DL (ug/L)	Maximum Reported Effluent Value (ug/L)	UCB95 (Dm = 180)	Limiting Ocean Plan Table B WQO (ug/L)	Effluent Limitation Required?
Nitrobenzene	36	0	0.62	0.31	1.01249E-06	4.9	No
N-nitrosodimethyl-amine	36	0	2.7	1.35	2.45496E-05	7.3	No
N-nitrosodi-n-propylamine	36	0	0.85	0.425	2.00599E-06	0.38	No
N-nitrosodiphenyl-amine	36	0	0.65	0.325	1.12166E-06	2.5	No
Aldrin	38	0	0.008	0.0025	1.95002E-11	0.000022	Endpoint 3**
Chlordane (total)	37	0	0.0041	0.00205	1.91505E-11	0.000023	No
DDT	38	0	0.0025	0.00125	6.55563E-12	0.00017	No
Dieldrin	38	0	0.01	0.005	4.06903E-11	0.00004	No
Endosulfan (sum)	38	0	0.0017	0.00085	2.84224E-12	0.009	Endpoint 3**
Endrin	38	0	0.015	0.0075	7.95235E-11	0.002	No
Heptachlor	38	0	0.014	0.007	8.13137E-11	0.00005	Endpoint 3**
Heptachlor epoxide	38	0	0.014	0.007	6.85369E-11	0.00002	Endpoint 3**
PCB (sum)	38	0	0.04	0.02	2.66651E-09	0.000019	Endpoint 3**; WQBEL carried forward
PAHs	36	0	0.39	0.195	3.70779E-07	0.0088	No
HCH	38	0	0.0021	0.00105	4.49291E-12	0.004	No
Toxaphene	38	0	0.25	0.125	1.65726E-08	0.00021	Endpoint 3**; WQBEL carried forward
Halomethanes	38	0	0.12	5.41	9.19364E-05	130	No
Total chlorine residual	3,398	0	0.04	2.04	2.97926E-06	2	No; RPA based on BPJ = Yes
TCDD	22	3	0	5.37E-07	2.21708E-22	3.9E-09	Endpoint 1***
Total non-chlorinated phenol	36	0	0.63	10.86	0.001443256	30	No
Total chlorinated phenol	36	0	0.61	0.305	9.77436E-07	1	No
Ammonia	1,136	0	1.44	73	0.05590753	600	No

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Parameter	# of Samples	# of Non-detect Values*	Maximum Reported DL (ug/L)	Maximum Reported Effluent Value (ug/L)	UCB95 (Dm = 180)	Limiting Ocean Plan Table B WQO (ug/L)	Effluent Limitation Required?
TUc	36	0	0	100	0.092327223	181	No; RPA based on BPJ = Yes
TUa	17	0	0	3.04	0.00287448	5.7	No; RPA based on BPJ = Yes

* One-half of the MDL used as the reported concentration when a non-detect occurs.
** Endpoint 3: RPA is inconclusive. Monitoring is required.
*** Endpoint 1: Effluent limitation must be developed for the pollutant.

Table F-10. RPA Summary Results for Discharge Point 002

Parameter	# of Samples	# of Non-detect Values*	Maximum Reported DL (ug/L)	Maximum Reported Effluent Value (ug/L)	UCB95 (Dm = 36)	Limiting Ocean Plan Table B WQO (ug/L)	Effluent Limitation Required?
Antimony	75	0	0.23	1.97	0.04866	1,200	No
Arsenic	75	0	0.47	5.46	3.066988	8	No
Beryllium	75	0	0.06	0.03	0.000811	0.033	No
Cadmium	202	0	0.07	0.035	0.000946	1	No
Chromium	202	0	0.21	5.05	0.089896	2	No
Copper	202	0	0.52	47.6	2.959964	3	No
Lead	202	0	0.86	1.98	0.024495	2	No
Mercury	61	0	0.012	0.052	0.001603	0.04	No
Nickel	202	0	1.62	24.7	0.46843	5	No
Selenium	75	0	0.32	18.1	0.649576	15	No
Silver	202	0	0.05	0.8	0.171864	0.7	No
Thallium	75	0	0.02	0.49	0.003704	2	No
Zinc	202	0	1.52	74.5	9.195415	20	No
Cyanide	36	0	4.88	7.62	0.206166	1	No
Acrolein	38	0	3.7	1.85	0.297112	220	No
Acrylonitrile	38	0	0.69	0.345	0.008677	0.1	No
Benzene	38	0	0.07	0.61	0.010704	5.9	No
Carbon tetrachloride	38	0	0.28	0.14	0.004384	0.9	No
Chlorobenzene	38	0	0.11	0.16	0.002622	570	No

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Parameter	# of Samples	# of Non-detect Values*	Maximum Reported DL (ug/L)	Maximum Reported Effluent Value (ug/L)	UCB95 (Dm = 36)	Limiting Ocean Plan Table B WQO (ug/L)	Effluent Limitation Required?
Chlorodibromo-methane	38	0	0.18	1.78	0.076677	8.6	No
Chloroform	38	0	0.17	14.6	0.415872	130	No
Bromodichloro-methane	38	0	0.11	4.1	0.14864	6.2	No
1,2-dichloroethane	38	0	0.06	0.03	0.000906	28	No
1,1-dichloroethene	38	0	0.72	0.36	0.019534	0.9	No
cis-1,3-dichloropropene	38	0	0.91	0.455	0.027755	8.9	No
Ethylbenzene	38	0	0.12	0.7	0.010358	4,100	No
Methylene chloride	38	0	0.61	6.47	0.154524	450	No
1,1,2,2-tetrachloroethane	38	0	0.12	0.06	0.00171	2.3	No
Tetrachloroethene	38	0	0.17	2.24	0.046955	2	No
Toluene	38	0	0.07	4.17	0.064887	85,000	No
1,1,1-trichloroethane	38	0	0.3	0.15	0.005952	540,000	No
1,1,2-trichloroethane	38	0	0.1	0.05	0.00168	9.4	No
Trichloroethene	38	0	0.17	0.34	0.006777	27	No
Vinyl chloride	38	0	0.6	0.3	0.011077	36	No
2-methyl, -4,6-dinitrophenol	36	0	0.63	0.315	0.008514	220	No
2,4-dinitrophenol	36	0	0.84	0.42	0.011351	4	No
2,4,6-trichlorophenol	36	0	0.86	0.43	0.011622	0.29	No
Benzidine	36	0	2.5	1.25	0.033784	0.000069	Endpoint 3**
Bis(2-chloroethoxy) methane	36	0	0.73	0.365	0.009865	4.4	No
Bis(2-chloroethyl) ether	36	0	0.92	0.46	0.012432	0.045	No
Bis (2-chloroisopropyl) ether	36	0	0.73	0.365	0.009865	1,200	No
Bis(2-ethylhexyl) phthalate	36	0	3.1	4.2	0.074546	3.5	No
Dichlorobenzenes	36	0	0.41	0.205	0.005541	5,100	No
1,4-dichlorobenzene	36	0	0.69	0.345	0.009324	18	No

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Parameter	# of Samples	# of Non-detect Values*	Maximum Reported DL (ug/L)	Maximum Reported Effluent Value (ug/L)	UCB95 (Dm = 36)	Limiting Ocean Plan Table B WQO (ug/L)	Effluent Limitation Required?
3,3-dichlorobenzidine	36	0	0.49	0.245	0.006622	0.0081	No
Diethyl phthalate	36	0	1.3	4.1	0.131753	33,000	No
Dimethyl phthalate	36	0	0.54	0.27	0.007297	820,000	No
Di-n-butyl phthalate	36	0	0.75	1.4	0.022315	3,500	No
2,4-dinitrotoluene	36	0	0.62	0.31	0.008378	2.6	No
1,2-diphenylhydrazine	36	0	0.6	0.3	0.008108	0.16	No
Fluoranthene	36	0	0.49	0.245	0.006622	15	No
Hexachlorobenzene	65	0	0.43	0.215	0.05453	0.00021	Endpoint 3**
Hexachlorobutadiene	36	0	0.33	0.165	0.004459	14	No
Hexachlorocyclo-pentadiene	36	0	1.1	0.55	0.014865	58	No
Hexachloroethane	36	0	0.6	0.3	0.008108	2.5	No
Isophorone	36	0	0.77	0.385	0.010405	730	No
Nitrobenzene	36	0	0.62	0.31	0.008378	4.9	No
N-nitrosodimethyl-amine	36	0	2.7	1.35	0.036486	7.3	No
N-nitrosodi-n-propylamine	36	0	0.85	0.425	0.011486	0.38	No
N-nitrosodiphenyl-amine	36	0	0.65	0.325	0.008784	2.5	No
Aldrin	38	0	0.008	0.0025	0.000147	0.000022	Endpoint 3**
Chlordane (total)	37	0	0.0041	0.00205	5.54E-05	0.000023	Endpoint 3**
DDT	38	0	0.0025	0.00125	3.38E-05	0.00017	Endpoint 3**
Dieldrin	38	0	0.01	0.005	0.000216	0.00004	No
Endosulfan (sum)	38	0	0.0017	0.00085	2.3E-05	0.009	Endpoint 3**
Endrin	38	0	0.015	0.0075	0.000379	0.002	No
Heptachlor	38	0	0.014	0.007	0.000259	0.00005	Endpoint 3**
Heptachlor epoxide	38	0	0.014	0.007	0.000296	0.00002	Endpoint 3**
PCB (sum)	38	0	0.04	0.02	0.000541	0.000019	Endpoint 3**
PAHs	36	0	0.39	0.195	0.00527	0.0088	No

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Parameter	# of Samples	# of Non-detect Values*	Maximum Reported DL (ug/L)	Maximum Reported Effluent Value (ug/L)	UCB95 (Dm = 36)	Limiting Ocean Plan Table B WQO (ug/L)	Effluent Limitation Required?
HCH	38	0	0.0021	0.00105	2.84E-05	0.004	No
Toxaphene	38	0	0.25	0.125	0.002998	0.00021	Endpoint 3**
Halomethanes	38	0	0.12	5.41	0.12215	130	No
Total chlorine residual	3,398	0	0.04	2.04	0.023338	2	No; RPA based on PBJ = Yes
TCDD	22	3	0	5.37E-07	2.89E-08	3.9E-09	Endpoint 1***
Total non-chlorinated phenol	36	0	0.63	10.86	0.347153	30	No
Total chlorinated phenol	36	0	0.61	0.305	0.008243	1	No
Ammonia	1,136	0	1.44	73	1.126013	600	No
TUc	36	0	0	--	--	--	RPA based on BPJ = Yes
TUa	17	0	0	--	--	--	--

* One-half of the MDL used as the reported concentration when a non-detect occurs.
** Endpoint 3: RPA is inconclusive. Monitoring is required.
*** Endpoint 1: Effluent limitation must be developed for the pollutant.

3. WQBEL Calculations

a. Concentration Calculation

The following equation from Ocean Plan section III.C is used to calculate all concentration-based WQBELs.

$$Ce = Co + Dm (Co – Cs)$$

where:

Ce = the effluent concentration limitation, ug/L
Co = the concentration (water quality objective) to be met at the completion of initial dilution, ug/L
Cs = background seawater concentration, ug/L
Dm = minimum probable initial dilution expressed as parts seawater per part wastewater.

Background seawater concentration for all Table B pollutants is assumed to be zero (Cs = 0), except for the following five pollutants.

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Table F-11. Example – Ocean Plan Table B Background Seawater Concentrations

Parameter	Units	Background Seawater Concentration (Cs)
Arsenic	ug/L	3
Copper	ug/L	2
Mercury	ug/L	0.0005
Silver	ug/L	0.16
Zinc	ug/L	8

Example calculations for WQBELs are shown for copper, lead, and total chlorine residual.

Table F-12. Example – Ocean Plan Table B Water Quality Objectives

Parameter	Units	6-month Median	Daily Maximum	Instantaneous Maximum
Copper	ug/L	3	12	30
Lead	ug/L	2	8	20
Total chlorine residual	ug/L	2	8	60

Using the equation, Ce = Co + Dm (Co – Cs), example WQBELs are calculated, as follows, where Dm =7.5.

Example – Copper
Ce = 3 + 7.5 (3 – 2) = 11 ug/L (6-month Median)
Ce = 12 + 7.5 (12 – 2) = 87 ug/L (Maximum Daily)
Ce = 30 + 7.5 (30 – 2) = 240 ug/L (Instantaneous Maximum)

Example – Lead
Ce = 2 + 7.5 (2 – 0) = 17 ug/L (6-month Median)
Ce = 8 + 7.5 (8 – 0) = 68 ug/L (Maximum Daily)
Ce = 20 + 7.5 (20 – 0) = 170 ug/L (Instantaneous Maximum)

Example – Total chlorine residual
Ce = 2 + 7.5 (2 – 0) = 17 ug/L (6-month Median)
Ce = 8 + 7.5 (8 – 0) = 68 ug/L (Maximum Daily)
Ce = 60 + 7.5 (60 – 0) = 510 ug/L (Instantaneous Maximum)

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b. Mass-based Calculation

The following equation from Ocean Plan section III.C is used to calculate all mass-based WQBELs.

Mass (in lbs/day) = 0.00834 x Ce x Q

where:

Ce = the effluent concentration limitation, ug/L
Q = flow rate, mgd.

For example, in the case of copper where Q = 56.59 mgd, the 6-month median mass-based WQBEL is:

5 lbs/day = 0.00834 x 11 ug/L x 56.59 mgd

c. A summary of the applicable WQBELs is shown in Tables F-14 and F-15, in sections IV.D.2 and 3 of this Fact Sheet.

4. Whole Effluent Toxicity (WET)

The Ocean Plan addresses the application of chronic and acute toxicity requirements based on minimum probable initial dilutions (Dm) for ocean discharges. Following the Ocean Plan, dischargers are required to conduct chronic toxicity monitoring for ocean discharges with Dm factors ranging from 99 to 349; also, Regional Water Boards may require acute toxicity monitoring in addition to chronic toxicity monitoring. Dischargers with Dm factors below 99 are required to conduct only chronic toxicity testing. The Dm for Discharge Point 001 is 180. Consequently, Dm for chronic toxicity for Discharge Point 001 is 180 and Dm for acute toxicity for Discharge Point 001 is 18. The Dm for Discharge Point 002 is 36. Consequently, Dm for chronic toxicity for Discharge Point 002 is 36 and there is no Dm for acute toxicity. Based on these requirements, both chronic and acute toxicity monitoring is specified for Discharge Point 001 and chronic toxicity monitoring is specified for Discharge Point 002.

The Ocean Plan establishes a daily maximum chronic toxicity objective of 1.0 TUc = 100/NOEC, using a 5-concentration hypothesis test, and a daily maximum acute toxicity objective of 0.3 TUa = 100/LC50, using a point estimate model. In 2010, USEPA endorsed the peer-reviewed Test of Significant Toxicity (TST) 2-concentration hypothesis testing approach in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) as an improved hypothesis-testing tool to evaluate data from USEPA's toxicity test methods. The TST hypothesis testing approach more reliably identifies toxicity—in relation to the chronic (0.25 or more) and acute (0.20 or more) mean responses of regulatory management concern—than the current NOEC hypothesis-testing

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approach used in the Ocean Plan. TST results are also more transparent than the point estimate model approach used for acute toxicity in the Ocean Plan that is not designed to address the question of statistical uncertainty around the modeled toxicity test result in relation to the effect level of concern. The TST is the superior approach for addressing statistical uncertainty when used in combination with USEPA's toxicity test methods and is implemented in federal permits issued by USEPA Region 9.

The TST's null hypothesis for chronic toxicity is:

> H_0: Mean response (In-stream Waste Concentration in % effluent) ≤ 0.75 mean response (Control).

Results obtained from a single-concentration chronic toxicity test are analyzed using the TST approach and an acceptable level of chronic toxicity is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

The TST's null hypothesis is for acute toxicity is:

> H_0: Mean response (In-stream Waste Concentration in % effluent) ≤ 0.80 mean response (Control).

Results obtained from a single-concentration acute toxicity test are analyzed using the TST approach and an acceptable level of acute toxicity is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

<u>WQBEL Calculation for Chronic Toxicity</u> (Discharge Point 001)

The chronic toxicity In-stream Waste Concentration (in % effluent) for Discharge Point 001 is 100/Dm = 100/180 = 0.556%.

Chronic toxicity, TST: The chronic toxicity WQBEL for Discharge Point 001 is expressed as a null hypothesis (H_0) and regulatory management decision (*b* value) of 0.75 for the chronic toxicity methods in Attachment E – Monitoring and Reporting Program, where a 0.25 mean response (or more) at the In-stream Waste Concentration (IWC) of 0.556% effluent demonstrates an unacceptable level of chronic toxicity in a chronic toxicity test. The null hypothesis for this discharge is:

> H_0: Mean response (0.556% effluent) ≤ 0.75 mean response (Control).

Results obtained from a single-concentration chronic toxicity test shall be analyzed using the Test of Significant Toxicity hypothesis testing approach in Attachment E – Monitoring and Reporting Program. Compliance with this chronic toxicity WQBEL is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

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<u>WQBEL Calculation for Acute Toxicity</u> (Discharge Point 001)

The acute toxicity In-stream Waste Concentration (in % effluent) for Discharge Point 001 is 100/(1.0)Dm = 100/(1.0)(180) = 5.56%.

Acute toxicity, TST: The acute toxicity WQBEL for Discharge Point 001 is expressed as a null hypothesis (H_0) and regulatory management decision (*b* value) of 0.80 for the acute toxicity methods in Attachment E – Monitoring and Reporting Program, where a 0.20 mean response (or more) at the In-stream Waste Concentration (IWC) of 5.56% effluent demonstrates an unacceptable level of acute toxicity in an acute toxicity test. The null hypothesis for this discharge is:

H_0: Mean response (5.56% effluent) ≤ 0.80 mean response (Control).

Results obtained from a single-concentration acute toxicity test shall be analyzed using the Test of Significant Toxicity hypothesis testing approach in Attachment E – Monitoring and Reporting Program. Compliance with this acute toxicity WQBEL is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

<u>WQBEL Calculation for Chronic Toxicity</u> (Discharge Point 002)

Using the Ocean Plan equation, Ce = Co + Dm (Co – Cs), the chronic toxicity WQBEL is calculated, as follows, where Dm = 36. The chronic toxicity In-stream Waste Concentration (in % effluent) for Discharge Point 002 is 100/37 TUc = 2.703%.

Ce = 1 + 36(1 - 0) = 37 TUc (Maximum Daily)

D. Final Effluent Limitations

1. The Discharger shall maintain compliance with the following effluent limitations at Reclamation Plant No. 1 and Treatment Plant No. 2 Discharge Points 001 and 002, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP.

Table F-13. TBELs for Reclamation Plant No. 1 and Treatment Plant No. 2 Discharge Points 001 and 002

Parameter	Units	Effluent Limitations[1]					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-month Median
Biochemical oxygen demand 5-day @ 20°C[2]	mg/L	30	45	--	--	--	--
	lbs/day	68,555	102,832	--	--	--	--

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Parameter	Units	Effluent Limitations[1]					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-month Median
Carbonaceous biochemical oxygen demand 5-day @ 20°C[2]	mg/L	25	40	--	--	--	--
	lbs/day	57,129	91,406	--	--	--	--
Total suspended solids	mg/L	30	45	--	--	--	--
	lbs/day	68,555	102,832	--	--	--	--
pH	standard units	--	--	--	6.0	9.0	--
Oil and grease	mg/L	25	40	--	--	75	--
	lbs/day	57,129	91,406	--	--	171,387	--
Settleable solids	ml/L	1.0	1.5	--	--	3.0	--
Turbidity	NTU	75	100	--	--	225	--
Notes:	[1] Mass emission effluent limitations (in lbs/day) are based on the average daily influent flow of 274 mgd projected for 2017, taken from the Discharger's 2009 Master Plan. [2] In lieu of the parameter BOD_5 and the BOD_5 levels specified for effluent quality in this table, the parameter $CBOD_5$ and the $CBOD_5$ levels specified for effluent quality in this table may be substituted and reported by the Discharger.						

a. Percent Removal: The average monthly percent removal of influent BOD 5-day 20 degrees C, CBOD 5-day 20 degrees C, and total suspended solids shall not be less than 85 percent.

b. Percent Removal: The average monthly percent removal of influent total suspended solids shall not be less than 75 percent.

2. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP.

Table F-14. WQBELs for Reclamation Plant No. 1 and Treatment Plant No. 2 Discharge Point 001

Parameter	Units	Effluent Limitations[2,3]					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-month Median
Total chlorine residual	mg/L	--	--	1.45	--	10.86	0.36
	lbs/day	--	--	3,313	--	24,817	823
Acute toxicity, TST	P or F	--	--	P	--	--	--
Chronic toxicity, TST	P or F	--	--	P	--	--	--
Benzidine	ug/L	0.01249	--	--	--	--	--

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Parameter	Units	Effluent Limitations[2,3]					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-month Median
	lbs/day	0.0285	--	--	--	--	--
Hexachloro-benzene	ug/L	0.0380	--	--	--	--	--
	lbs/day	0.0868	--	--	--	--	--
PCBs*[1]	ug/L	0.0034	--	--	--	--	--
	lbs/day	0.0078	--	--	--	--	--
TCDD equivalents*	pg/L	0.706	--	--	--	--	--
	lbs/day	0.000001613	--	--	--	--	--
Toxaphene	ug/L	0.03801	--	--	--	--	--
	lbs/day	0.0869	--	--	--	--	--
Notes:	[1] For definitions indicated by "*", see Attachment A – Definitions. [2] The minimum probable initial dilution (Dm = 180) used to calculate WQBELs for Ocean Plan Table B pollutants is 181:1. [3] Mass emission effluent limitations (in lbs/day) are based on the average daily influent flow of 274 mgd projected for 2017, taken from the Discharger's 2009 Master Plan.						

a. Acute toxicity, TST: The acute toxicity WQBEL for Discharge Point 001 is expressed as a null hypothesis (H_0) and regulatory management decision (*b* value) of 0.80 for the acute toxicity methods in Attachment E – Monitoring and Reporting Program, where a 0.20 mean response (or more) at the In-stream Waste Concentration (IWC) of 5.56% effluent demonstrates an unacceptable level of acute toxicity in an acute toxicity test. The null hypothesis for this discharge is:

H_0: Mean response (5.56% effluent) ≤ 0.80 mean response (Control).

Results obtained from a single-concentration acute toxicity test shall be analyzed using the Test of Significant Toxicity hypothesis testing approach (EPA 833-R-10-003, 2010) in Attachment E – Monitoring and Reporting Program. Compliance with this acute toxicity WQBEL is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

b. Chronic toxicity, TST: The chronic toxicity WQBEL for Discharge Point 001 is expressed as a null hypothesis (H_0) and regulatory management decision (*b* value) of 0.75 for the chronic toxicity methods in Attachment E – Monitoring and Reporting Program, where a 0.25 mean response (or more) at the In-stream Waste Concentration (IWC) of 0.556% effluent demonstrates an unacceptable level of chronic toxicity in a chronic toxicity test. The null hypothesis for this discharge is:

H_0: Mean response (0.556% effluent) ≤ 0.75 mean response (Control).

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Results obtained from a single-concentration chronic toxicity test shall be analyzed using the Test of Significant Toxicity hypothesis testing approach (EPA 833-R-10-003, 2010) in Attachment E – Monitoring and Reporting Program. Compliance with this chronic toxicity WQBEL is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

c. Radioactivity: Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations. Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.

d. Waste management systems that discharge to the ocean must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.

e. Waste discharged to the ocean must be essentially free of:

(1) Material that is floatable or will become floatable upon discharge.

(2) Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.

(3) Substances which will accumulate to toxic levels in marine waters, sediments or biota.

(4) Substances that significantly decrease the natural light to benthic communities and other marine life.

(5) Materials that result in aesthetically undesirable discoloration of the ocean surface.

f. Waste effluents shall be discharged in a manner which provides sufficient initial dilution to minimize the concentrations of substances not removed in the treatment.

Waste that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing and water-contact sports are to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used.

3. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 002, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP.

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Table F-15. WQBELs for Reclamation Plant No. 1 and Treatment Plant No. 2 Discharge Point 002

Parameter	Units	Effluent Limitations[3,4]					
		Average Monthly **[2]	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-month Median
Total coliform density	CFU/100 mL	1,000	--	10,000	--	--	--
Fecal coliform density	CFU/100 mL	400	--	400	--	--	--
Enterococcus density	CFU/100 mL	104	--	104	--	--	--
Total chlorine residual	mg/L	--	--	0.296	--	2.22	0.074
	lbs/day	--	--	676	--	5,073	169
Chronic toxicity, NOEC	TUc	--	--	37	--	--	--
TCDD equivalents*[1]	pg/L	0.144	--	--	--	--	--
	lbs/day	0.000000329	--	--	--	--	--
Notes:	[1] For definitions indicated by "*", see Attachment A – Definitions. [2] "**" = The geometric mean, rather than average, is used to determine compliance for Total coliform density, Fecal coliform density, and Enterococcus density. [3] The minimum probable initial dilution (Dm = 36) used to calculate WQBELs for Ocean Plan Table B pollutants is 37:1. [4] Mass emission effluent limitations (in lbs/day) are based on the average daily influent flow of 274 mgd projected for 2017, taken from the Discharger's 2009 Master Plan.						

a. Radioactivity: Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations. Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.

b. Waste management systems that discharge to the ocean must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.

c. Waste discharged to the ocean must be essentially free of:

(1) Material that is floatable or will become floatable upon discharge.

(2) Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.

(3) Substances which will accumulate to toxic levels in marine waters, sediments or biota.

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(4) Substances that significantly decrease the natural light to benthic communities and other marine life.

(5) Materials that result in aesthetically undesirable discoloration of the ocean surface.

d. Waste effluents shall be discharged in a manner which provides sufficient initial dilution to minimize the concentrations of substances not removed in the treatment.

Waste that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing and water-contact sports are to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used.

4. Satisfaction of Anti-backsliding Requirements

CWA section 402(o)/303(d)(4) and 40 CFR 122.44(l) prohibit backsliding and require effluent limitations, permit conditions, and standards in a reissued NPDES permit to be as stringent as those in the previous permit, with some exceptions where limitations and conditions may be relaxed. All effluent limitations and conditions in this Order/Permit are at least as stringent as those in the previous Order/Permit, as described in sections VI.B and C of this Fact Sheet.

5. Satisfaction of Antidegradation Policy

40 CFR 131.12 requires that State water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. This resolution incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements and incorporates by reference both the State and federal antidegradation policies. As discussed in sections VI.B and C of this Fact Sheet, the discharge is consistent with 40 CFR 131.12 and State Water Board Resolution No. 68-16.

6. Stringency of Requirements for Individual Pollutants

This Order/Permit contains technology-based effluent limitations and WQBELs for individual pollutants. Technology-based effluent limitations consist of restrictions on biochemical oxygen demand (5-day), carbonaceous biochemical

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oxygen demand (5-day), total suspended solids, and pH which implement the minimum, applicable federal technology-based requirements for POTWs. Also, effluent limitations consisting of restrictions on oil and grease, settleable solids, and turbidity more stringent than federal technology-based limitations are necessary to implement State treatment standards in Ocean Plan Table A. Discharge Point 001 WQBELs consisting of restrictions on total chlorine residual, acute toxicity, chronic toxicity, radioactivity, benzidine, hexachlorobenzene, PCBs, TCDD equivalents, and toxaphene more stringent than federal technology-based limitations are necessary to meet State water quality standards in the Ocean Plan. Discharge Point 002 WQBELs consisting of restrictions on total coliform density, fecal coliform density, *Enterococcus* density, total chlorine residual, chronic toxicity, radioactivity, and TDCC equivalents more stringent than federal technology-based limitations are necessary to meet State water quality standards in the Ocean Plan. All effluent limitations are discussed in the Fact Sheet. Collectively, the restrictions on individual pollutants in this Order/Permit are no more stringent than required by the CWA.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Receiving water limitations are based on water quality objectives in Ocean Plan section III. As such, they are a required part of this Order/Permit.

The Regional Water Board has determined that bacterial indicator standards for water contact recreation are applied throughout the water column of the Nearshore Zone (i.e., designated REC-1). The Regional Water Board has determined that only the top ten feet of the Offshore Zone is used for water contact recreation (i.e., designated REC-1); however, the Regional Water Board and USEPA have also determined that it is appropriate to apply bacterial indicator standards throughout the water column of the Offshore Zone to assure that the discharge does not pose a threat to water contact recreation.

Receiving water limitations for enterococcus density in ocean waters beyond the outer limit of the territorial seas are based on CWA section 304(a) water quality criteria. These criteria must be achieved beyond the zone of initial dilution in areas where primary contact recreation, as defined in USEPA guidance, occurs. USEPA describes the "primary contact recreation" use as protective when the potential for ingestion of, or immersion in, water is likely. Activities usually include swimming, water-skiing, skin-diving, surfing, and other activities likely to result in immersion. (*Water Quality Standards Handbook*, EPA-823-B-94-005a, 1994, p. 2-2.) The nature and extent of primary contact recreational use in federal waters is recorded and reported during water quality monitoring conducted under the receiving water core monitoring program.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR 122.48 requires all NPDES permits to specify requirements for recording and reporting monitoring results. California Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and

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Reporting Program (MRP), Attachment E of this Order/Permit, establishes monitoring and reporting requirements to implement federal and State requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this POTW.

The MRP is guided, in part, by the principals, framework, and recommended design for discharge and receiving water monitoring presented in Model Monitoring Program for Large Ocean Dischargers in Southern California (SCCWRP Tech. Rep. #357. Southern California Coastal Water Research Project, Westminster, CA. 101 pp.). The SCCWRP model monitoring program has three components that comprise a range of spatial and temporal scales: (1) core monitoring, (2) regional monitoring, and (3) strategic process studies.

Core Monitoring. Core monitoring is local in nature and focuses on monitoring trends in quality and effects of the point source discharge. This includes discharge monitoring, as well as some aspects of receiving water monitoring.

Regional Monitoring. Regional monitoring is focused on questions best answered by a region-wide approach that incorporates coordinated survey design and sampling techniques. Key components of regional monitoring include elements to address pollutant mass emission estimates, public health concerns, monitoring trends in natural resources, assessment of regional impacts from all contaminant sources, and beneficial use protection. The final designs of regional monitoring programs are developed by means of steering and technical committees comprised of participating agencies. For each component of regional monitoring, the MRP specifies the required degree and nature of participation by the Discharger, based upon its past participation in regional monitoring programs.

Strategic Process Studies. Strategic process studies are focused on refined questions regarding specific effects or development of monitoring techniques and are anticipated to be of short duration and/or small scale, although multi-year studies also may be needed. Questions regarding discharge or receiving water quality, discharge impacts, ocean processes in the area of the discharge, or development of techniques for monitoring the same, arising out of the results of core or regional monitoring, may be pursued through strategic process studies. These studies are by nature ad hoc and, typically, cannot be anticipated in advance of the five-year permit cycle.

A. Influent Monitoring

Influent monitoring is required to assess the performance of treatment facilities and evaluate compliance with effluent limitations, and determine the effectiveness of pretreatment and nonindustrial source control programs.

Noteworthy changes for this Order/Permit include new monitoring for nutrient parameters and reduced monitoring for Method 608 parameters not detected in the influent.

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B. Effluent Monitoring

Effluent monitoring is required to determine compliance with effluent limitations and permit conditions, and to identify operational problems and improve treatment facility performance. Effluent monitoring also provides information on discharge characteristics and flows for use in interpreting receiving water monitoring data.

Effluent monitoring requirements also addresses the three management questions for effluent monitoring in *Model Monitoring Program for Large Ocean Discharges in Southern California* (SCCWRP, 2002; Model Monitoring Program):

> Is the effluent concentration of selected constituents below levels that will protect human health and aquatic life?
>
> What is the mass of selected constituents that are discharged annually?
>
> Is the effluent concentration or mass changing over time?

Noteworthy changes for this Order/Permit include new monitoring for bacteria indicator densities, nutrient parameters, and individual PCB congeners; monitoring for mercury, PCB congeners, and TDCC equivalents using more sensitive methods; and reduced monitoring for Method 608 parameters not detected in the effluent.

C. Receiving Water Core Monitoring

1. Water Quality Monitoring

Offshore water quality monitoring data are used to determine compliance with receiving water limitations and Ocean Plan water quality standards, and assist in the interpretation of biological data.

Water quality monitoring requirements also addresses the two management questions for water quality monitoring in the Model Monitoring Program:

> Are water column physical and chemical parameters within ranges that ensure protection of the ecosystem?
>
> What is the fate of the discharge plume?

Monthly water quality monitoring will be carried out over a large grid of 28 stations centered on Discharge Point 001. The station grid covers approximately 72 square kilometers adjacent to the coastline of Huntington Beach and Newport Beach. Noteworthy changes for this Order/Permit include a change in sampling frequency from 3x/quarter to 1/month. Station C2, inshore of Newport Canyon, is no longer monitored under this program because it is not impacted by Discharge Point 001. The existing discrete sample collection interval has been changed from one biased towards the upper water column to one more evenly spaced (10 meter interval) that provides a more uniform

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sample distribution throughout the water column (to 60 meters) to better assess the spatial extent of the wastewater plume.

2. REC-1 Water Quality Monitoring (Offshore Zone)

REC-1 water quality monitoring data in the offshore zone are used to determine compliance with receiving water limitations and Ocean Plan water quality standards.

REC-1 monitoring requirements also addresses the two management questions for REC-1 monitoring in the Model Monitoring Program:

> Does sewage effluent reach water contact zones?
>
> Are densities of bacteria in water contact zones below levels that will ensure public safety?

Quarterly (5-days/month), REC-1 monitoring will be carried out over a picket-line of eight stations centered inshore of Discharge Point 001, in State waters. The south-to-north station alignment is adjacent to the coastline of Huntington Beach and Newport Beach. Noteworthy changes for the Order/Permit include removing Station C2, inshore of Newport Canyon, from the line of monitoring stations because it is not impacted by Discharge Point 001. The existing discrete sample collection interval has been changed from one biased towards the upper water column to one more evenly spaced (10 meter interval) that provides a more uniform sample distribution throughout the water column (to 60 meters) to better assess the spatial extent of the wastewater plume.

3. Sediment Monitoring

The purpose of sediment monitoring is to map the area of impact and detect spatial and temporal trends in sediment pollutants and benthic infauna in the area of the discharge, and to assess compliance with State water quality standards and federal criteria.

Sediment monitoring requirements also addresses the two management questions for sediment monitoring in the Model Monitoring Program:

> Are sediments in the vicinity of the discharge impaired? If so, what is the spatial extent of impairment?
>
> Are sediment conditions changing over time?

Annual sediment chemistry monitoring and benthic infauna community monitoring will be carried out over a large grid of 68 stations centered on Discharge Point 001; of these 68 stations, the 29 stations immediately surrounding the outfall diffuser and extending northward and southward along the 60-meter contour line will be monitored semi-annually. Annual whole

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sediment toxicity monitoring will be carried out at nine stations at the outfall depth (60 meters). The station grid covers approximately 65 square kilometers adjacent to the coastline of Huntington Beach and Newport Beach. Noteworthy changes for this Order/Permit include a change in monitoring design which eliminates 1/quarter replicate sampling at ten 60 meter contour stations and increases the number of monitoring stations from 49 stations to 68 stations, resulting in greater spatial coverage within the monitoring area, including the area immediately surrounding the outfall diffuser, and more appropriate temporal sampling. Downcoast of Discharge Point 001, sediment stations inshore and offshore of Newport Canyon continue to be monitored. This Order/Permit adds annual whole sediment toxicity monitoring at nine 60 meter contour stations already monitored by the Discharger.

Since 2005, there has been a trend towards declining infaunal community health (measured using the Benthic Response Index and Infaunal Trophic Index) at several stations within the zone of initial dilution surrounding the outfall diffuser at Discharge Point 001 and marginal deviations from reference at two nearfield stations. The Discharger has considered these data and believes the discharge of treated wastewater effluent could be negatively impacting infaunal communities near the point of discharge. No correlations to measured contaminants or conditions that might explain these changes have been found, suggesting that the causative agent(s) are not being measured by the receiving water core monitoring program. The Discharger is conducting investigations into the cause(s) of these changes, and has increased the density of stations near the discharge to better assess the spatial extent of this impact.

4. Demersal Fish and Epibenthic Invertebrate Monitoring

The purpose of demersal fish and epibenthic invertebrate monitoring is to detect spatial and temporal trends in demersal fish and epibenthic community structure, demersal tissue chemistry and liver histopathology, and sport fish muscle chemistry in the area of the discharge, and to assess compliance with State water quality standards and federal criteria.

Demersal fish and epibenthic invertebrate monitoring requirements also addresses the four management questions for fish and epibenthic invertebrate monitoring and seafood safety monitoring in the Model Monitoring Program:

Is the health of fish populations and communities impaired?

Are fish populations and communities changing over time?

Is fish tissue contamination changing over time?

Are seafood tissue concentrations below levels that will ensure public safety?

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Annual demersal fish and epibenthic community monitoring will be carried out over a grid of 14 stations upcoast of Discharge Point 001; of these 14 stations, the six stations at the outfall depth (60 meters) will be monitored semi-annually. Annual demersal fish tissue (muscle and liver) chemistry monitoring will be carried out over two stations upcoast of Discharge Point 001 at the outfall depth. The monitoring area covers approximately 27 square kilometers adjacent to the coastline of Huntington Beach and Newport Beach. Noteworthy changes for this Order/Permit include a change in monitoring design which eliminates semi-annual replicate sampling at nine stations and increases the number of monitoring stations from nine stations to 14 stations, resulting in greater spatial coverage within the monitoring area, and more appropriate temporal sampling. This Order/Permit adds annual sport fish muscle chemistry monitoring at two zones. The Order/Permit continues once/5 years demersal fish liver histopathology monitoring at two stations.

D. Receiving Water Regional Monitoring

Discharger participation and level of effort in regional monitoring programs continues to be a required condition of the Order/Permit. Regional monitoring programs which must be conducted under the Order/Permit include the: Southern California Bight Regional Monitoring Program, the Central Bight Water Quality Cooperative Program, Central Bight Kelp Survey, and Orange County Regional Shoreline REC-1 Cooperative Monitoring Program. The Discharger currently participates in all four programs.

Discharger participation and level of effort in regional monitoring programs continues to be a required condition of the Order/Permit. Regional monitoring programs which must be conducted under the Order/Permit include the: Southern California Bight Regional Monitoring Program, the Central Bight Water Quality Cooperative Program (226 square kilometers), Central Bight Kelp Survey, and Orange County Regional Shoreline REC-1 Cooperative Monitoring Program (35 kilometers).

Noteworthy changes for this Order/Permit include a change in REC-1 water quality monitoring in the nearshore zone, where monitoring effort has been shifted from core monitoring conducted by the Discharger at 17 stations along Huntington Beach and Newport Beach, to coordinated regional monitoring where the Discharger conducts a minimum of 5-days/30-days monitoring at 38 stations (from Seal Beach to El Moro Beach) of the 98 stations monitored along Orange County's coastal shoreline in coordination with the County of Orange Health Care Agency, South Orange County Wastewater Authority, and Orange County Public Works (OC Watersheds).

E. Strategic Process Studies

Discharger investigations conducted through strategic process studies continues to be a required condition of the Order/Permit. Strategic process studies which must be conducted under the Order/Permit include the: Constituents of Emerging Concern study, and those studies not yet completed by the Discharger that have been

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approved by the Regional Water Board and USEPA during the term of the 2004 Order/Permit (i.e., Orange County Ocean Sediment Mapping Study, Sediment Profile Imaging (SPI) Near the OCSD Outfall, Evaluation of ZID Water Quality: Low-Flow Study, Final Effluent Characterization, Data Assimilation and Plume Tracking Using Regional Oceanic Modeling System (ROMS), and endocrine (cortisol) disruption in wild fish). Three areas of focus over the next permit cycle are climate change, changes in effluent quality, and compliance questions.

F. Other Monitoring Requirements

Other monitoring required by the Order/Permit includes a new requirement for once/5 years outfall and diffuser system inspection, and a special study of receiving waters impacted by four-to-six weeks of discharge through Discharge Point 002 during the "Outfall Land Section and Ocean Outfall Booster Pump Station Piping Rehabilitation" project (referred to as J-112). Details of Discharge Points 001 and 002 and expected water quality impacts for the project are in the Discharger's environmental impact report, *Outfall Land Section and OOBS Piping Rehabilitation, Draft Environmental Impact Report* (Environmental Science Associates, 2011) (EIR).

The basic difference between Discharge Points 001 and 002 is the fate and transport of the effluent. When discharged from Discharge Point 001, the plume remains well below the ocean surface and away from recreational use areas. When discharged from Discharge Point 002, the plume is expected to rise to the ocean surface within recreational waters.

The J-112 EIR listed three possible marine environmental impacts. These included the potential to affect beneficial uses by inducing phytoplankton blooms and elevating fecal indicator bacteria in near shore waters. To eliminate or minimize these potential impacts, the EIR identified a series of mitigation measures being adopted by OCSD. The monitoring elements contained in the Order/Permit are designed to comply with the EIR mitigation measures. The overall goal of the modeling and receiving waters monitoring program is to characterize the temporal and spatial extent of the discharged effluent and its impact to receiving waters during discharge from Discharge Point 002. This data will document the effectiveness of the enhanced effluent disinfection process on protecting recreational waters (e.g., public bathing beaches) and changes to biologic communities (e.g., algal species). The monitoring program will focus on these primary objectives: measure microbiology in recreational waters, measure nutrients and changes in phytoplankton, assess environmental impacts to sediments and benthic communities, and model plume fate and transport.

After completion of the rehabilitation project, the Discharger will work with Southern California Coastal Ocean Observing System and the Central and Northern California Ocean Observing System to produce a review and critique of field monitoring efforts. This will include sections on model fidelity with observed data and the ability to monitor phytoplankton effects. The report will provide OCSD managers concise summary of what monitoring efforts were cost effective and useful to OCSD,

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regulators, and the public. Based on these results, within 180 days of receipt of the final report, the Discharger is required to propose to the Regional Water Board and USEPA a receiving water monitoring program for Discharge Point 002 during periods of non-operation and operation. The Order/Permit will be reopened and modified to incorporate receiving water core monitoring program changes for Discharge Point 002 approved by the Regional Water Board and USEPA.

VII. RATIONAL FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D of this Order/Permit.

40 CFR 122.41(a) through (n) establish conditions that apply to all NPDES permits. These conditions must be incorporated into permits either expressly or by reference. The Order/Permit incorporates federal conditions that address enforcement authority specified in 40 CFR 122.41(a)(2) and (3), and, by reference, State enforcement authority under California Water Code section 13387(e) which is more stringent.

The Order/Permit also incorporates Regional Water Board standard provisions that apply to all NPDES permits issued by the Regional Water Board and USEPA Region standard provisions that apply to all NPDES permits issued by USEPA Region 9.

B. Special Provisions

1. Reopener Provisions

These provisions are based on 40 CFR regulations governing NPDES permit modification. The Regional Water Board and USEPA may reopen the Order/Permit to modify requirements for cause. Causes for modification can include, but are not limited to, the promulgation of new regulations, changes in sludge use or disposal practices, etc.

2. Best Management Practices and Pollution Prevention

The pollutant minimization program provision is based on the requirements of Ocean Plan section III.C.9 and conditions in the 2004 Order/Permit.

3. Construction, Operation, and Maintenance Specifications

The provisions in this section are based on requirements in the 2004 Order/Permit, related to operator certification, electric power safeguards, and updates of the Operation and Maintenance Manual, preventative and contingency plans (for controlling accidental discharges), and the Stormwater Management Plan.

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4. Special Provisions for Municipal Facilities (POTWs Only)

The provisions in this section (treatment plant capacity, sludge/biosolids, pretreatment, POTW collection system) are based on applicable statutory and regulatory requirements for POTWs and requirements in the 2004 Order/Permit.

5. Other Special Provisions

a. Effluent Mass Emission Benchmarks

To address uncertainty due to potential increases in toxic pollutant loadings from the discharge to the marine environment during the five-year permit term, and to establish a framework for evaluating the need for an antidegradation analysis to determine compliance with State and federal antidegradation requirements at the time of permit reissuance, average annual mass emission benchmarks have been established for effluent discharged through Discharge Point 001 (MRP section VII). For this Order/Permit, the mass emission benchmarks (in metric tons per year) continue to be determined based on 1990 through 1994 effluent concentrations, using the 95th percentile of the 4-day average distribution of daily effluent concentrations, the Discharger's projected 2009 annual average influent flow of 278 mgd, and the following equation: MT/yr = (Ce ug/L)(Q 10^6 gal/day)(3.785 l/gal)(365 days/yr)(1MT/10^{12} ug/L). Average monthly performance was calculated as outlined in Appendix E of *Technical Support Document for Water Quality-based Toxics Control* (EPA/5005/2-90-001, 1991). These mass emission benchmarks are not water quality-based effluent limitations and are not enforceable, as such. They may be re-evaluated and modified during the term of this Order/Permit.

b. The Regional Water Board continues to require the Discharger to make monitoring data accessible to the public via the Internet, as required under previous Orders/Permits.

VIII. PUBLIC PARTICIPATION

The Regional Water Board and USEPA are considering the issuance of waste discharge requirements and NPDES permit (State Order and federal permit) for the above referenced POTW. As a step this process, Regional Water Board and USEPA staff have developed a tentative Order/Permit. The Regional Water Board intends that joint issuance of the draft permit with USEPA will serve as its certification under CWA section 401 that discharge pursuant to the permit will comply with 33 U.S.C. 1311, 1312, 1313, 1316, and 1317. Therefore, any issues regarding such certification should be raised during the public comment period. In addition, the Regional Water Board is proposing to amend Time Schedule Order No. R8-2004-0067 (TSO) to change all references from "R8-2004-0062" to "R8-2012-0035". The Regional Water Board and USEPA encourage public participation in this reissuance process.

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A. Notification of Interested Parties

The Regional Water Board and USEPA have notified the Discharger and interested agencies and persons of their intent to reissue the Order/Permit for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through a legal public notice in the *Orange County Register* on May 8, 2012; and the posting of the Notice and tentative Order/Permit on the Regional Water Board website: http://www.waterboards.ca.gov/santaana/board_decisions/tentative_orders/index.shtml on May 8, 2012.

B. Written Comments on State Order and Federal Permit

The staff determinations are tentative. Interested persons are invited to submit written comments concerning the tentative Order/Permit. Comments should be submitted either in person or by mail to the Executive Officer of the Regional Water Board and Robyn Stuber of the USEPA, at the addresses on the cover page of this Order/Permit.

Although the public comment period for the State Order and TSO amendment close at the end of the public hearing on June 15, to facilitate joint consideration of comments by both the Regional Water Board and USEPA, all comments must be submitted in writing by the close of business on June 6, 2012.

C. Public Hearing on State Order

The Regional Water Board will hold a public hearing on the States tentative WDRs during its regular Board meeting on the following date and time, at the following location:

Date:	June 15, 2012
Time:	9:00 a.m.
Location:	Irvine Ranch Water District 15600 Sand Canyon Avenue Irvine, CA 92618

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. A current Board meeting agenda can be accessed through the Regional Water Board web address http://www.waterboards.ca.gov/santaana/board_info/agendas/ for changes in dates and locations.

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D. State Order Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final Order. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

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

E. Federal NPDES Permit Appeals

When a final NPDES permit is issued by USEPA, it will become effective 33 days following the date it is mailed to the Discharger, unless a request for review is filed. If a request for review is filed, only those permit conditions which are uncontested will go into effect pending disposition of the request for review. Requests for review must be filed within 33 days following the date the final permit is mailed and must meet the requirements of 40 CFR 124.19. All requests for review should be addressed to the Environmental Appeals Board (EAB) as follows. Requests sent through the U.S. Postal Service (except by Express Mail) must be addressed to the EAB's mailing address, which is:

U.S. Environmental Protection Agency
Clerk of the Board
Environmental Appeals Board (MC 1103B)
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460-0001

All filings delivered by hand or courier, including Federal Express, UPS, and U.S. Postal Express Mail, should be directed to the following address:

Environmental Appeals Board
U.S. Environmental Protection Agency
Colorado Building
1341 G Street, N.W., Suite 600
Washington, D.C. 20460

Those persons filing a request for review must have filed written comments on the draft federal permit. Otherwise, any such request for review may be filed only to the extent of changes from the draft to the final permit decision.

F. Information and Copying

The Report of Waste Discharge and permit application, related documents, tentative permit limitations and conditions, comments received, and other information are on

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file and may be inspected at the Regional Water Board and USEPA addresses on the cover page of this Order/Permit, between 9:00 a.m. and 3:00 p.m., Monday through Friday. Copying of documents may be arranged through either the Regional Water Board by calling (951) 782-4130, or USEPA by calling (415) 972-3524.

G. Register of Interested Persons

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

H. Additional Information

Requests for additional information or questions regarding this Order/Permit should be directed to Gary Stewart at (951) 782-4130 and Robyn Stuber at (415) 972-3524.

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CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (ug/L)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
1.	Antimony	204.2					10	5	50	0.5	5	0.5		1000
2.	Arsenic	206.3				20		2	10	2	2	1		1000
3.	Beryllium						20	0.5	2	0.5	1			1000
4.	Cadmium	200 or 213					10	0.5	10	0.25	0.5			1000
5a.	Chromium (III)	SM 3500												
5b.	Chromium (VI)	SM 3500				10	5							1000
	Chromium (total)	SM 3500					50	2	10	0.5	1			1000
6.	Copper	200.9					25	5	10	0.5	2			1000
7.	Lead	200.9					20	5	5	0.5	2			10,000
8.	Mercury	1631												
9.	Nickel	249.2					50	5	20	1	5			1000
10.	Selenium	200.8 or SM 3114B or C						5	10	2	5	1		1000
11.	Silver	272.2					10	1	10	0.25	2			1000
12.	Thallium	279.2					10	2	10	1	5			1000
13.	Zinc	200 or 289					20		20	1	10			
14.	Cyanide	SM 4500 CN^- C or I				5								
15.	Asbestos	0100.2												
16.	TCDD equivalents	1613												
17.	Acrolein	603	2.0	5										
18.	Acrylonitrile	603	2.0	2										
19.	Benzene	602	0.5	2										
33.	Ethylbenzene	602	0.5	2										
39.	Toluene	602	0.5	2										
20.	Bromoform	601	0.5	2										
21.	Carbon Tetrachloride	601	0.5	2										
22.	Chlorobenzene	601	0.5	2										
23.	Chlorodibromomethane	601	0.5	2										
24.	Chloroethane	601	0.5	2										
25.	2-Chloroethylvinyl Ether	601	1	1										
26.	Chloroform	601	0.5	2										
75.	1,2-Dichlorobenzene	601	0.5	2										
76.	1,3-Dichlorobenzene	601	0.5	2										
77.	1,4-Dichlorobenzene	601	0.5	2										
27.	Dichlorobromomethane	601	0.5	2										
28.	1,1-Dichloroethane	601	0.5	1										
29.	1,2-Dichloroethane	601	0.5	2										
30.	1,1-Dichloroethylene or 1,1-Dichloroethene	601	0.5	2										
31.	1,2-Dichloropropane	601	0.5	1										
32.	1,3-Dichloropropylene or 1,3-Dichloropropene	601	0.5	2										
34.	Methyl Bromide or Bromomethane	601	1.0	2										
35.	Methyl Chloride or Chloromethane	601	0.5	2										

[1] The suggested method is the USEPA method unless otherwise specified. The Discharger may use another USEPA-approved or recognized method if that method has a level of quantification below the applicable water quality objective. Where no method is suggested, the Discharger may use any standard method.

[2] Minimum Levels are from the Ocean Plan. They are the concentration of the lowest calibration standard for that technique based on a survey of contract laboratories.

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CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (ug/L)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
36.	Methylene Chloride or Dichlorormethane	601	0.5	2										
37.	1,1,2,2-Tetrachloroethane	601	0.5	1										
38.	Tetrachloroethylene	601	0.5	2										
40.	1,2-Trans-Dichloroethylene	601	0.5	1										
41.	1,1,1-Trichloroethane	601	0.5	2										
42.	1,1,2-Trichloroethane	601	0.5	2										
43.	Trichloroethene	601	0.5	2										
44.	Vinyl Chloride	601	0.5	2										
45.	2-Chlorophenol	604	2	5										
46.	2,4-Dichlorophenol	604	1	5										
47.	2,4-Dimethylphenol	604	1	2										
48.	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10	5										
49.	2,4-Dinitrophenol	604	5	5										
50.	2-Nitrophenol	604		10										
51.	4-Nitrophenol	604	5	10										
52.	3-Methyl-4-Chlorophenol	604	5	1										
53.	Pentachlorophenol	604	1	5										
54.	Phenol	604	1	1		50								
55.	2,4,6-Trichlorophenol	604	10	10										
56.	Acenaphthene	610 HPLC	1	1	0.5									
57.	Acenaphthylene	610 HPLC		10	0.2									
58.	Anthracene	610 HPLC		10	2									
60.	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	10	5										
61.	Benzo(a)Pyrene	610 HPLC		10	2									
62.	Benzo(b)Fluoranthene or 3,4 Benzofluoranthene	610 HPLC		10	10									
63.	Benzo(ghi)Perylene	610 HPLC		5	0.1									
64.	Benzo(k)Fluoranthene	610 HPLC		10	2									
74.	Dibenzo(a,h)Anthracene	610 HPLC		10	0.1									
86.	Fluoranthene	610 HPLC	10	1	0.05									
87.	Fluorene	610 HPLC		10	0.1									
92.	Indeno(1,2,3-cd)Pyrene	610 HPLC		10	0.05									
100.	Pyrene	610 HPLC		10	0.05									
68.	Bis(2-Ethylhexyl)Phthalate	606 or 625	10	5										
70.	Butylbenzyl Phthalate	606 or 625	10	10										
79.	Diethyl Phthalate	606 or 625	10	2										
80.	Dimethyl Phthalate	606 or 625	10	2										
81.	Di-n-Butyl Phthalate	606 or 625		10										
84.	Di-n-Octyl Phthalate	606 or 625		10										
59.	Benzidine	625		5										
65.	Bis(2-Chloroethoxy)Methane	625		5										
66.	Bis(2-Chloroethyl)Ether	625	10	1										
67.	Bis(2-Chloroisopropyl)Ether	625	10	2										
69.	4-Bromophenyl Phenyl Ether	625	10	5										
71.	2-Chloronaphthalene	625		10										
72.	4-Chlorophenyl Phenyl Ether	625		5										
73.	Chrysene	625		10	5									

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CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (ug/L)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
78.	3,3'-Dichlorobenzidine	625		5										
82.	2,4-Dinitrotoluene	625	10	5										
83.	2,6-Dinitrotoluene	625		5										
85.	1,2-Diphenylhydrazine (Azobenzene)	625		1										
88.	Hexachlorobenzene	625	5	1										
89.	Hexachlorobutadiene	625	5	1										
90.	Hexachlorocyclopentadiene	625	5	5										
91.	Hexachloroethane	625	5	1										
93.	Isophorone	625	10	1										
94.	Naphthalene	625	10	1	0.2									
95.	Nitrobenzene	625	10	1										
96.	N-Nitrosodimethylamine	625	10	5										
97.	N-Nitrosodi-n-Propylamine	625	10	5										
98.	N-Nitrosodiphenylamine	625	10	1										
99.	Phenanthrene	625		5	0.05									
101.	1,2,4-Trichlorobenzene	625	1	5										
102.	Aldrin	608	0.005											
103.	α-BHC	608	0.01											
104.	β-BHC	608	0.005											
105.	γ-BHC (Lindane)	608	0.02											
106.	δ-BHC	608	0.005											
107.	Chlordane	608	0.1											
108.	4,4'-DDT	608	0.01											
109.	4,4'-DDE	608	0.05											
110.	4,4'-DDD	608	0.05											
111.	Dieldrin	608	0.01											
112.	Endosulfan (alpha)	608	0.02											
113.	Endosulfan (beta)	608	0.01											
114.	Endosulfan Sulfate	608	0.05											
115.	Endrin	608	0.01											
116.	Endrin Aldehyde	608	0.01											
117.	Heptachlor	608	0.01											
118.	Heptachlor Epoxide	608	0.01											
119-125	PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260	608	0.5											
126.	Toxaphene	608	0.5											

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