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City of Oxnard

Public Works Integrated Master Plan

WASTEWATER

PROJECT MEMORANDUM 3.1
BACKGROUND SUMMARY

FINAL DRAFT
December 2015

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City of Oxnard

Public Works Integrated Master Plan

WASTEWATER

PROJECT MEMORANDUM 3.1
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BACKGROUND SUMMARY

1.0 INTRODUCTION

The City of Oxnard (City) owns and operates the Oxnard Wastewater Treatment Plant (OWTP) and the associated wastewater collection system. The City provides wastewater treatment to Oxnard and several surrounding communities. The City is permitted to discharge treated wastewater to the Pacific Ocean and in addition, a portion of the treated wastewater is used as recycled water after further treatment through the City's Advanced Water Purification Facility (AWPF).

This Project Memorandum (PM) will provide an overview of the existing OWTP and collection system, as well as summarize past OWTP planning reports, regulatory requirements and climate change issues the system will be facing.

1.1 PMs Used for Reference

Other Project Memoranda (PMs) that expand on the wastewater system needs/recommended projects include:

- PM 3.2 - Wastewater System - Flow and Load Projections.
- PM 3.3 - Wastewater System - Infrastructure Modeling and Alternatives.
- PM 3.4 - Wastewater System - Treatment Plant Performance and Capacity.
- PM 3.5 - Wastewater System - Condition Assessment.
- PM 3.6 - Wastewater System - Seismic Assessment.
- PM 3.7 - Wastewater System - Treatment Alternatives.
- PM 3.8 - Wastewater System - Arc Flash Assessment.
- PM 3.9 - Wastewater System - Cathodic Protection Assessment.
- PM 3.10 - Wastewater System - SCADA Assessment.
- PM 3.11 - Wastewater System - Biosolids Management.

1.2 Other Reports Used for Reference

In developing the wastewater background summary of this Public Works Integrated Master Plan (PWIMP), information from other reports were incorporated to ensure a well-rounded and holistic look at the wastewater system. The following reports are used in this PWIMP analysis:

- Oxnard Wastewater Treatment Facilities Plan, November 1985 (John S. Murk Engineers, 1985).

- Oxnard Wastewater Treatment Plant National Pollutant Discharge Elimination System (NPDES) Permit, Order No. R4-2013-0094, NPDES No. CA0054097. (NPDES Permit, 2013).
- Oxnard Wastewater Treatment Plant Operations and Maintenance Manual Volume 1-6, April 1980 (Brown and Caldwell, 1980).
- Oxnard Wastewater Treatment Plant Operations and Maintenance Manual Phase 1 Expansion Volumes 1-4, September 1991 (Camp Dresser McKee Inc., 1991).
- Oxnard Waste Discharge Requirements, Order No. R4-2008-0083 as amended by Order No. R4-2011-0079, File No. 64-104 and File No. 08-070, CI- 9456, (WDR, 2008).
- Cayan, D., P. Bromirski, K. Hayhoe, M. Tyree, M. Dettinger, and R. Flick (2006) Projecting Future Sea Level. A Report From: California Climate Change Center. CEC-500-2005-202-SF, (Cayan *et al.*, 2006).
- Walsh, J.E., *et al.* (2005) Cryosphere and Hydrology. In Arctic Climate Impact Assessment (ACIA): Scientific Report. pp. 184-242. Cambridge University Press, (Walsh, 2005).
- Mike Healey, Projections of Sea Level Rise for the Delta, Memorandum to Blue Ribbon Task Force, CALFED Independent Science Board, September 6, 2007. http://www.deltavision.ca.gov/BlueRibbonTaskForce/April2008/Item2_Attachment1.pdf, (Healy, 2007).

2.0 EXISTING WASTEWATER SYSTEM

The wastewater system provides collection, treatment, and disposal of wastewater for most of Oxnard and areas with institutional agreements with the City, which include the City of Port Hueneme, the Port Hueneme Water Agency, the Naval Base Ventura County facilities at Port Hueneme and Point Mugu, Ventura Regional Sanitation District, Crestview Mutual Water Company, Santa Clara Wastewater Company, Nyeland Acres, and Las Posas Estates. Figure 1 and Figure 2 show an overview of the wastewater collection and treatment system.

2.1 Overview

In 1955, the City of Oxnard constructed a wastewater treatment facility with an average dry weather flow (ADWF) capacity of 5 million gallons per day (mgd) that collected wastewater from throughout the City. The facility included raw sewage pumping, influent screening, primary sedimentation, an activated sludge secondary treatment process, effluent disinfection, and anaerobic digestion. Digested sludge was dewatered using on-site drying beds. Final effluent was transported through a 30-inch diameter cast iron outfall and discharged approximately 700 feet offshore.

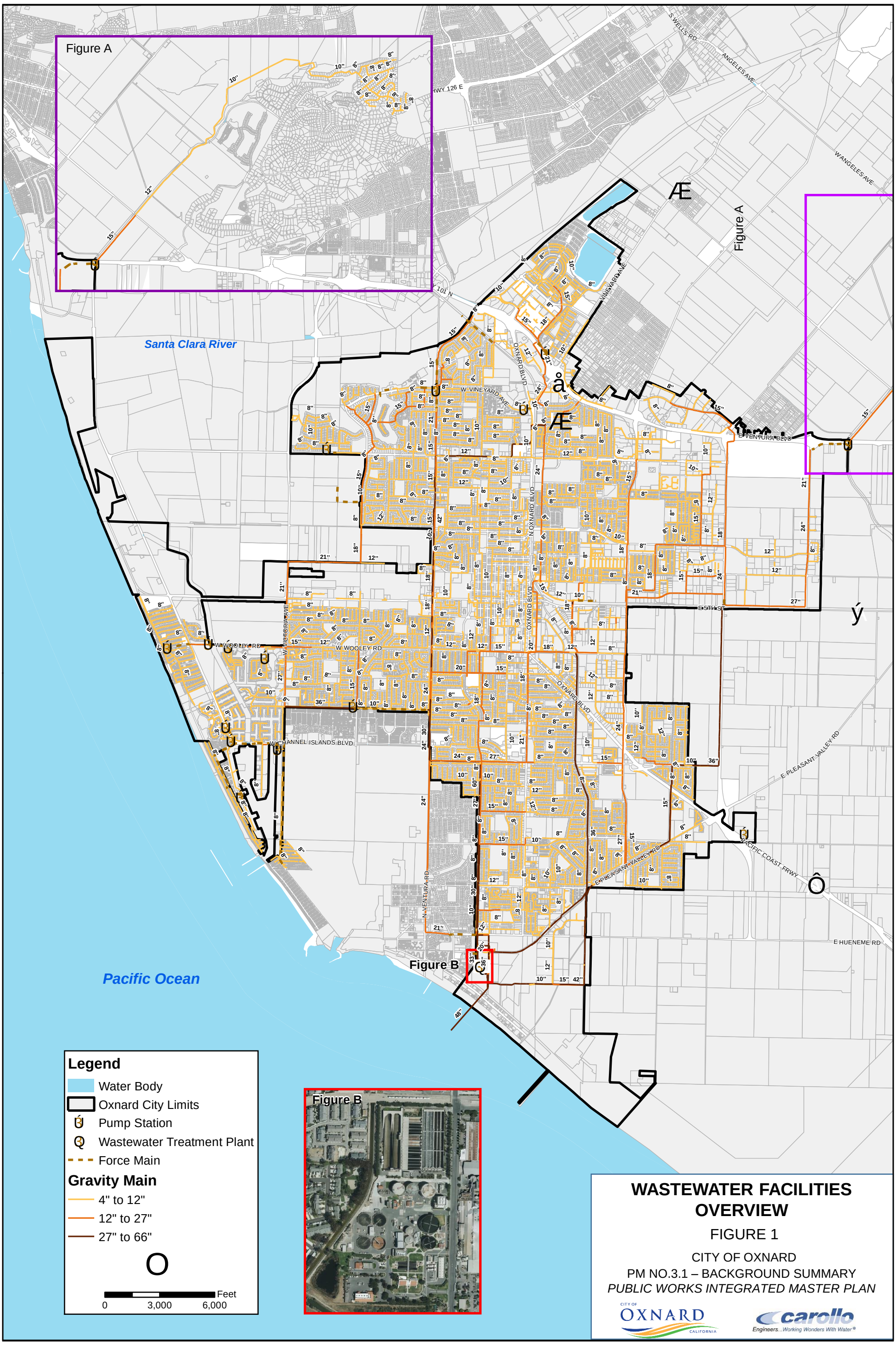
Figure A
Santa Clara River
Pacific Ocean
Figure B
W VINEYARD AVE
OXNARD BLVD
VINEYARD AVE
S WELLS RD
ANGELES AVE
W ANGELES AVE
HWY 126 E
HWY 101 N
E VENTURA BLVD
E 5TH ST
W WOOLEY RD
VICTORIA AVE
W CHANNEL ISLANDS BLVD
NAVENTURA RD
E PLEASANT VALLEY RD
PACIFIC COAST FRWY
E HUENEME RD
Legend
Water Body
Oxnard City Limits
Pump Station
Wastewater Treatment Plant
Force Main
Gravity Main
4" to 12"
12" to 27"
27" to 66"
Feet
0
3,000
6,000
WASTEWATER FACILITIES OVERVIEW
FIGURE 1
CITY OF OXNARD
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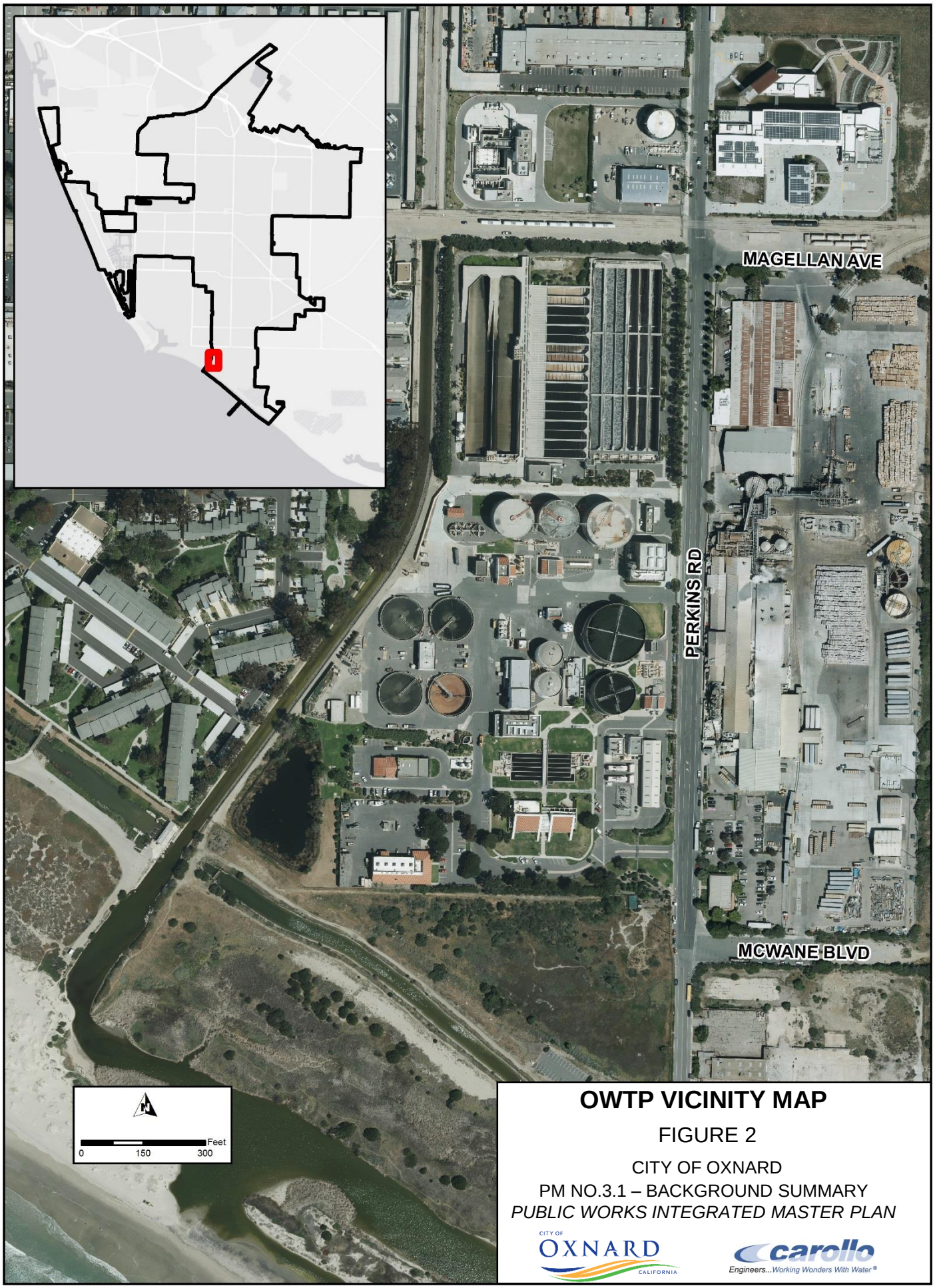

OWTP VICINITY MAP

FIGURE 2

CITY OF OXNARD

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PUBLIC WORKS INTEGRATED MASTER PLAN

CITY OF OXNARD CALIFORNIA

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In 1964, the ADWF capacity was increased to 11 mgd by abandoning the existing activated sludge system and converting the existing aeration tank to a pre-aeration tank and the existing secondary clarifier to a second primary clarifier. This project also included a final effluent pumping station and a 48-inch diameter land outfall segment that tied into the existing 30-inch diameter outfall. In addition, a 4,816 foot long 48-inch diameter extension and a 384-foot long 48-inch diameter multiport diffuser, with 17 6-inch diameter ports, was added to extend the existing outfall.

A 1971 project expanded the ADWF capacity further to 25 mgd by adding a parallel advanced primary treatment train with flotation clarifiers. The existing anaerobic digesters were converted to a skimmings (scum) storage tank and primary sludge storage tank, respectively. A new solids handling building was constructed with vacuum filters for sludge dewatering and a multiple-hearth furnace for sludge incineration.

A 1975 project was designed to comply with the Ocean Plan enacted by the State Water Resources Control Board in the early 1970s. The primary clarifiers from the 1961 project were incorporated into two biofilters (trickling filters) to provide additional carbonaceous BOD (cBOD) removal and two of the flotation clarifiers from the 1971 project were converted to treat the trickling filter effluent. These secondary treatment facilities increased the overall cBOD and TSS removal to 92 percent. The multiple-hearth furnace was abandoned and two new anaerobic digesters were constructed for sludge stabilization upstream of the existing vacuum filters. Dewatered sludge was hauled to landfill. Additional facilities constructed in this project included a biofilter feed pumping station, chlorine contact tank, and digester gas-driven engine generators. The existing skimmings (scum) storage tank and primary sludge storage tank were converted to gravity thickeners.

The existing outfall diffuser was modified to provide the higher initial dilution required by the Ocean Plan. Inserts were added to the existing ports to reduce the diameter to 3 inches and an additional 106 3-inch diameter ports were drilled in the existing diffuser and the last 616 feet of the existing outfall. These modification increased the multiport diffuser length to 1,000 feet. Because a portion of the 1971 primary treatment facilities were incorporated into the new secondary treatment facilities, the ADWF capacity decreased to 22.6 mgd.

The ADWF capacity was increased to 31.7 mgd in a 1990 project that added an activated sludge treatment system downstream of the existing biofilters. Secondary effluent equalization (5 MG of storage) was added immediately downstream of the secondary clarifiers to limit the peak flow through the outfall to 50 mgd at the projected peak wet weather flow rate of 75.4 mgd. The aeration basins, rectangular secondary clarifiers, and secondary effluent equalization basins were constructed in a single structure at the north end of the OWTP site. Provisions were made for three future secondary clarifiers. This project also included modification of the existing flotation clarifiers to gravity primary settling tanks, modifications to the existing interstage pumping station to lift the trickling filter effluent to the new aeration tanks, two dissolved air flotation thickeners (DAFTs) to handle the new waste activated sludge (WAS) stream, a new anaerobic digester, a new belt filter

press dewatering facility to replace the existing vacuum filters, modifications to the headworks, a new standby influent pumping system, new gaseous chlorine and sulfur dioxide storage and delivery facilities, and a new pump station for the Eastern Trunk line.

A new headworks structure, located north of the existing OWTP site, was constructed in a 2003 project. As part of this project the Eastern Trunk line was rerouted to the new headworks facility and the existing Eastern Trunk pump station located at the OWTP was decommissioned. The northeast interceptor and southeast interceptor flow by gravity into the new headworks structure, which included climber-type mechanical bar screens, aerated grit tanks, and a raw sewage pumping station. Raw screenings are washed and compacted and raw grit is washed and dewatered in an adjacent screenings and grit handling building. Solids handling recycles (gravity thickener overflow, DAFT overflow, and belt filter press filtrate) and other OWTP recycle streams are routed via the southeast interceptor to the new headworks structure. The preliminary treatment and raw sewage pumping facilities were designed for a maximum flow rate of 77.4 mgd.

In 2009, an advanced water purification facility (AWPF) was constructed to further treat undisinfected OWTP secondary effluent using membrane filtration (MF), reverse osmosis (RO), and ultraviolet/advanced oxidation (UV/AOX) process that provides disinfection and reduces micropollutant concentrations. The recycled water from the AWPF effluent is currently permitted for landscape irrigation, turfgrass irrigation, food crop irrigation, industrial or commercial cooling tower makeup, industrial boiler feed, and recreational impoundments. Planned future uses of AWPF recycled water include aquifer recharge for indirect potable reuse and as a barrier for seawater intrusion.

As of 2015, the City's OWTP is permitted to process up to 31.7 mgd of ADWF. The OWTP collection system includes roughly 384 miles of piping to convey waste from both within city limits and from the surrounding area. The OWTP is designed to remove conventional pollutants including biochemical oxygen demand (BOD_5), total suspended solids (TSS), and other pollutants regulated in the NPDES permit. Most of the treated effluent is discharged to the Pacific Ocean through the existing outfall. Stabilized and dewatered solids residuals are hauled to landfill.

2.2 Collection System

2.2.1 Description

The City's existing sanitary sewer collection system is comprised of roughly 384 miles of gravity collection system pipe from 4-inches in diameter up to 60-inches in diameter. As is typical for a community this size, most of the sewers are 8-inches in diameter (67 percent). Table 1 summarizes the pipe size distribution for the gravity sewers.

Table 2 summarizes the gravity sewer pipe by material. As shown in Table 2, the majority of the sewers are made of vitrified clay pipe (VCP) (70 percent) and Polyvinyl Chloride (PVC) (22 percent).

Table 1	Gravity Sewer Pipe Size Distribution Public Works Integrated Master Plan City of Oxnard		
Pipe Diameter, in.	**Length, ft**	**Length, miles**	**Percent of Total, %**
4	1,953	0.4	0.1%
6	21,795	4.1	1.1%
8	1,367,230	258.9	67.4%
10	167,265	31.7	8.3%
12	100,282	19.0	4.9%
14	90	0.0	0.0%
15	91,076	17.2	4.5%
16	8,671	1.6	0.4%
18	42,563	8.1	2.1%
20	2,807	0.5	0.1%
21	34,966	6.6	1.7%
24	37,074	7.0	1.8%
27	29,918	5.7	1.5%
30	8,052	1.5	0.4%
33	6,112	1.2	0.3%
36	52,610	10.0	2.6%
42	26,699	5.1	1.3%
48	6,926	1.3	0.3%
60	15,417	2.9	0.8%
Unknown	6,660	1.3	0.3%
Total	**2,028,166**	**384.1**	**100.0%**

Notes
(1) Source: City GIS Database, June 2014.
(2) Table only accounts for active pipes. Inactive or abandoned pipes are excluded.
(3) Table only accounts for pipes owned by the City of Oxnard. Privately owned pipes or pipes owned by the County of Ventura are excluded.

Table 2	**Gravity Sewer Pipe Material Public Works Integrated Master Plan City of Oxnard**	
Material	**Length, ft**	**Percent of Total, %**
Asbestos Cement Pipe (ACP)	15,618	0.8%
Cast Iron (CIP)	1,275	0.1%
Centrifugally Cast, Glass-Fiber-Reinforced, Polymer Mortar (CCFRPM)	22,447	1.1%
Ductile Iron (DIP)	320	0.0%
Fiberglass Reinforced Pipe (FRP)	15,757	0.8%
High Density Poly Ethylene (HDPE)	64,559	3.2%
Polymer Resin Concrete (PRC)	3,816	0.2%
Polyvinyl Chloride (PVC)	453,325	22.4%
Reinforced Concrete Pipe (RCP)	14,641	0.7%
Vitrified Clay Pipe (VCP)	1,420,147	70.0%
Unknown	16,260	0.8%
Total	**2,028,166**	**100.0%**

Notes
(1) Source: City GIS Database, June 2014.
(2) Table only accounts for active pipes. Inactive or abandoned pipes are excluded.
(3) Table only accounts for pipes owned by the City of Oxnard. Privately owned pipes or pipes owned by the County of Ventura are excluded.

The City currently operates and maintains 15 lift stations throughout the City. All of the lift stations utilize a submersible pump configuration except for the Patterson & Hemlock Wastewater Lift Station which has a wet well configuration. All of the pump stations have a duty and a standby pump. Table 3 summarizes the wastewater lift stations in the service area.

Table 4 summarizes the lift station force main pipe size distribution. The force mains associated with the wastewater lift stations are composed of approximately 4.7 miles of pressurized pipe from 4-inches in diameter up to 20-inches in diameter. The majority of the pipes are 6-inches and 10-inches in diameter (67 percent).

Table 5 summarizes the age of the wastewater gravity and pressure force mains. Installation dates for the gravity mains were not readily available. Approximately 89 percent of the gravity mains do not have installation dates available in the GIS database, but all force mains had installation dates. Force main pipe ages ranged from 6 to 46 years old.

Table 3 Wastewater Lift Stations
Public Works Integrated Master Plan
City of Oxnard

Lift Station No.	Name	Type	Year Built	No. of Pumps	Rated Pump Capacity (gpm)	Rated TDH (ft)	Pump Op Strategy
1	Cabezone	Submersible	1971	2	315	27	Duty/Standby
2	Harbor	Submersible	1970	2	200	55	Duty/Standby
4	Madalay & Wooley	Submersible	1986	2	600	46	Duty/Standby
6	Canal	Submersible	1986	2	1,000	40	Duty/Standby
7	Viewpoint	Submersible	2003	2	300	25	Duty/Standby
8	Seabridge	Submersible	2006	2	600	33	Duty/Standby
9	Oxnard High School	Submersible	2003	2	300	25	Duty/Standby
15	Cascade	Submersible	1970	2	300	30	Duty/Standby
20	Beardsley	Submersible	1965	2	1,100	15	Duty/Standby
23	Wagon Wheel	Submersible	1991	2	1,500	36	Duty/Standby
24	Handyman	Submersible	1971	2	500	24	Duty/Standby
27	Launch Ramp	Submersible	1977	2	230	18	Duty/Standby
28	Riverpark	Submersible	2006	2	1,395	32	Duty/Standby
29	Patterson & Hemlock	Wet Well	2004	2	5,400	80	Duty/Standby
			2004	2	3,700	37	Duty/Standby
30	Colony	Submersible	1984	2	450	66	Duty/Standby

Note:
(1) Source: City of Oxnard, October 2014

Table 4 Lift Station Force Main Pipe Size Distribution
Public Works Integrated Master Plan
City of Oxnard

Pipe Diameter, in.	Length, ft	Length, miles	Percent of Total, %
4	245	0.05	1.0%
6	7,519	1.42	30.5%
8	264	0.05	1.1%
10	9,097	1.72	36.9%
12	3,952	0.75	16.0%
20	3,560	0.67	14.5%
Total	**24,637**	**4.67**	**100.0%**

Note:
(1) Source: City of Oxnard, October 2014

Table 5	Wastewater Mains Age Distribution Public Works Integrated Master Plan City of Oxnard				
Installation Year	Estimated Age (at least), years	Length, feet		Percent of Total, %	
		Force Main(4)	Gravity Main(1,2,3)	Force Main(4)	Gravity Main(1,2,3)
1960-1969	46	7,096	53,993	28.8%	2.7%
1970-1979	36	4,422	0	18.0%	0.0%
1980-1989	26	5,383	3,834	21.9%	0.2%
1990-1999	16	1,078	1,611	4.4%	0.1%
2000-2009	6	6,658	158,939	27.0%	7.8%
2010	5	0	5,630	0.0%	0.3%
2011	4	0	300	0.0%	0.0%
2012	3	0	2,534	0.0%	0.1%
2013	2	0	2,034	0.0%	0.1%
Unknown	--	0	1,799,291	0.0%	88.7%
Total		**24,637**	**2,028,166**	**100.0%**	**100.0%**

Notes
(1) Source: City GIS Database, June 2014.
(2) Table only accounts for active pipes. Inactive or abandoned pipes are excluded.
(3) Table only accounts for pipes owned by the City of Oxnard. Privately owned pipes or pipes owned by the County of Ventura are excluded.
(4) Source: City of Oxnard, October 2014.

2.3 Wastewater Treatment Plant

2.3.1 Description of Existing Treatment Facilities

The OWTP has a permitted capacity of 31.7 mgd and treats wastewater for discharge to the City's existing ocean outfall. An overall site plan and process flow schematic are provided in Figure 3 and Figure 4, respectively. Table 6 summarizes basic design criteria for the OWTP. Appendix A includes a detailed summary of the unit process sizing, original design criteria, and major equipment that was collected from operation and maintenance manuals.

LEGEND

1. Eastern Trunk Pump Station
2. Headworks
3. Primary Sedimentation Tanks
4. Primary Sedimentation Building
5. Interstage Pump Station
6. Biofilters
7. Activated Sludge Tanks
8. Secondary Sedimentation Tanks
9. Flow Equalization Basins
10. North Area Electrical Building
11. Blower Building
12. Chlorine Contact Tanks
13. Effluent Pumping Station
14. Effluent Electrical Building
15. Gravity Thickeners
16. DAF Thickeners
17. Anaerobic Digesters
18. Digester Control Building
19. Waste Gas Burner
20. Solids Processing Building
21. Main Electrical Building
22. Generator Building
23. Chemical Handling Facilities
24. Polymer Building
25. Dechlorination Storage
26. Chlorination Storage Area
27. Propane Storage Tank
28. Administration Building
29. Storage Buildings (3)
30. Maintenance Building
31. Collection System Maintenance Building
32. Advanced Water Purification Facility

OWTP SITE PLAN

FIGURE 3

CITY OF OXNARD

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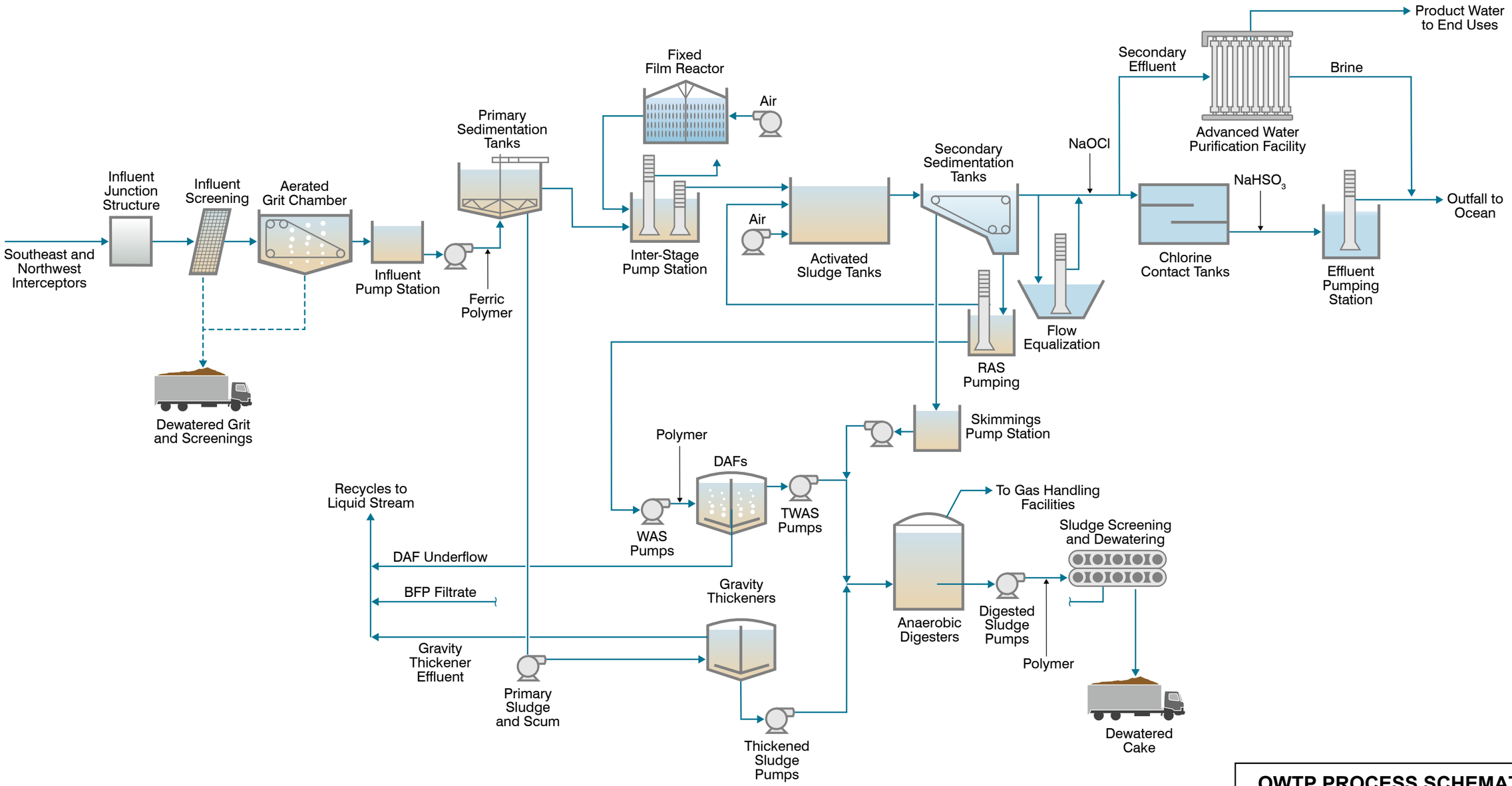
ox0715f20-9587(PM3-1 FIG3).ai



OWTP PROCESS SCHEMATIC

FIGURE 4

CITY OF OXNARD

PM NO. 3.1 – BACKGROUND SUMMARY

PUBLIC WORKS INTEGRATED MASTER PLAN

ox0715f21-9587(PM3-1 FIG4).ai

Table 6	OWTP Design Criteria Public Works Integrated Master Plan City of Oxnard		
Criteria	**Main Equipment**	**Ancillary Equipment**	**Year Installed**
Preliminary Treatment			
Bar Screens	4 mechanical screens (1/4-inch openings) 2 manual screens (1/2-inch opening)	Screenings Conveyor/Compactor	2008
Aerated Grit	2 chambers, each with 4 hoppers	Grit pumps/separator	2008
Influent Pumps	6 – 18,000 gpm 450-hp pumps		2008
Primary Treatment			
Sedimentation	4 circular 105-foot diameter basins	Sludge scrapers, transfer pumps, scum ejector, optional polymer	4 basins – 1972
Secondary Treatment			
Biofiltration	2 – one 140-foot dia., and one 100-foot dia. filters	Feed and recirculation pumps, ventilation system	2 filters – 1975
Activated Sludge	2 tanks, each with 3 passes, 3 step-feed channels per pass. Fine air diffusers fixed on floor.	6 - single-stage blowers, return activated sludge pumps	1990
Sedimentation	18 rectangular sedimentation basins	Waste activated sludge pumps	1990
Flow Equalization	1 - 5-MG storage tank with 2 sections	Pump station and recirculation tubes	1990
Disinfection			
Chlorination/ Dechlorination	6 pass contact tank	Hypochlorite and bisulfite feed systems	6 passes – 1980
Solids Handling			
Gravity Thickening (for primary solids)	2 - 59-foot diameter thickeners	Polymer and ferric chloride system for thickening, thickened sludge pump station	2 GT – 1980
Dissolved Air Flotation (for secondary solids thickening)	2 - 25-foot diameter thickeners	Polymer system for thickening	2 units - 1990

Table 6	OWTP Design Criteria Public Works Integrated Master Plan City of Oxnard		
Criteria	**Main Equipment**	**Ancillary Equipment**	**Year Installed**
Anaerobic Digestion	3 digesters, 2 at 90-foot diameter and 1 at 110-foot diameter	Heat exchanger, mixer, recirculation pumps, fixed cover, gas collection system, digested sludge pumping	90-foot dia.– 1980 110-foot dia. – 1990
Belt Filter Press (Dewatering)	4 - 2.2-m units	Polymer system for sludge conditioning	4 BFPs – 1990
Cogeneration	3 - 500-kW generators	Waste heat recovery system	1980

Note:
(1) Source: OWTP, Operation and Maintenance Manuals, and comments from Mark Moise.

2.3.1.1 Preliminary Treatment and Influent Pump Station

Preliminary treatment (or “Headworks”) consists of an inlet junction structure, bar screens, screenings conveyance, grit removal, and grit conveyance. The influent junction box collects flow from the Southeast Interceptor Sewer and the Northwest Interceptor Sewer as well as tank drainage and return flows from the OWTP. From there flow is routed to a total of six influent screen channels. Four of the screen channels have mechanical bar screens while the remaining two are equipped with manual bar screens. From there, flow is routed to one of two grit chambers to remove grit and other heavy material that is hauled to an offsite landfill for disposal.

Finally, flow is gravity fed to the influent pump station wet well. The influent pump station includes six dry pit submersible pumps. During normal operations three of the six pumps are on duty.

2.3.1.2 Primary Treatment

Raw wastewater from the headworks flows to four primary sedimentation basins for primary treatment. Each sedimentation basin is 105 feet (ft) in diameter and has a designated sludge collector, sludge pump, and surface scum removal mechanism. The primary treatment process includes facilities for adding ferric chloride and polymer to enhance sedimentation. Ferric chloride destabilizes the suspended particles in the primary influent wastewater to promote flocculation. The addition of polymer after floc formation produces a much larger floc, enhancing the settling of suspended solids in the primary clarifiers.

2.3.1.3 Secondary Treatment

The secondary treatment system uses a fixed-film secondary treatment process followed by an air-activated sludge process that removes organic material (biochemical oxygen demand, [BOD]) from primary effluent. The City’s discharge permit for the facility does not currently require nitrogen or phosphorus removal.

The secondary treatment system is comprised of biotowers, activated sludge tanks (ASTs), and secondary sedimentation basins (SSTs). First, the primary effluent flows to an interstage pump station where it is pumped by four circulation pumps over the two existing biotowers. These biotowers were constructed in 1975. The larger biotower is 140 feet in diameter while the smaller biotower is 100 feet in diameter. Flow is then pumped by three interstage feed pumps to the ASTs.

The OWTP has two ASTs that can be operated in a step-feed configuration. Additionally, each AST has three channels that can be run in series or in parallel. Each pass has fixed fine bubble diffusers fed by five single-stage centrifugal blowers. Each of the three channels in the ASTs is 450 ft long with a surface water depth of 17 feet.

The South Pipe Gallery at the south end of the aeration passes house the aeration blower equipment. Five centrifugal blowers supply air to the aeration basins to provide oxygen for the activated sludge microorganisms and mixing of the mixed liquor. Air drawn into the blowers is compressed, and then discharged through dedicated headers to the fine bubble diffusers.

Flow exiting the ASTs is collected in an effluent channel that flows to the SST inlet channel. This SST inlet channel runs along all eighteen rectangular SSTs to distribute flow. Each SST has plastic flight and chain sludge collectors that send sludge to a centralized return activated sludge (RAS) pump station consisting of a wet well and four mixed flow pumps. Secondary effluent leaving the SSTs flows in the secondary effluent channel that runs along all eighteen SSTs. This secondary effluent then flows by gravity to the Chlorine Contact Tank (CCT) and/or to the Advanced Water Purification Facility (AWPF) lift pump station wet well.

When flow exiting the SSTs is greater than 50 mgd, a portion of the flow is diverted and flows by gravity to two equalization basins (EQ Basin). Each EQ Basin is 2.5 million gallons. When peak flows subside, secondary effluent stored in the EQ basins is pumped by three vertical mixed flow pumps out of the basins to the CCTs.

2.3.1.4 Effluent Disinfection

Secondary effluent leaving the SSTs and/or EQ Basin flows by gravity or is pumped through a 48-inch secondary effluent line that discharges to the inlet of the CCT adjacent to the Administration Building. The OWTP has two three-pass CCTs. Each pass is 145 feet long.

Chlorination using sodium hypochlorite and dechlorination using sodium bisulfite are the final liquid treatment processes at the OWTP. Their primary function is to disinfect the effluent before it is discharged to the ocean. Disinfection with sodium hypochlorite solution inactivates pathogens by oxidation during a “contact time.” Chlorine contact tanks are provided to slow the flow and allow time for disinfection to occur. Chlorine residual in the plant effluent is toxic to aquatic organisms so it must be completely removed by adding

sodium bisulfite solution. The reaction between the chlorine residual and sodium bisulfite is essentially immediate.

Sodium hypochlorite is added at the secondary clarifier effluent channel located in the north area process tankage along the southern end of the EQ basins. Sodium bisulfite is added to the chlorinated effluent at the CCT discharge end prior to final ocean disposal.

Secondary uses for sodium hypochlorite in the plant include odor control at the influent manholes and at the secondary effluent feed tie-in to the AWPF.

2.3.1.5 Effluent Pump Station and Outfall

The effluent pump station and outfall dispose treated wastewater to the ocean. The system includes in-plant conveyance piping, a pump station with two engine driven pumps, two electric motor (VFD) pumps, one additional motor driven pump ("big red"), and an outfall. The two engine driven pumps and two VFD pumps are located at the effluent pump station, while the one motor driven pump is located at the effluent end of the CCT. Typically, the motor driven pump is used during low flow conditions while the engine driven pumps are only used for peak flows.

The OWTP has a 6,800-foot outfall that was constructed around 1963 and modified in 1978. It discharges OWTP effluent into the Pacific Ocean through multi-port diffusers offshore of Ormond Beach. It has a permitted capacity of 50 mgd.

2.3.1.6 Solids Handling

The solids handling facilities at the OWTP consist of two gravity thickeners for primary sludge thickening, two dissolved air flotation thickeners (DAFTs) for waste activated sludge (WAS) thickening, three anaerobic digesters, and four belt filter presses (BFPs) for dewatering.

Primary sludge and scum is pumped from the primary clarifiers to the gravity thickeners. The sludge feed is combined at the thickener feed junction box and discharged to the thickener influent well where it is evenly distributed to prevent short circuiting. Polymer is added to this sludge stream. The purpose of the gravity thickeners is to reduce the liquid content in the primary sludge sent to the digesters.

WAS and scum from the secondary clarifiers are pumped from the RAS/WAS pump stations to the DAFTs. Polymer is added to this sludge stream. The DAFTs separate the solids from the liquid in the WAS flow by using fine air bubbles to float the sludge particles to the surface, where it is then scraped off. Volume reduction from WAS thickening benefits the sludge digestion and dewatering processes by reducing the volume of sludge to be processed, quantity of chemicals required for sludge conditioning, and amount of heat required for digestion. The thickened solids are combined with the thickened primary sludge and pumped to the digesters for digestion.

The main purpose of anaerobic digestion is to biologically decompose organic material in primary and secondary scum and sludge to a stable form in compliance with regulatory requirements for final disposal. Anaerobic digestion also reduces the amount of solids to dewater, reduces the volume of sludge cake that is hauled to the landfill, reduces pathogens in the sludge and produces digester gas that is high in methane and useful for fueling other equipment.

The solids dewatering facility consists of the belt filter press (BFP) process in the Solids Processing Building east of the digesters. The BFP system is designed to concentrate the anaerobically digested sludge from a solids content of less than 3 percent to a range of 18 to 20 percent. Polymer is mixed with digested sludge upstream of the BFPs to promote flocculation and solids capture so that the solids will concentrate into cake form. BFP sludge cake is conveyed to hauling trucks for transport to an offsite landfill.

3.0 REGULATIONS

3.1 Current Wastewater Regulations

3.1.1 Collection System

Wastewater collection systems are governed by the California State Water Resources Control Board (SWRCB) which adopted statewide general waste discharge requirements (WDRs) for sanitary sewer collection systems in 2006. All systems with greater than one mile of pipeline must apply for coverage under the WDR.

The WDRs require all collection systems to monitor for sanitary sewer overflows and require all collection systems to implement a sewer system management plan (SSMP). This SSMP is essentially an asset management plan that takes into account future capacity and operation and maintenance needs. There are eleven mandatory elements to the SSMP and these elements include an operation and maintenance program, design and performance provisions, emergency response plan, system evaluation and capacity assurance plan, monitoring, and program audits.

The operation and maintenance program requirements include the implementation of a rehabilitation and replacement plan to prioritize system deficiencies and plan actions to address these deficiencies. The design and performance provisions include the creation of design and construction standards for installing new sewer system components and for repairing existing elements. These standards include the need for inspection and for providing systems that resist infiltration and inflow. Another component of the SSMP, the system evaluation and capacity assurance plan, is essentially the creation of a capital improvement plan that will provide sufficient capacity for both peak dry and wet weather flows. Such a plan must include an evaluation, design criteria, capacity enhancement measures, and a schedule. Oftentimes sewer system modeling is an integral component of this planning effort.

3.1.2 Treatment Plant

Wastewater discharges are governed by both federal and state requirements. The primary laws regulating water quality are the Clean Water Act (CWA) and the California Water Code. Under the CWA, the Environmental Protection Agency (EPA) or a delegated State agency regulates the discharge of pollutants into waterways through the issuance of National Pollutant Discharge Elimination Systems (NPDES) permits. NPDES permits set limits on the amount of pollutants that can be discharged into the waters of the United States. The California Water Code and the Porter-Cologne Act, a provision of the Water Code, require the State to adopt water quality policies, plans, and objectives for the protection of the State's waters. The State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) meet this requirement by establishing water quality criteria in regional Basin Plans, the Inland Surface Waters, Enclosed Bays and Estuaries Plan, the Thermal Plan, and the Ocean Plan. The SWRCB and the RWQCBs also have regulatory authority along with the California Division of Drinking Water (DDW) over projects using recycled water. Table 7 provides more detail on the responsibilities and authority of the SWRCB, RWQCB, and the DDW.

Table 7 Responsibilities and Authorities of Water Boards and State Department of Public Health
Public Works Integrated Master Plan
City of Oxnard

Department/Board	Responsibility
RWQCB	Protects surface and groundwater resources. Issues permits that implement DDW recommendations.
SWRCB	Establishes general policies governing the permitting of recycled water projects.(1) Exercises general oversight over recycled water projects, including review of RWQCB permitting practices.
DDW	Protects public health and drinking water supplies. Develops uniform water recycling criteria appropriate to particular uses of water.

Note:
(1) Consistent with its role of protecting water quality and sustaining water supplies.

The OWTP is located in the Los Angeles Region, and therefore the Los Angeles RWQCB (LARWQCB) has authority to issue permits for wastewater discharge and recycled water use. The OWTP currently discharges to the Pacific Ocean under existing NPDES permit (CA0054097) which was adopted by the LARWQCB on July 26, 2013 (WW-16). The City also operates an AWPF under its Groundwater Enhancement and Treatment (GREAT) Program, to produce non-potable water for reuse. The GREAT Program operates under a

separate Water Recycling Requirement (WRR) and Waste Discharge Requirements (WDRs) Order No. R4-2008-0083 (WW-17), as amended by Order No. R4-2011-0079. The reuse of the reclaimed water is regulated under separate WDR and WRRs; Order No. R4-2008-0083 as amended by Order No. R4-2011-0079, File No. 64-104 and File No. 08-070, CI- 9456.

OWTP's existing 2013 NPDES permit establishes discharge limits for conventional constituents, nutrients, metals, and organics. These limits are established to be protective of aquatic life and other beneficial uses of the receiving water. Table 8 provides a list of conventional constituents and metals along with their permit limit. The full OWTP NPDES permit can be found in Appendix B.

In addition to the discharge limits on the constituents, nutrients, and metals provided above, there are also receiving water limitations (including monitoring) that must be met and performance goals, which are not enforceable standards. These additional limitations are listed in the NPDES permit.

3.2 Future Wastewater Regulations

There are several upcoming regulatory developments and overall trends that must be considered in the master planning process for wastewater systems in Oxnard.

3.2.1 New Water Quality Standards

Water quality standards may be updated in the future, possibly resulting in requirements that are more stringent. Effluent limits for toxics included in Oxnard's discharge permit have historically been based on water quality standards outlined in the California Ocean Plan.

Diazinon is an example of a constituent with objectives that have been adopted or are under development by EPA, yet have not been included in any of the previously listed documents. Aquatic life ambient water quality criteria for diazinon (an organophosphate pesticide) are 6.7 ug/L for acute toxicity and 1.4 ug/L for chronic toxicity in saltwater.

In some instances, the RWQCB will use EPA criteria that have not yet been incorporated into the California Toxics Rule (CTR) based on Best Professional Judgment (BPJ).

New or updated water quality criteria for other parameters such as Alachlor and Atrazine are in the process of being developed. High levels of brominated compounds (e.g., polybrominated diphenylethers [PBDEs]) are also of concern in California. In 2003, two of the three types of PBDEs were banned in the state of California. PBDEs are being monitored within the 303 (d) framework.

Table 8 OWTP NPDES Permit Limits
Public Works Integrated Master Plan
City of Oxnard

Constituent	Units	Effluent Limitations[1]				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD_5	mg/L	30	45	--	--	--
	lbs/day	7,960	11,900	--	--	--
TSS	mg/L	30	45	--	--	--
	lbs/day	7,960	11,900	--	--	--
pH	standard units	--	--	--	6.0	9.0
Oil and Grease	mg/L	25	40	--	--	75
	lbs/day	6,630	10,600	--	--	19,900
Settleable Solids	ml/L	1.0	1.5	--	--	3.0
Turbidity	NTU	75	100	--	--	225
Chronic Toxicity	TUc	--	--	99	--	--
Gross alpha	PCi/L	--	--	15	--	--
Gross beta	PCi/L	--	--	50	--	--
Combined Radium-226 & Radium-228	PCi/L	--	--	5.0	--	--
Tritium	PCi/L	--	--	20,000	--	--
Strontium-90	PCi/L	--	--	8.0	--	--
Uranium	PCi/L	--	--	20	--	--
Benzidine[2]	ug/L	0.0068	--	--	--	--
	lbs/day	0.0018	--	--	--	--
Heptachlor epoxide[2]	ug/L	0.002	--	--	--	--
	lbs/day	0.00053	--	--	--	--
PCBs[2]	ug/L	0.0019	--	--	--	--
	lbs/day	0.0005	--	--	--	--
TCDD Equivalents[2]	ug/L	0.00000039	--	--	--	--
	lbs/day	0.0000001	--	--	--	--

Notes:
(1) From the 2013 NPDES Permit No. CA0054097.
(2) The result of the reasonable potential analysis is inconclusive. Therefore, limitations are carried over from Order No. R4-2007-0029, as amended by Order No. R4-2010-0048, to avoid backsliding.

3.2.2 Lower Detection Limits

As analytical techniques for detection of toxic compounds improve, and detection limits drop; additional parameters may be found to have reasonable potential to exceed California ocean plan objectives, and effluent limits may be added to the OWTP NPDES permit.

3.2.3 Dioxin

Dioxin is a combustion by-product that is present in collections systems due to air deposition and subsequent runoff to the system. Water quality objectives for dioxin congeners are very low and therefore, difficult to meet. It is possible that a Water Quality Based Effluent Limit (WQBEL) may be added to future OWTP permits. Consequently, measures to minimize dioxins should be considered over the master planning horizon.

3.2.4 Emerging Microconstituents

OWTP's NPDES 2013 permit includes special provisions to develop a work plan to investigate Constituents of Emerging Concern (CECs) in the OWTP effluent. Upon approval of the work plan by the LARWQCB executive officer, OWTP will be required to implement the plan. A list of CECs required to be investigated are included in the permit, and monitoring will be performed every 2 years. A subset of CECs that are under investigation can be classified as Endocrine Disruptors, discussed below.

Endocrine Disruptors: In 1996, Congress passed new legislation in the Food Quality Protection Act and Safe Drinking Water Act Amendments requiring EPA to "determine whether certain substances may have an effect in humans that is similar to an effect produced by a naturally occurring estrogen or other such endocrine effect." In response, the EPA developed the Endocrine Disruptor Screening and Testing Advisory Committee (EDSTAC). The EDSTAC's ongoing Endocrine Disruptor Screening program (EDSP) has a goal to review more than 87,000 chemicals for endocrine-disrupting potential – both individually and when combined with other chemicals (to determine synergistic or additive effects) – in a two-tiered approach. The EPA also expanded the EDSP to include male hormones (androgens) and the thyroid system, and to include effects on fish and wildlife.

Through Tier 1, EPA hopes to identify chemicals that have the potential to interact with the endocrine system. Through Tier 2, EPA will determine the endocrine-related effects caused by each chemical and obtain information about effects at various doses.

Endocrine disruptor screening is currently in progress. The EPA has developed the EDSP Comprehensive Management Plan that provides guidance for agency personnel and outlines the critical activities that are planned for the EDSP over the next 5 years.

In the meantime, while EPA continues to screen compounds, other agencies are requiring monitoring to identify exposure routes of EDCs. For example, DDW *Title 22, Chapter 3:*

Recycling Criteria includes monitoring requirements for known endocrine disruptors and pharmaceuticals in recycled water recharged to groundwater for informational purposes.

The possibility of new regulations governing the discharge of endocrine disruptor compounds must be considered within a typical 10- to 20-year planning horizon for new wastewater facilities. In fact, many of the 'suspect' compounds also appear in the EPA National Toxics Rule, and in state regulations governing discharges of toxic substances. Therefore, additional source control measures and/or treatment to reduce many of these compounds in the environment will probably be implemented sooner than regulations related specifically to endocrine disruptors. Therefore, it is clear that endocrine disrupting chemicals will have real impacts on the planning and design of wastewater facilities in the coming years.

3.3 Receiving Water Quality Issues

The 2012 California Ocean Plan provides Table 3 (formerly Table C), which stipulates the background receiving water quality used in the determination of reasonable potential and in permit calculations. In other words, since Ocean water quality is uniform, default values specified in the Ocean Plan are used for background receiving water concentrations. The 2012 California Ocean Plan is available here: http://www.waterboards.ca.gov/water_issues/programs/ocean/docs/cop2012.pdf.

The Ocean Plan includes a statistical approach for determining if a pollutant has reasonable potential to exceed WQOs. This methodology is based on the EPA's *Technical Support Document for Water Quality-based Effluent Limits.*

The procedure used to calculate limitations from the Ocean Plan is:

$$C_e = C_o + D_m (C_o - C_s)$$

Where;

- C_e = The effluent concentration limit.
- C_o = Water Quality Objective.
- C_s = Background seawater concentration (from Table 3).
- D_m = Minimum probable initial dilution (defined conservatively).

The Ocean Plan does not apply further adjustments to the result calculated by the equation above.

3.4 Air Quality Regulations

Several agencies at the federal, state, and local level have jurisdiction pertaining to air pollution and odor control at wastewater treatment plants. At the federal level, the major agencies are the EPA and the Occupational Safety and Health Administration (OSHA). At

the state level, the applicable agencies are the California Air Resources Board (CARB) and Cal-OSHA. At the local level, it is the Ventura County Air Pollution Control District (District). These agencies establish ambient air quality criteria and levels of treatment necessary to protect the public health and environment both off-site and on-site of a potential source. The RWQCB also includes general nuisance (odor) provisions in NPDES permits and WDRs. These agencies also have the responsibility to permit new facilities for construction and operation and to establish new source pollutant levels and treatment requirements.

The EPA establishes standards (termed National Ambient Air Quality Standards or NAAQS) under the authority of the Federal Clean Air Act (CAA) that identify safe levels of certain pollutants in the atmosphere to prevent adverse impacts to human health and to crops, forests, and materials. Standards were established for carbon monoxide, ozone, fine particulate matter (PM), nitrogen oxide, and lead. EPA also sets National Emissions Standards for Hazardous Air Pollutants (NESHAPs) for major sources of hazardous air pollutants. Existing major sources are subject to the federal CAA requirements to implement maximum achievable control technology (MACT) only if a process is modified to emit toxic air contaminants above the “major” threshold (10 tons/year of a single HAP or 25 tons/year of a combination of HAPs).

CARB is the lead agency for air pollution control in California, coordinating and overseeing state and local air pollution control programs and implementing the California Clean Air Act. CARB has also developed state air quality standards that are generally more stringent than federal standards.

The District has the primary responsibility for the control of air pollution from sources other than motor vehicles and consumer products. The District issues and renews air quality permits for any air polluting equipment such as diesel generators and compressors that are 50 horsepower (hp) and over. Air quality permits are required by State and Federal laws as part of doing business in Ventura County. Additionally, the District also issues permits for modification of the existing permitted equipment and for the installation of abatement equipment used to control emissions, such as activated carbon odor control units.

Types of new permits include the “Authority to Construct” and “Permit to Operate.” A facility must file an application for an Authority to Construct before construction begins. District permit staff will evaluate the project before an Authority to Construct is issued to ensure that the project plans are reviewed and the project complies with District rules and regulations.

After an Authority to Construct has been issued and construction is complete, but before the facility begins operation, operators are required to obtain a Permit to Operate. A temporary Permit to Operate may be issued so that emissions testing or a District inspection may be conducted while the new or modified facility is operating. Upon determining that the facility is complying with all applicable District rules, District staff issues a Permit to Operate with enforceable permit conditions to ensure continuing rule compliance. Permits must be renewed annually.

See Appendix C for OWTP's existing Air Quality Permit. The OWTP currently holds permits from the District for the following sources:

- Two effluent pump natural gas engines.
- Three electrical generator waste gas engines.
- Two waste gas burners.
- One odor reduction tower.
- One odor control system (headworks).
- One odor reduction station (solids processing building).
- Six standby diesel engines for electricity generators.
- One emergency standby diesel engine for air compressor.

The District also regulates the emission of certain odorous substances, such as Sulfur Dioxide and Hydrogen Sulfide. Table 9 summarizes these concentration levels.

Table 9 Hydrogen Sulfide and Sulfur Dioxide Ground Level Concentrations - Emission Limits
Public Works Integrated Master Plan
City of Oxnard

Substance	Limit Ground Level Concentration (ppm)	Duration
Hydrogen Sulfide(1)	0.06 or	Averaged over 3 consecutive minutes
	0.03	Averaged over 60 consecutive minutes
Sulfur Dioxide(1)	0.25 or	Averaged over 60 consecutive minutes
	0.04	Averaged over 24 hour period

Notes:
(1) Source: Ventura County Air Pollution Control District Regulation 4, Rule 54, (July 1994).
(2) http://www.vcapcd.org/Rulebook/Reg4/RULE%2054.pdf.

Improvements and changes to wastewater process and discharge location may require revised air quality permits. However, requirements of the air quality permitting process should not have an impact as large as other regulatory requirements such as water quality regulations on capital improvement planning decisions.

3.4.1 Greenhouse Gas Emissions

3.4.1.1 State and Federal Mandatory Reporting

The Air Resources Board (ARB) adopted the Global Warming Solutions Act (also referred to as Assembly Bill 32, AB 32) in September 2006. This Act was the first regulatory program in the U.S. to require public and private agencies statewide to reduce GHG emissions. The GHGs regulated under AB 32 are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. Currently, the Act does not affect wastewater treatment process emissions, but it does cover onsite general stationary combustion sources and electricity generating units. An agency must report their annual (calendar year) emissions if it emits over 10,000 metric tons of CO_2 equivalent (CO_2e) emissions from its stationary combustion units and they have an aggregate maximum rated heat input capacity of 16 million Btu per hour or greater.

In addition, the EPA's Mandatory GHG Reporting Rule (Reporting Rule) was adopted October 30, 2009. The Reporting Rule explicitly states that centralized domestic wastewater treatment systems are not required to report emissions; however, any stationary combustion of fossil or non-fossil fuels taking place at a wastewater treatment facility may be considered a "large" source of GHGs if they emit a total of 25,000 metric tons or more of CO_2e emissions per year.

The City's 2012 onsite stationary combustion of natural gas and biogas resulted in approximately 4,800 metric tons of CO_2e emissions including biogenic CO_2 (i.e., CO_2 from biogas combustion). This is well below each of the reporting thresholds.

3.4.1.2 California Cap-and-Trade Program

In addition to mandatory reporting of GHGs, the ARB adopted a GHG cap-and-trade program that became effective in January 2012. This program states that agencies emitting 25,000 metric tons or more of fossil fuel-based (i.e., natural gas and diesel) CO_2e emissions per year beginning in 2011 or any subsequent year will be capped and required to reduce their emissions over time.

As previously mentioned, the City's 2012 onsite stationary combustion of natural gas and biogas resulted in approximately 4,800 metric tons of CO_2e emissions. This is well below the reporting threshold, which is based on combustion of fossil fuels only.

3.4.2 Regulatory Development

Emissions limitations throughout the state have become more stringent over the last decade. This is especially true within the District, which is a designated non-attainment zone for ozone and particulate matter under the California ambient air quality standards and a designated non-attainment zone under the Ozone National Ambient Air Quality Standard. There is one recent amendment to the District's air quality regulations that may affect the OWTP in the near future. Rule 54 on sulfur compounds was amended in January 2014 to

limit sulfur dioxide emissions to 75 parts per billion (ppb) at or beyond the property line. While existing sources do not need to take any action to demonstrate compliance, all sources must meet the combustion emission limit on a dry basis using a revised calculation to account for percent oxygen content.

Additionally, there is a draft amendment to Rule 74.15.1 regarding boilers, steam generators, and process heaters. This rule would limit NOx emissions for new or replacement units rated greater than 2 million BTU/hr and less than 5 million BTU/hr. These new limits would be based on similar standards adopted by the San Joaquin Valley in their Rule 4307.

When new projects are being considered, it is important to include consideration of the District regulations; not so much because they will drive a project, but to make sure that appropriate equipment is selected that complies with the regulation that are in place. The District is becoming more proactive in addressing stationary sources at wastewater treatment plants. They should be consulted during the design or selection of processes or equipment that falls under their jurisdiction.

3.5 Regulatory Considerations for Biosolids Management

Solids generated at a wastewater treatment facility include screenings, grit, primary or raw sludge (PS), and secondary or waste activated sludge (WAS). The PS and WAS are typically described as solids prior to stabilization. Sludge generated by a wastewater treatment facility is defined as biosolids once beneficial use criteria, as determined by compliance with Section 503 of Chapter 40 of the Code of Federal Regulations (40 CFR 503), have been achieved through stabilization processes. Stabilization processes are described as those that help reduce pathogens and reduce vector attraction.

Currently, the OWTP disposes of its screenings, grit, and dewatered anaerobically digested solids (or biosolids) by hauling all of it to a nearby landfill. However, the PWIMP will consider alternatives to landfilling biosolids in order to make the best use of the energy and nutrient content. This section provides a summary of existing and potential future regulations that need to be considered as part of the PWIMP's analysis of solids treatment and disposal or use options.

3.5.1 Existing Federal Regulations

As mentioned above, the EPA regulates biosolids use under 40 CFR 503. The 40 CFR 503 regulations address land application, surface disposal, and incineration of biosolids. The 40 CFR 503 regulations are self-implementing and include monitoring, certification, and reporting requirements. Agencies are required to send an annual report to the EPA summarizing and certifying their compliance with the rule.

The 40 CFR 503 regulations establish metal concentration limitations, pathogen density reduction requirements, vector attraction reduction requirements, and site management

practices for land application of biosolids. Land application refers to the beneficial use of biosolids for their nutrient and organic matter content. Biosolids land application rates cannot exceed the agronomic rate of the vegetation that will be grown. The metal concentration limitations are based on a risk assessment prepared by EPA. The pathogen density and vector attraction reduction requirements are based on past successful experience. Biosolids are classified as either "Class B" or "Class A" with respect to pathogen density. Class B biosolids have significantly reduced pathogen densities (as compared to raw sludge), but require application site management to ensure protection of public health and the environment. Class A biosolids have further reduced pathogen densities and do not require application site management to ensure protection of public health and the environment. Biosolids that meet the pollutant concentration, Class A pathogen, and vector attraction reduction requirements in 40 CFR 503 are typically called "Exceptional Quality Biosolids", and can be sold or given away in bulk or bags without additional regulation by EPA.

The 40 CFR 503 regulations also establish requirements for surface disposal and incineration of biosolids. Surface disposal includes monofills, surface impoundments, lagoons used for final disposal as opposed to treatment, waste piles, dedicated disposal sites, and dedicated beneficial use sites. Incineration refers to combustion of sewage sludge or biosolids at high temperatures in an enclosed device. The 40 CFR 503 regulations establish metals concentration limits, total hydrocarbon emission limits, and management practices. The use or disposal of non-hazardous incinerator ash is not covered by 40 CFR 503; other Federal regulations (40 CFR 257 and 40 CFR 258) cover these practices.

3.5.2 Existing State Regulations

In California, state regulation of biosolids land application is more stringent than Federal regulation. The SWRCB has adopted General WDRs for the Discharge of Biosolids to Land for use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities (Biosolids General Order). The Biosolids General Order can be used by RWQCBs for streamlined permitting of biosolids land application sites. The adoption of the Biosolids General Order has led to increased consistency between WDRs, however, the RWQCBs can adopt site-specific WDRs if conditions warrant.

The Biosolids General Order applies to Class B land application sites and sites where Class A Exceptional Quality biosolids will be applied at rates greater than 10 dry tons per acre per year to a field that is larger than 20 acres in size. The Biosolids General Order goes beyond the requirements of 40 CFR 503 by requiring additional biosolids testing, soil testing, groundwater sampling, and wind and dryness limitations. The SWRCB and the RWQCBs generally recognize that highly treated Class A, Exceptional Quality biosolids products such as heat dried pellets or properly prepared composts are commercial products and their use is not regulated. The California Department of Food and Agriculture (CDFA) regulates

nutrient guarantees of fertilizer materials and agricultural minerals. CDFA licensing is required for all producers of fertilizing materials and agricultural minerals.

Biosolids reuse and disposal in landfills falls under the jurisdiction of the California Department of Resources Recycling and Recovery (CalRecycle). In addition to regulating the co-disposal of biosolids in landfills and use of biosolids for Alternative Daily Cover (ADC), CalRecycle also regulates biosolids composting facilities. ADC is considered different from co-disposal because it utilizes the biosolids (mixed with other materials, such as green waste) as a daily cover for the solid waste placed in the landfill, reducing the need to use the soil for that purpose. ADC is considered to be a beneficial use. ADC use is limited to 25 percent of the total landfill cover requirements.

3.5.3 Potential Future Regulations

Use or disposal of biosolids is becoming progressively difficult in California. Land application of biosolids is being restricted by many California counties, and fewer landfills are accepting biosolids.

Numerous counties in California have developed or are currently developing ordinances for biosolids land application. Figure 5 summarizes the current status of County ordinances that affect land application of biosolids.

In 2013, California passed Assembly Bill (AB) 341, which requires 75 percent reduction of solid waste sent to landfills by 2020 (it is expected that 90 percent reduction of solid waste sent to landfills will be required by 2025). Approximately 30 percent of the solid waste stream sent to landfills is organic and CalRecycle is working on a plan to eliminate organics from landfills in support of the Air Resources Board (ARB) AB 32 Scoping Plan's target to reduce greenhouse gas emissions to 1990 levels by 2020. While the AB 32 Scoping Plan does not explicitly state that organic waste streams are or will be prohibited from use as ADC, it does state that it is exploring opportunities to phase out landfilling organic material, developing legislation as early as 2016. In addition, AB 1594 was passed in September 2014 requiring that green waste no longer qualify for diversion credit when used as ADC at a landfill. This bill may indirectly affect an agency's biosolids use or disposal program when it is fully implemented January 1, 2020. Agencies that mix green waste with biosolids for use as ADC at landfills currently receive diversion credit under AB 939, but will no longer be able to due to AB 1594. While neither of these bills directly prohibit or limit biosolids sent to landfills, solids management options will likely be impacted by these regulations.

To comply with possible future restrictions, the planning process will need to consider alternative biosolids use and/or disposal scenarios that are cost effective.

STATUS OF BIOSOLIDS LAND APPLICATION ORDINANCES BY COUNTY

FIGURE 5

CITY OF OXNARD

PM NO. 3.1 – BACKGROUND SUMMARY

PUBLIC WORKS INTEGRATED MASTER PLAN

CITY OF OXNARD CALIFORNIA

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4.0 CLIMATE CHANGE

4.1 Climate Change: Sea Level Rise

Sea level is the elevation of the ocean relative to a reference elevation. Along the coast, sea level is usually measured relative to the adjacent land and is called relative sea level. For practical purposes, sea level is an average or mean elevation recorded over a time period long enough to exclude the effects of waves (usually longer than 1 minute). Tide gage data is often presented as 1-hour averages, but mean sea level (MSL), in the context of global climate change and MSL rise, is usually presented as monthly or annual averages.

Consequences of global warming include increased melting of land ice (specifically in Greenland and Antarctica) and thermal expansion of the marine mixed layer of the ocean, both of which contribute to sea level rise. Independent of climate change, vertical land movements also contribute to relative sea level change and astronomical tides can cause changes in water level along the California coast of about 3 meters (10 feet) (Cayan *et al.*, 2006). Since the processes contributing to sea level changes all have significant spatial variability, it has been suggested that there will be considerable geographic variability in changes in the rate of relative sea level rise (Walsh, 2005).

In the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report (AR4) published in 2007, the range in projected rise in MSL is 0.18 to 0.59 meters (7 to 23 inches) by the year 2100 relative to 1990 levels. However, these projections are based on physical models that do not reproduce the current rate at which the polar ice caps are melting. Since these projections were released, there have been major advances in the science of sea level rise. The Independent Science Board (ISB) peer-reviewed studies now estimate a rise in MSL of between 0.51 to 1.40 meters (20 to 55 inches) by 2100, and it is recommended that 1.40 meters (55 inches) be used for climate change adaptation planning. The IPCC conservative estimates should be viewed as minima for planning purposes (Healy, 2007).

Per Executive Order S-13-08 by the Governor of the State of California, Department of Water Resources, California Energy Commission, California's Coastal Management Agencies, and the Ocean Protection Council, requested that the National Academy of Sciences (NAS) create an independent panel to complete the first California Sea Level Rise Assessment Report. A prepublication of *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* was released in 2012. The report projected a range in MSL rise specific to California of nearly the same as that by the ISB – 0.50 to 1.40 meters (19.8 to 55 inches) – taking into account issues such as coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates.

Future rates of sea level rise are likely to accelerate. Figure 6 shows the monthly mean higher-high water (MHHW) level relative to the North American Vertical Datum (NAVD) at one tide gauge located nearest to the OWTP from 1933 to 2012. The range of sea level rise

projections determined by the IPCC, FEMA, SB, and NAS to the year 2100 is shown in this figure. Figure 7 shows the OWTP site with blue shading representing areas that are vulnerable to the projected sea level rise by year 2100. Some uncertainty exists, due to uncertainty about the emissions of greenhouse gases, population growth rates, government policies to address emissions, and the actual dynamics of the oceans and ice sheets. A detailed discussion of which facilities at the OWTP are at risk and the proposed risk mitigation measures for each facility is provided in PM 3.7.1.

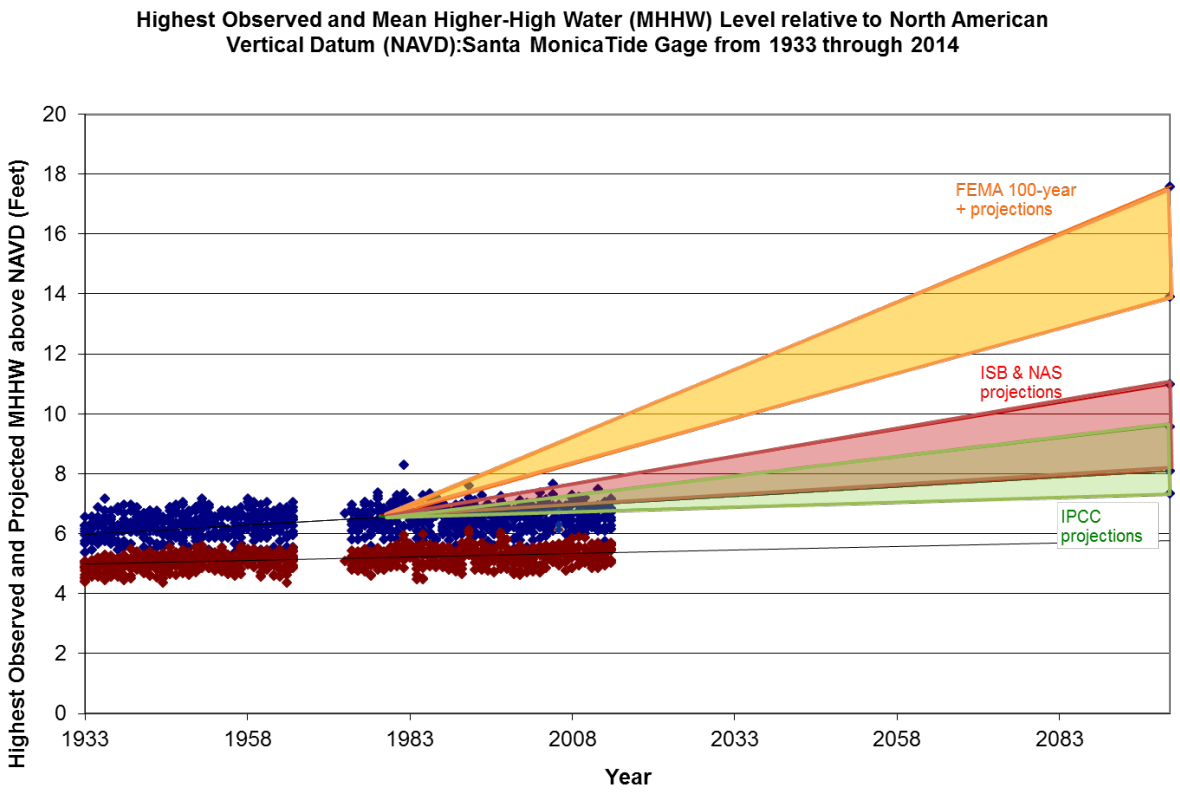
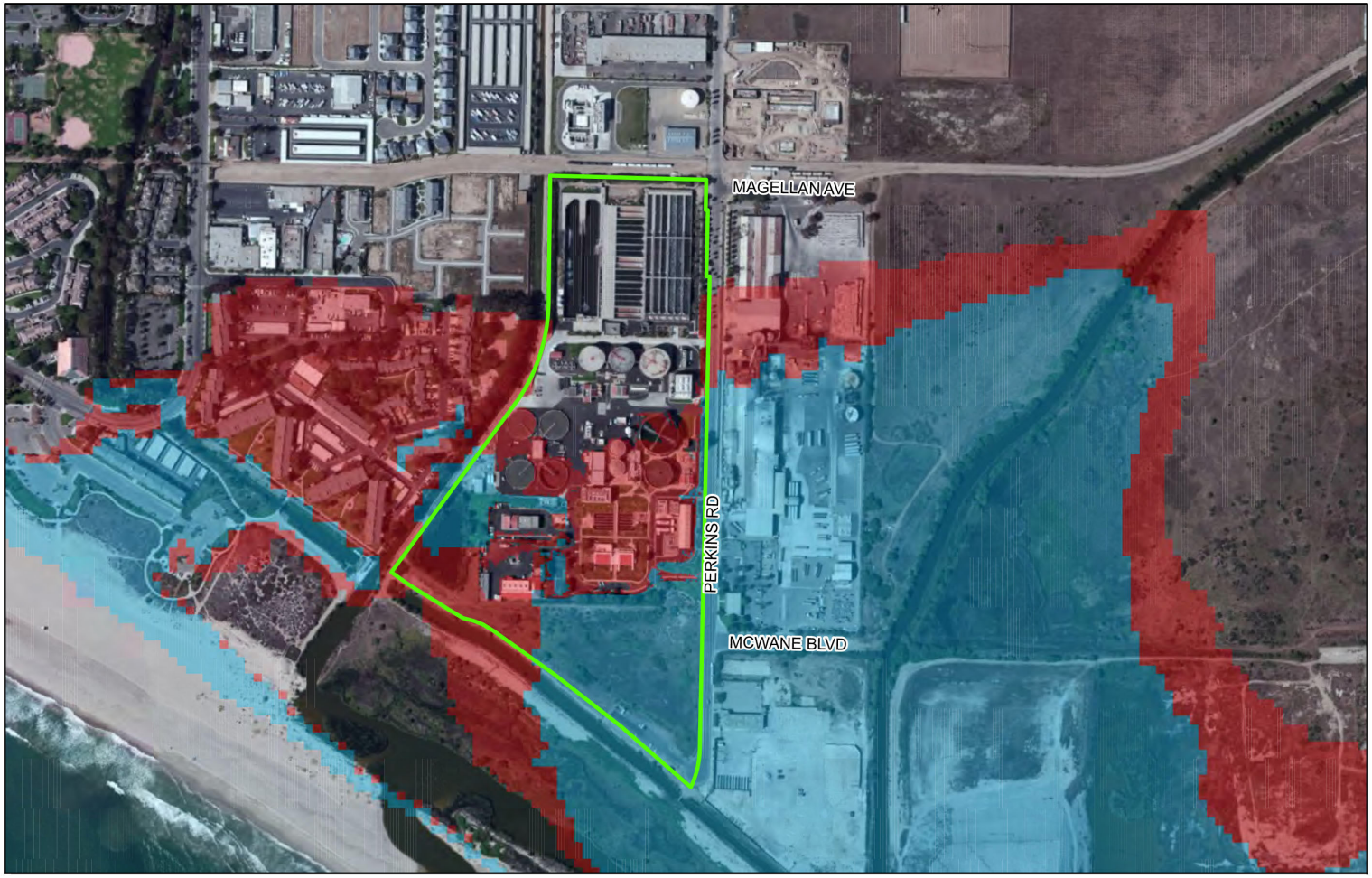


Figure 6 Projected Sea Level Rise



Legend

WWTP

Inundation Area - Range of High Tide Levels by 2100

Low (~9.7 ft)

High (~11.1 ft)

N

0 250 500 Feet

AREAS OF THE OWTP SITE VULNERABLE TO THE PROJECTED 2100 RISE IN SEA LEVEL

FIGURE 7

CITY OF OXNARD

PM NO. 3.1 – BACKGROUND SUMMARY

PUBLIC WORKS INTEGRATED MASTER PLAN

CITY OF OXNARD CALIFORNIA

carollo Engineers...Working Wonders With Water®

ox0715f23-9587(PM3-1 FIG7).ai

APPENDIX A – OWTP DETAILED DESIGN CRITERIA

OXNARD WASTEWATER TREATMENT PLANT
DESIGN CRITERIA

Item	Value
Headworks	
Influent Screens	
Type	Continuous Belt Screen (Duperon)
Number	4
Clear Opening, in	0.25
Capacity, each, mgd	38.7
Type	Manual Bar Screen
Number	2
Clear Opening, in	0.5
Capacity, each, mgd	77.4
Screening Conveyors	
Type	Belt
Number	2
Width, ft	2
Screenings Compactor	
Number	2
Capacity, cf/hr	35
Grit Basins	
Type	Aerated Grit
Number of Basins	2
Length per Basin, ft	45
Width per Basin, ft	20
SWD, ft	11
Grit Pumps	
Type	Recessed Impeller
Number	8
Capacity, gpm	250
TDH, ft	100
Nameplate hp	40
Grit Separators/Classifiers	
Number	3
Capacity, gpm	500
Channel Air Blowers	
Type	Centrifugal
Number	4
Capacity, cfm	2@540@7.5 psig, 2@340@8.2 psig
Influent Pump Station	
Pump Type	Dry-pit centrifugal
Number	6
Capacity, gpm	18,000
TDH, ft	70
Nameplate hp	450
Drive Type	2@constant speed and 4@VFDs
Odor Control at Headworks	
Type	3-stage absorption system scrubber
Capacity, cfm	25,000
Primary Sedimentation Basins	
Type	Circular, center feed
Number	4
Diameter, ft	105
Surface Area, each, sf	8,655
Total Surface Area (all in service), sf	34,619
Primary Sludge Pumps	
Type	Recessed Impeller
Number	4
Capacity, gpm	440
TDH, ft	50
Nameplate hp	25
Drive Type	Constant speed

OXNARD WASTEWATER TREATMENT PLANT
DESIGN CRITERIA

Item	Value
Scum Pumping	
Type	Ejectors
Number	4
Primary Clarifier Chemical Addition	
Type	Ferric Chloride
Number of Pumps	2
Capacity, gph	9 to 90
Type	Polymer (Stranco Polyblend)
Number of Pumps	2
Capacity, gpm	10
Biofilters	
Media Type	PVC
Number	4
Diameter, ft	1@100' and 1@140'
Media Depth	26
Specific Surface Area, sf/cf	27
Total Media Volume, kcf	604
Ventilation Fans	
Number	4 per Biofilter
Capacity, cfm	15,000 cfm@1" WC and 7,500 cfm@1" \
Nameplate hp	10 and 3
Biofilter Circulation Pumps	
Type	Mixed flow vertical
Number	4
Capacity, mgd	16.7
TDH, ft	46
Nameplate hp	200
Drive Type	Constant speed
Interstage Feed Pumps	
Type	Mixed flow vertical
Number	3
Capacity, mgd	28.9
TDH, ft	30
Nameplate hp	250
Drive Type	VFDs
Activated Sludge Tanks	
Type	3-pass
Number	2
Pass Dimensions	
Length, ft	450
Width, ft	22
SWD, ft	17
Volume per Pass, MG	1.26
Volume per Tank, MG	3.78
Total Activated Sludge Tank Volume, MG	7.55
Diffusers	
Type	7-inch ceramic domes
Number per Tank	6,660
Total Number of Diffusers	13,320
Number of Blanks per Tank	5,940
Total Number of Blanks	11,880
Process Aeration Blowers	
Type	Single-Stage Compressor
Number	5
Capacity, acfm	3,475 to 6,950
Design psig	9.8
Nameplate hp	350
Channel Aeration Blowers	
Type	Positive Displacement
Number	1
Capacity, acfm	1674
Design psig	6.0
Nameplate hp	

OXNARD WASTEWATER TREATMENT PLANT
DESIGN CRITERIA

Item	Value
Secondary Sedimentation Basins	
Type	Rectangular
Number	18
Length, ft	150
Width, ft	22
Depth, ft	9.9
Surface Area, each, sf	3,300
Total Surface Area (all in service), sf	59,400
RAS Pumps	
Type	Mixed flow
Number	4
Capacity, gpm	6,700
TDH, ft	53
Nameplate hp	100
Drive Type	VFDs
WAS Pumps	
Type	Horizontal End Suction
Number	3
Capacity, gpm	480
TDH, ft	79
Nameplate hp	20
Drive Type	VFDs
Skimmings Pump Station	
Type	Recessed Impeller
Number	2
Capacity, gpm	425 / 480
TDH, ft	28 / 66
Nameplate hp	40
Drive Type	2-Speed
Flow Equalization Basins	
Number	1
Volume, MG	5
FEB Pumps	
Type	Vertical Mixed Flow
Number	3
Capacity, gpm	8600
TDH, ft	12.5
Nameplate hp	75
Drive Type	VFDs
Chlorine Contact Tanks	
Number of Tanks	Two 3-pass tanks
Dimensions each pass	3-pass
Length, ft	145
Width, ft	10
SWD, ft	10
Volume, each pass, MG	0.11
Volume, each tank, MG	0.33
Total Volume, MG	0.65
Effluent Pump Station	
Type	mixed flow electric
Number	1
Capacity, mgd	25
TDH, ft	30
Nameplate hp	200
Drive Type	VFD
Type	mixed flow engine driven
Number	4
Capacity, mgd	17.3
TDH, ft	146
Nameplate hp	500
Drive Type	VFD

OXNARD WASTEWATER TREATMENT PLANT
DESIGN CRITERIA

Item	Value
Ocean Outfall	
Length, ft	5,100
Type and Diameter	48-inch RCP
Length, ft	1,700
Type and Diameter	30-inch CIP
Diffuser Length, ft	1,016
Number of Diffusers	85
Diffusers	2-inch ports @ 12' OC, each side
Total No. of Diffusers	170
Design Dilution ratio	
Winter	155
Summer	105
Design Capacity, mgd	50
Gravity Thickeners	
Type	Circular, center feed
Number	2
Diameter, ft	59
SWD, ft	15
Surface Area, each, sf	2,733
Total Surface Area (all in service), sf	5,465
Supply Fans	
Number	1
Capacity, cfm	21,680 @ 1/10" WC
Nameplate hp	2
Foul Air/Exhaust Fans	
Number	1
Capacity	24,000 @ 4.5" WC
Nameplate hp	40
Thickened Primary Sludge Pumps	
Number	3
Capacity, gpm	200
TDH, ft	138
Nameplate hp	15
Drive Type	Constant speed
Scum Feed Pump	
Number	1
Capacity, gpm	50
TDH, ft	138
Nameplate hp	5
Drive Type	Constant speed
DAF Thickeners	
Type	Circular, center feed
Number	2
Diameter, ft	25
SWD, ft	7.5
Surface Area, each, sf	491
Total Surface Area (all in service), sf	981
Pressurization Pump	
Number per DAF	1
Capacity	300@174' and 600@160'
Nameplate hp	40
Air Compressor	
Number	1
Capacity	7.1 cfm@ 125 psig
Nameplate hp	2
TWAS Pumps	
Number	2
Capacity, gpm	62
TDH, psig	55
Nameplate hp	3
Drive Type	VFD

OXNARD WASTEWATER TREATMENT PLANT
DESIGN CRITERIA

Item	Value
Thickener Polymer Feed System	
Bulk Polymer Storage Tank	10' Diameter, 13.5' High
Bulk Polymer Transfer Pump	
Number	2
Capacity, gpm	0.35
TDH, psig	10
Nameplate hp	0.5
Mix Tank	4' Diameter, 5.5' High
Mixer	
Number	1
Type	Vertical
Nameplate hp	1
Solution Feed Pumps	
Number	3
Capacity, gpm	5
TDH, psig	10
Nameplate hp	1
Anaerobic Digesters	
Number	2
Diameter, ft	90
SWD, ft	33.5
Volume, ea, MG	1.6
Number	1
Diameter, ft	110
SWD, ft	33.5
Volume, ea, MG	2.4
Total Volume, MG	5.6
Mixing System	
Type	Gas Mixing
Number of Blowers	3
Blower Capacity	1,050 cfm@22.1 psig
Blower Nameplate hp	100
Number of Blowers	2
Blower Capacity	350@10 psig
Blower Nameplate hp	40
Number of Blowers	2
Blower Capacity	1,600@10 psig
Blower Nameplate hp	150
Sludge Circulation Pumps	
Number	3
Capacity, gpm	650
TDH, ft	70
Nameplate hp	50
Hot Water Circulation Pumps	
Number	3
Capacity, gpm	275
TDH, ft	35
Nameplate hp	5
Digested Sludge Screens	
Number	2
Type	In-Line Rotary Screen
Nameplate hp	1
Digested Sludge Pumps	
Number	3
Capacity, gpm	250
TDH, psig	20
Nameplate hp	10
Drive Type	VFD
Dewatering System Feed Pumps	
Number	4
Capacity, gpm	130
TDH, ft	60
Nameplate hp	7.5
Drive Type	VFD

OXNARD WASTEWATER TREATMENT PLANT
DESIGN CRITERIA

Item	Value
Dewatering Units	
Number	4
Type	Belt Filter Press
Belt Size, m	2.2
Belt Drive Motor Nameplate hp	3
Hydraulic Unit Pump Motor Nameplate h	1.5
Washwater Booster Pum	
Capacity, gpm	120
TDH, psig	100
Namplate hp	10
Conveyors	
Number	4
Type	Belt
Belt Width, ft	2
Nameplate hp	3
Dewatering Polymer Feed System	
Bulk Polymer Storage Tank	12' Diameter, 18' High
Manufacturer	Polyblen Stranco
Number	4
Feed Capacity, gph	4-40@35 psi
Mixer motor nameplate hp	1/3
Solution Metering Pumps	
Number	4
Capacity, gpm	5
TDH, psig	50
Nameplate hp	1/8
Odor Control Facilities	
Splids Processing Building Foul Air	
Gravity Thickening Foul Air	
Scum Handling Area Foul Air	

APPENDIX B – OWTP NPDES PERMIT

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

June 11, 2013

Ms. Karen R. Burnham
Interim City Manager
City of Oxnard Municipal Corporation
300 West Third Street
Oxnard, CA 93030

Dear Ms. Burnham:

ADOPTED WASTE DISCHARGE REQUIREMENTS (WDRs) AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT – CITY OF OXNARD MUNICIPAL CORPORATION, OXNARD WASTEWATER TREATMENT PLANT (NPDES NO. CA0054097, CI NO. 2022)

Our letter dated May 17, 2013, transmitted the revised tentative waste discharge requirements for renewal of your permit to discharge wastes under the NPDES.

Pursuant to Division 7 of the California Water Code, this Regional Water Board at a public hearing held on June 6, 2013, reviewed the revised tentative requirements, considered all the factors in the case, and adopted Order No. R4-2013-0094. Order No. R4-2013-0094 serves as your NPDES permit and expires on July 26, 2018. Section 13376 of the California Water Code requires that an application and Report of Waste Discharge for a new permit must be filed at least 180 days before the expiration date. A copy of the adopted order and attachments are enclosed.

The complete adopted Order and attachments will be sent only to the Discharger. However, these documents are available on the Regional Water Board's website for your review. The Regional Water Board's web address is www.waterboards.ca.gov/losangeles/.

If you have any questions, please contact Raul Medina at (213) 620-2160 or the undersigned at (213) 576-6664.

Sincerely,

Brandi Outwin-Beals, P.E., Chief
Municipal Permitting Unit (NPDES)

Enclosures
cc: See Mailing List

Mailing List

Environmental Protection Agency, Region 9, Permits Branch (WTR-5)
NOAA, National Marine Fisheries Service
Department of Interior, U.S. Fish and Wildlife Service
Jennifer Fordyce, State Water Resources Control Board, Office of Chief Counsel
Department of Fish and Game, Region 5
California State Parks and Recreation
State Coastal Conservancy
Ventura County Planning Commission
Ventura County Department of Environmental Health
Ventura County Department of Public Health
Ventura County Department of Public Works, Flood Control and Drainage
Ventura Regional Sanitation District
Ventura Coast Keeper
Heal the Bay
Environment Now
Los Angeles Waterkeeper
Natural Resources Defense Council
Southern California Coastal Water Research Project

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LOS ANGELES REGION

320 W. 4th Street, Suite 200, Los Angeles, California 90013
(213) 576-6600 • Fax (213) 576-6640
http://www.waterboards.ca.gov/losangeles/

ORDER NO. R4-2013-0094
NPDES NO. CA0054097

WASTE DISCHARGE REQUIREMENTS FOR THE CITY OF OXNARD, OXNARD WASTEWATER TREATMENT PLANT DISCHARGE TO THE PACIFIC OCEAN VIA OUTFALL 001

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	City of Oxnard Municipal Corporation (Discharger)
Name of Facility	Oxnard Wastewater Treatment Plant (Oxnard WWTP or Facility) and its associated wastewater collection system and outfalls
Facility Address	6001 South Perkins Road
	Oxnard, CA 93033-9047
	Ventura County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Secondary treated wastewater plus brine waste	34°, 07', 24" N	119°,11', 26" W	Pacific Ocean

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	June 6, 2013
This Order shall become effective on:	July 26, 2013
This Order shall expire on:	July 26, 2018
The Discharger shall file a Report of Waste Discharge as an application for renewal of waste discharge requirements in accordance with Title 23, Division 3, Chapter 9 of the California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System permit in accordance with Title 40, Section 122.21(d) of the Code of Federal regulations no later than:	180 days prior to the Order expiration date
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as follows:	Major

I, Samuel Unger, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on **June 6, 2013**.

Samuel Unger

Samuel Unger, P.E., Executive Officer

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Attachment D – Standard Provisions D-1
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Attachment J – Pretreatment Reporting Requirements J-1
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I. FINDINGS

The California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board), finds:

A. Legal Authorities. This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the United States Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (CWC) (commencing with section 13370). It shall serve as a National Pollutant Discharges Elimination System (NPDES) permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260).

B. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order 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 the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E, G, I, J and K are also incorporated into this Order.

C. Notification of Interested Parties. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.

D. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

THEREFORE, IT IS HEREBY ORDERED, that this Order supercedes Order No. R4-2008-0029 as amended by Order No. R4-2010-0048 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the CWC (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

II. DISCHARGE PROHIBITIONS

A. Ocean Plan Discharge Prohibition

1. 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 waste stream that discharges to the ocean is prohibited by the Ocean Plan. Discharge of sludge digester supernatant directly to the ocean, or to a waste stream that discharges to the ocean without further treatment, is prohibited.

   It is the policy of the State Water Resources Control Board (State Water Board) that the treatment, use and disposal of sewage sludge shall be carried out in the manner found to have the least adverse impact on the total natural and human environment. Therefore, if federal law is amended to permit such discharge, which could affect California water, the State Water Board may consider requests for exceptions to this section under chapter III.I of the Ocean Plan, provided further that an Environmental Impact Report on the proposed project shows clearly that any available alternative disposal method will have a greater adverse environmental impact than the proposed project.

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. The bypassing of untreated or partially treated wastes to the ocean is prohibited except as allowed in Standard Provision I.G. of Attachment D.

C. Wastes discharged from Discharge Point 001 shall be limited to secondary treated and brine waste produced at the Advanced Water Purification Facility (AWPF) of the City of Oxnard's Groundwater Enhancement and Treatment Program (GREAT Program) – Phase I Project. Discharge of wastewater at a location different from Discharge Point 001 in this Order is prohibited.

III. EFFLUENT LIMITATIONS, PERFORMANCE GOALS, AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations and Performance Goals – Discharge Point 001

1. Final Effluent Limitations and Performance Goals – Discharge Point 001

a. Before, during, and after start-up of the City of Oxnard's GREAT Program – Phase I Project, the Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at the interim monitoring location EFF-001A (subject to III.A.1.b. immediately below) as described in the attached Monitoring and Reporting Program (MRP; Attachment E).

The mass emission rates collected from EFF-001A shall be calculated as the actual concentration in the secondary-treated effluent plus brine waste effluent multiplied by the actual flow in the secondary-treated effluent plus brine waste and a conversion factor.

b. The City of Oxnard is currently constructing a permanent sampling facility to incorporate a sampling location that enables complete mixing of the secondary-treated effluent and the brine waste from the AWPF. This sampling facility is expected to be completed by December 2013. This sampling point is referred to as monitoring location EFF-001B. Once this permanent sampling facility becomes operable, the interim monitoring location EFF-001A shall be automatically superseded by monitoring location EFF-001B, which will become the final effluent point of compliance.

c. The performance goals for Discharge Point 001 are also given below. The listed performance goals are not enforceable effluent limitations or standards. However, the Discharger shall maintain, if not improve, its treatment efficiency. The Executive Officer may modify any of the performance goals if the Discharger requests and has demonstrated that the change is warranted. Any exceedance of the performance goals shall trigger an investigation into the cause of the exceedance. If the exceedance persists in three successive monitoring periods, the Discharger shall submit a written report within 90 days to the Regional Water Board on the nature of the exceedance, the results of the investigation as to the cause of the exceedance, and the corrective actions taken or proposed corrective measures with timetable for implementation, if necessary.

Table 4. Effluent Limitations

Parameter	Units	Effluent Limitations[1]					Performance Goals
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Minimum	Instan-taneous Maximum	Average Monthly
Major Wastewater Constituents							

[1] The mass emission rates are based on the plant design flow rate of 31.7 mgd, and are calculated as follows: Flow (mgd) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day, or Flow (mgd) x Concentration (µg/L) x 0.00834 (conversion factor) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

Parameter	Units	Effluent Limitations[1]					Performance Goals
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Minimum	Instan-taneous Maximum	Average Monthly
Biochemical Oxygen Demand (BOD) 5-day @ 20°C	mg/L	30	45	--	--	--	--
	lbs/day	7,960	11,900	--	--	--	--
Total Suspended Solids (TSS)	mg/L	30	45	--	--	--	--
	lbs/day	7,960	11,900	--	--	--	--
pH	standard units	--	--	--	6.0	9.0	--
Oil and Grease	mg/L	25	40	--	--	75	--
	lbs/day	6,630	10,600	--	--	19,900	--
Settleable Solids	ml/L	1.0	1.5	--	--	3.0	--
Turbidity	NTU	75	100	--	--	225	--
Marine Aquatic Life Toxicants							
Arsenic[2]	µg/L	--	--	--	--	--	2.0
	lbs/day	--	--	--	--	--	0.5
Cadmium[2]	µg/L	--	--	--	--	--	1.0
	lbs/day	--	--	--	--	--	0.26
Chromium (VI)[2]	µg/L	--	--	--	--	--	8.0
	lbs/day	--	--	--	--	--	2.1
Copper[2]	µg/L	--	--	--	--	--	30
	lbs/day	--	--	--	--	--	7.9
Lead[2]	µg/L	--	--	--	--	--	23
	lbs/day	--	--	--	--	--	6.1
Mercury[2]	µg/L	--	--	--	--	--	0.3
	lbs/day	--	--	--	--	--	0.08
Nickel[2]	µg/L	--	--	--	--	--	8.0
	lbs/day	--	--	--	--	--	2.1
Selenium[2]	µg/L	--	--	--	--	--	4.7
	lbs/day	--	--	--	--	--	1.2
Silver[2]	µg/L	--	--	--	--	--	1.9
	lbs/day	--	--	--	--	--	0.5
Zinc[2]	µg/L	--	--	--	--	--	36
	lbs/day	--	--	--	--	--	9.5
Cyanide	µg/L	--	--	--	--	--	25
	lbs/day	--	--	--	--	--	6.6
Chlorine Residual	mg/L	--	--	--	--	--	0.13
	lbs/day	--	--	--	--	--	0.03
Ammonia as N	mg/L	--	--	--	--	--	32
	lbs/day	--	--	--	--	--	8.5
Phenolic compounds	µg/L	--	--	--	--	--	5.0

[2] Represents total recoverable metals value.

Parameter	Units	Effluent Limitations[1]					Performance Goals
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Minimum	Instan-taneous Maximum	Average Monthly
(non-chlorinated)	lbs/day	--	--	--	--	--	1.3
Phenolic compounds (chlorinated)	µg/L	--	--	--	--	--	0.42
	lbs/day	--	--	--	--	--	0.11
Endosulfan	µg/L	--	--	--	--	--	0.05
	lbs/day	--	--	--	--	--	0.013
HCH	µg/L	--	--	--	--	--	0.1
	lbs/day	--	--	--	--	--	0.026
Endrin	µg/L	--	--	--	--	--	0.05
	lbs/day	--	--	--	--	--	0.013
Chronic toxicity	TUc	--	--	99	--	--	--
Radioactivity							
Gross alpha	PCi/L	--	--	15	--	--	--
Gross beta	PCi/L	--	--	50	--	--	--
Combined Radium-226 & Radium-228	PCi/L	--	--	5.0	--	--	--
Tritium	PCi/L	--	--	20,000	--	--	--
Strontium-90	PCi/L	--	--	8.0	--	--	--
Uranium	PCi/L	--	--	20	--	--	--
Human Health Toxicants – Non Carcinogens							
Acrolein	µg/L	--	--	--	--	--	10
	lbs/day	--	--	--	--	--	2.6
Antimony	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Bis(2-chloroethoxy) methane	µg/L	--	--	--	--	--	25
	lbs/day	--	--	--	--	--	6.6
Bis(2-chloroisopropyl) ether	µg/L	--	--	--	--	--	10
	lbs/day	--	--	--	--	--	2.6
Chlorobenzene	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Chromium (III)	µg/L	--	--	--	--	--	8.0
	lbs/day	--	--	--	--	--	2.1
Di-n-butyl-phthalate	µg/L	--	--	--	--	--	0.19
	lbs/day	--	--	--	--	--	0.05
Dichlorobenzenes	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Diethyl phthalate	µg/L	--	--	--	--	--	10
	lbs/day	--	--	--	--	--	2.6
Dimethyl phthalate	µg/L	--	--	--	--	--	10
	lbs/day	--	--	--	--	--	2.6

Parameter	Units	Effluent Limitations[1]					Performance Goals
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Minimum	Instan-taneous Maximum	Average Monthly
2-Methyl-4,6-dinitrophenol	µg/L	--	--	--	--	--	25
	lbs/day	--	--	--	--	--	6.6
2,4-Dinitrophenol	µg/L	--	--	--	--	--	25
	lbs/day	--	--	--	--	--	6.6
Ethyl benzene	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Fluoranthene	µg/L	--	--	--	--	--	0.039
	lbs/day	--	--	--	--	--	0.01
Hexachlorocyclopentadiene	µg/L	--	--	--	--	--	25
	lbs/day	--	--	--	--	--	6.6
Nitrobenzene	µg/L	--	--	--	--	--	5
	lbs/day	--	--	--	--	--	1.3
Thallium	µg/L	--	--	--	--	--	5
	lbs/day	--	--	--	--	--	1.3
Toluene	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Tributyltin	µg/L	--	--	--	--	--	0.0263
	lbs/day	--	--	--	--	--	0.007
1,1,1-Trichloroethane	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Human Health Toxicants – Carcinogens							
Acrylonitrile	µg/L	--	--	--	--	--	10
	lbs/day	--	--	--	--	--	2.6
Aldrin	µg/L	--	--	--	--	--	0.025
	lbs/day	--	--	--	--	--	0.0066
Benzene	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Benzidine[3]	µg/L	0.0068	--	--	--	--	--
	lbs/day	0.0018	--	--	--	--	--
Beryllium	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Bis(2-chloroethyl) ether	µg/L	--	--	--	--	--	5.0
	lbs/day	--	--	--	--	--	1.3
Bis(2-ethylhexyl) phthalate	µg/L	--	--	--	--	--	50
	lbs/day	--	--	--	--	--	13.2
Carbon tetrachloride	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Chlordane	µg/L	--	--	--	--	--	0.5

[3] The result of reasonable potential analysis (RPA) is inconclusive. Therefore, limitations are carried over from Order No. R4-2007-0029, as amended by Order No. R4-2010-0048, to avoid backsliding.

Parameter	Units	Effluent Limitations[1]					Performance Goals
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Minimum	Instan-taneous Maximum	Average Monthly
	lbs/day	--	--	--	--	--	0.13
Chlorodibromomethane	µg/L	--	--	--	--	--	0.61
	lbs/day	--	--	--	--	--	0.16
Chloroform	µg/L	--	--	--	--	--	1.2
	lbs/day	--	--	--	--	--	0.32
DDT	µg/L	--	--	--	--	--	0.25
	lbs/day	--	--	--	--	--	0.066
1,4-Dichlorobenzene	µg/L	--	--	--	--	--	0.041
	lbs/day	--	--	--	--	--	0.011
3,3'-Dichlorobenzidine	µg/L	--	--	--	--	--	25
	lbs/day	--	--	--	--	--	6.6
1,2-Dichloroethane	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
1,1-Dichloroethylene	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Bromodichloromethane	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Dichloromethane	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
1,3-Dichloropropene	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Dieldrin	µg/L	--	--	--	--	--	0.05
	lbs/day	--	--	--	--	--	0.013
2,4-Dinitrotoluene	µg/L	--	--	--	--	--	25
	lbs/day	--	--	--	--	--	6.6
1,2-Diphenylhydrazine	µg/L	--	--	--	--	--	5
	lbs/day	--	--	--	--	--	1.3
Halomethanes	µg/L	--	--	--	--	--	4.4
	lbs/day	--	--	--	--	--	1.2
Human Health Toxicants –Carcinogens							
Heptachlor	µg/L	--	--	--	--	--	0.05
	lbs/day	--	--	--	--	--	0.013
Heptachlor epoxide[3]	µg/L	0.002	--	--	--	--	--
	lbs/day	0.00053	--	--	--	--	--
Hexachlorobenzene	µg/L	--	--	--	--	--	5
	lbs/day	--	--	--	--	--	1.3
Hexachlorobutadiene	µg/L	--	--	--	--	--	5
	lbs/day	--	--	--	--	--	1.3
Hexachloroethane	µg/L	--	--	--	--	--	5
	lbs/day	--	--	--	--	--	1.3

Parameter	Units	Effluent Limitations[1]					Performance Goals
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Minimum	Instan-taneous Maximum	Average Monthly
Isophorone	µg/L	--	--	--	--	--	5
	lbs/day	--	--	--	--	--	1.3
N-Nitrosodimethylamine	µg/L	--	--	--	--	--	25
	lbs/day	--	--	--	--	--	6.6
N-Nitrosodi-N-propylamine	µg/L	--	--	--	--	--	25
	lbs/day	--	--	--	--	--	6.6
N-Nitrosodiphenylamine	µg/L	--	--	--	--	--	5
	lbs/day	--	--	--	--	--	1.3
PAHs	µg/L	--	--	--	--	--	0.097
	lbs/day	--	--	--	--	--	0.026
PCBs[3]	µg/L	0.0019	--	--	--	--	--
	lbs/day	0.0005	--	--	--	--	--
TCDD equivalents[3]	µg/L	0.00000039	--	--	--	--	--
	lbs/day	0.0000001	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Tetrachloroethylene	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Toxaphene	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
Trichloroethylene	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
1,1,2-Trichloroethane	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66
2,4,6-Trichlorophenol	µg/L	--	--	--	--	--	0.35
	lbs/day	--	--	--	--	--	0.09
Vinyl chloride	µg/L	--	--	--	--	--	2.5
	lbs/day	--	--	--	--	--	0.66

d. Percent Removal: The average monthly percent removal of BOD 5-day 20°C and TSS shall not be less than 85 percent.

e. The temperature of wastes discharged shall not exceed 100°F, which takes into account the very large dilution credit based upon Best Professional Judgment (BPJ).

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

i. Material that is floatable or will become floatable upon discharge;

ii. Settleable material or substances that may form sediments, which will degrade benthic communities or other aquatic life;

iii. Substances that will accumulate to toxic levels in marine waters, sediments or biota;

iv. Substances that significantly decrease the natural light to benthic communities and other marine life; and,

v. Materials that result in aesthetically undesirable discoloration of the ocean surface.

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

h. The locations of waste discharge from the Facility shall assure that:

i. Pathogenic organism and viruses are not present in areas where shellfish are harvested for human consumption or in areas used for swimming or other body-contact sports.

ii. Natural water quality conditions are not altered in areas designated as being areas of special biological significance or areas that existing marine laboratories use as a source of seawater.

iii. Maximum protection is provided to the marine environment.

iv. Waste that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing and water-contact sports areas 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.

B. Reclamation Specifications

The reuse of the reclaimed water is regulated under a separate WDRs and Water Recycling Requirements (WRRs) for the City of Oxnard GREAT Program – Phase 1 Project, Order No. R4-2008-0083, as amended by Order No. R4-2011-0079, File No. 64-104 and File No. 08-070, CI-9456.

IV. RECEIVING WATER LIMITATIONS

A. Surface Water Limitation

Receiving water limitations are based on water quality objectives contained in the Water Quality Control Plan for the Los Angeles Region (Basin Plan) and are a required part of this Order. The discharge shall not cause the following at Ormond Beach or in the Pacific Ocean. The Discharger shall not cause violation of the following water quality objectives. Compliance with these water quality objectives shall be determined by samples collected at stations representative of the area within the waste field where initial dilution is completed.

1. Bacterial Characteristics

a. Water Contact Standards

i. State/Regional Water Board Water Contact Standards

In marine water designated for water contact recreation (REC-1), the waste discharged shall not cause the following bacterial standards to be exceeded in the receiving water outside the initial dilution zone.

Geometric Mean Limits

(1) Total coliform density shall not exceed 1,000/100 ml.

(2) Fecal coliform density shall not exceed 200/100 ml.

(3) Enterococcus density shall not exceed 35/100 ml.

Single Sample Maximum (SSM)

(1) Total coliform density shall not exceed 10,000/100 ml.

(2) Fecal coliform density shall not exceed 400/100 ml.

(3) Enterococcus density shall not exceed 104/100 ml.

(4) Total coliform density shall not exceed 1,000/100 ml, when the fecal coliform/total coliform ratio exceeds 0.1.

ii. California Department of Public Health (CDPH) Standards

CDPH has established minimum protective bacteriological standards for coast water adjacent to public beaches and for public water contact sports areas in ocean waters. These standards are found in the California Code of Regulations (CCR), 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 (This incorporation by reference is prospective including future changes to the incorporated provisions as changes take effect), CDPH imposes the same standards as contained in title 17, CCR, and requires weekly sampling but allows the county health officer more discretion in making posting and closure decisions.

b. Shellfish Harvesting Standards

At all areas where shellfish may be harvested for human consumption, as determined by the Regional Water Board, the waste discharged shall not cause the following bacterial standards to be exceeded:

The median total coliform density for any 6-month period shall not exceed 70 per 100 ml, and not more than 10 percent of the samples during any 6-month period shall exceed 230 per 100 ml.

c. Implementation Provisions for Bacterial Characteristics

i. If the Discharger is required to conduct receiving water monitoring for bacterial characteristics in the future, then, at a minimum, weekly samples shall be collected from each site. The geometric mean values should be calculated using the five most recent sample results. If sampling occurs more frequently than weekly, all samples taken during the previous 30-day period shall be used to calculate the geometric mean.

ii. If a single sample exceeds any of the SSM standards, repeat sampling at that location shall be conducted to determine the extent and persistence of the exceedance. Repeat sampling shall be conducted within 24 hours of receiving analytical results and continued until the sample result is less than the SSM standard or until a sanitary survey is conducted to determine the source of the high bacterial densities.

When repeat sampling is required because of an exceedance of any one single sample density, values from all samples collected during that 30-day period will be used to calculate the geometric mean.

iii. It is state policy that the geometric mean bacterial objectives are strongly preferred for use in water body assessment decisions (for example, in developing the CWA section 303(d) list of impaired waters) because the geometric mean objectives are a more reliable measure of long-term water body conditions. In making assessment decisions on bacterial quality, SSM data must be considered together with any available geometric mean data. The use of only SSM bacterial data is generally inappropriate unless there is a limited data set, the water is subject to short-term spikes in bacterial concentrations, or other circumstances justify the use of only SSM data.

iv. For monitoring stations outside of the defined water-contact recreation zone (REC-1), samples will be analyzed for total coliform only.

2. Physical Characteristics

The waste discharged shall not:

a. Cause floating particulates and oil and grease to be visible;

b. Cause aesthetically undesirable discoloration of the ocean surface;

c. Significantly reduce the transmittance of natural light at any point outside the initial dilution zone; and,

d. Change the rate of deposition of inert solids and the characteristics of inert solids in ocean sediments such that benthic communities are degraded.

3. Chemical Characteristics

The waste discharged shall not:

a. Cause the dissolved oxygen concentration at any time to be depressed more than 10 percent from that which occurs naturally, as a result of the discharge of oxygen demanding waste materials;

b. Change the pH of the receiving waters at any time more than 0.2 units from that which occurs naturally as a result of the discharge pH;

c. Cause the dissolved sulfide concentration of waters in and near sediments to be significantly increased above that present under natural conditions;

d. Cause the concentration of substances set forth in chapter II, Table B of the Ocean Plan, in marine sediments to be increased to levels that would degrade indigenous biota;

e. Cause the concentration of organic materials in marine sediments to be increased to levels that would degrade marine life; and,

f. Contain nutrients at levels that will cause objectionable aquatic growth or degrade indigenous biota.

4. Biological Characteristics

The waste discharged shall not:

a. Degrade marine communities, including vertebrate, invertebrate, and plant species;

b. Alter the natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption; and,

c. Cause the concentration of organic materials in fish, shellfish or other marine resources used for human consumption to bioaccumulate to levels that are harmful to human health.

5. Radioactivity

Discharge of radioactive waste shall not degrade marine life.

B. Groundwater Limitations – Not Applicable

V. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

2. **Regional Water Board Standard Provisions.** The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:

   a. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by section 13050 of the CWC.

   b. Odors, vectors, and other nuisances of sewage or sludge origin beyond the limits of the treatment plant site or the sewage collection system due to improper operation of facilities, as determined by the Regional Water Board, are prohibited.

   c. All facilities used for collection, transport, treatment, or disposal of wastes shall be adequately protected against damage resulting from overflow, washout, or inundation from a storm or flood having a recurrence interval of once in 100 years.

   d. Collection, treatment, and disposal systems shall be operated in a manner that precludes public contact with wastewater.

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

   f. The provisions of this order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

   g. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities or penalties established pursuant to any applicable state law or regulation under authority preserved by section 510 of the CWA.

   h. Nothing in this 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 to under section 311 of the CWA.

   i. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction, including applicable requirements in municipal storm water management programs developed to comply with NPDES permits issued by the Regional Water Board to local agencies.

   j. Discharge of wastes to any point other than specifically described in this Order is prohibited, and constitutes a violation thereof.

   k. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to sections 301, 302, 303(d), 304, 306, 307, 316, 403, and 405 of the federal CWA and amendments thereto.

   l. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal facility, and they leave unaffected any further

restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.

m. Oil or oily material, chemicals, refuse, or other polluting materials shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.

n. A copy of these waste discharge specifications shall be maintained at the discharge facility so as to be available at all times to operating personnel.

o. If there is any storage of hazardous or toxic materials or hydrocarbons at this facility and if the facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

p. The Discharger shall file with the Regional Water Board a report of waste discharge at least 120 days before making any proposed change in the character, location or volume of the discharge.

q. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify the Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Regional Water Board, 30 days prior to taking effect.

r. CWC section 13385 provides that any person who violates a waste discharge requirement or a provision of the CWC is subject to civil penalties of up to $5,000 per day, $10,000 per day, or $25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to $10 per gallon per day or $25 per gallon per day of violation, or some combination thereof, depending on the violation, or upon the combination of violations.

s. CWC section 13387 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, including monitoring reports or reports of compliance or noncompliance, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained in this order is subject to a fine of not less than $5,000 nor more than $50,000, imprisonment in the state prison , or both. For a subsequent conviction, such a person shall be punished by a fine of not more than $100,000 per day of violation, by imprisonment in the state prison for two, four or six years, or by both that fine and imprisonment.

t. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this Order.

u. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

i. Name and general composition of the chemical,

ii. Frequency of use,

iii. Quantities to be used,

iv. Proposed discharge concentrations, and

v. USEPA registration number, if applicable.

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

w. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, or receiving water limitation of this Order, the Discharger shall notify the Watershed Regulatory section Chief at the Regional Water Board by telephone (213) 576-6616, or electronically at dhung@waterboards.ca.gov, or by Fax at (213) 576-6660 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing to the Regional Water Board within five days, unless the Regional Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. The written notification shall also be submitted via email with reference to CI-2022 to losangeles@waterboards.ca.gov. Other noncompliance requires written notification as above at the time of the normal monitoring report.

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

a. This Order may be reopened for modification to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above an Ocean Plan Table B water quality objective.

b. This Order may be modified, revoked and reissued, or terminated for cause, including, but not limited to:

i. Violation of any term or condition contained in this Order;

ii. Obtaining this Order by misrepresentation or by failure to disclose fully all relevant facts; or,

iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of a request by the Discharger for an Order modification, revocation and issuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

c. If an applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Regional Water Board may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.

d. This Order may be reopened and modified to incorporate new limits based on future reasonable potential analyses to be conducted based on on-going monitoring data collected by the Discharger and evaluated by the Regional Water Board.

e. This Order may be reopened and modified, in accordance with the provisions set forth in title 40, Code of Federal Regulations (40 CFR) parts 122 and 124, to incorporate requirements for the implementation of the watershed management approach.

f. This Order may be modified, in accordance with the provisions set forth in 40 CFR parts 122 and 124, to include new Minimum Levels (ML).

g. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments or the adoption of a TMDL for Ventura Coastal Stream Watershed Management Area.

h. The Regional Water Board may modify or revoke and reissue this Order if present or future investigations demonstrate that the discharge(s) governed by this Order will cause, have the potential to cause, or contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters.

i. This Order may be modified, revoked and reissued, or terminated in accordance with the provisions of 40 CFR parts 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order, endangerment to human health or the environment resulting from the permitted activity, or acquisition of newly obtained information which would have justified the application of different conditions if known at the time of Order adoption and issuance.

j. The waste discharged shall not cause a violation of any applicable water quality standard for receiving waters. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such standards.

k. This Order may be reopened and modified to revise the effluent and receiving water monitoring program as a result of future other ocean outfalls being constructed in proximity to the existing City of Oxnard Discharge Point 001.

l. This Order may be reopened and modified to revise effluent limitations and performance goals, sampling locations as a result of the GREAT program.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Special Study

i. Constituents of Emerging Concern (CECs) in the Effluent

(a) The Discharger shall conduct a special study to investigate the CECs in the effluent discharge. Within 90 days of the effective date of this Order, the Discharger shall submit to the Executive Officer a CEC special study work plan for approval. Upon approval, the Discharger shall implement the work plan.

(b) The Discharger shall follow the requirements of the work plan as discussed in the MRP and the Fact Sheet.

ii. Annual Special Studies

(a) The Discharger and the Regional Water Board shall consult annually to determine the need for special studies. Each year, the Discharger shall submit proposals for any proposed special studies to the Regional Water Board by December 15, for the following year's monitoring effort (July through June). The following year, detailed scopes of work for proposals, including reporting schedules, shall be presented by the Discharger at a Spring Regional Water Board meeting, to obtain the Regional Water Board approval and to inform the public. Upon approval by the Regional Water Board, the Discharger shall implement its special study or studies.

b. Toxicity Reduction Requirements

The Discharger shall prepare and submit a copy of the Discharger's initial investigation TRE work plan to the Executive Officer of the Regional Water Board for approval within 90 days of the effective date of this permit. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use USEPA manual EPA/833B-99/002 (municipal), or the most current version, as guidance. At a minimum, the initial investigation TRE work plan must contain the provisions in Attachment G. This work plan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at a minimum:

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

ii. A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the facility; and,

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

If the effluent toxicity test result exceeds the limitation, then the Discharger shall immediately implement accelerated toxicity testing that consists of six additional tests, approximately every two weeks, over a 12-week period. Effluent sampling for the first test of the six additional tests shall commence within five days of receipt of the test results exceeding the toxicity limitation.

If the results of any two of the six tests (any two tests in a 12-week period) exceed the limitation, the Discharger shall initiate a TRE.

If results of the implementation of the facility's initial investigation TRE work plan (as described above) indicate the need to continue the TRE/TIE, the Discharger shall expeditiously develop a more detailed TRE work plan for submittal to the Executive Officer within 15 days of completion of the initial investigation TRE.

Detailed toxicity testing and reporting requirements are contained in section V of the MRP (Attachment E).

c. Treatment Plant Capacity

The Discharger shall submit a written report to the Executive Officer of the Regional Water Board within 90 days after the "30-day (monthly) average" daily dry-weather flow equals or exceeds 75 percent of the design capacity of waste treatment and/or disposal facilities. The Discharger's senior administrative officer shall sign a letter, which transmits that report and certifies that the discharger's policy-making body is adequately informed of the report's contents. The report shall include the following:

i. The average daily flow for the month, the date on which the peak flow occurred, the rate of that peak flow, and the total flow for the day;

ii. The best estimate of when the monthly average daily dry-weather flow rate will equal or exceed the design capacity of the facilities; and,

iii. A schedule for studies, design, and other steps needed to provide additional capacity for waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units.

This requirement is applicable to those facilities which have not reached 75 percent of capacity as of the effective date of this Order. For those facilities that have reached 75 percent of capacity by that date but for which no such report has been previously submitted, such a report shall be filed within 90 days of the issuance of this Order.

3. Best Management Practices and Pollution Prevention

a. Storm Water Pollution Prevention Plan (SWPPP) – (Not Applicable)

Under previous permits, all of the storm water runoff traversing the treatment areas of the Facility premises was captured and treated in the plant. With the 2008 expansion of the treatment plant, including the new headworks facility, this is no longer the case. Runoff from the facility is now regulated under the Municipal Separate Storm Sewer System Permit for Ventura County (Ventura MS4 Permit) as a public agency activity subject to development and implementation of a SWPPP. As the SWPPP is now implemented under the Ventura MS4 permit, it is not required in this Order.

b. Spill Clean-up Contingency Plan (SCCP)

Within ninety days, the Discharger is required to submit a SCCP, which describes the activities and protocols to address clean-up of spills, overflows, and bypasses of untreated or partially treated wastewater from the Discharger's collection system or

treatment facilities that reach water bodies, including dry channels and beach sands. At a minimum, the plan shall include sections on spill clean-up and containment measures, public notification, and monitoring. The Discharger shall review and amend the plan as appropriate after each spill from the facility or in the service area of the Facility. The Discharger shall include a discussion in the annual summary report of any modifications to the Plan and the application of the Plan to all spills during the year.

The updated SCCP shall include a conceptual monitoring protocol for spills greater than 10,000 gallons to beach sands to: (1) define the extent of waste discharged to beach sands and adjacent surface waters, and (2) to confirm the conclusion and effectiveness of the clean-up and/or mitigation measures. The plan shall include a protocol for coordination with the local health department during such an event. This component of the plan shall be posted on the Regional Water Board website for stakeholder review and comment for 30 days prior to Executive Officer approval.

c. Pollutant Minimization Program (PMP)

Reporting protocols in the MRP (Attachment E) section IX.B.4 describe sample results that are to be reported as Detected but Not Quantified (DNQ) or Not Detected (ND). Definitions for a reported Minimum Level (ML) and Method Detection Limit (MDL) are provided in Attachment A.

These reporting protocols and definitions are used in determining the need to conduct a PMP as follows.

The Discharger shall develop and conduct a PMP as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL; sample results from analytical methods more sensitive than those methods required by this Order; presence of whole effluent toxicity; health advisories for fish consumption; or, results of benthic or aquatic organism tissue sampling) that a pollutant is present in the effluent above an effluent limitation and either of the following is true:

i. The concentration of the pollutant is reported as DNQ and the effluent limitation is less than the reported ML; or,

ii. The concentration of the pollutant is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in the MRP.

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, 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 (PPP), if required pursuant to CWC section 13263.3(d), shall be considered to fulfill the PMP requirements.

The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

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

ii. Quarterly monitoring for the reportable pollutant(s) in the influent to the wastewater treatment system;

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

iv. Implementation of appropriate cost-effective control measures for the reportable pollutant(s), consistent with the control strategy; and

v. An annual status report that shall be sent to the Regional Water Board including:

(a) All PMP monitoring results for the previous year;

(b) A list of potential sources of the reportable pollutant(s);

(c) A summary of all actions undertaken pursuant to the control strategy; and

(d) A description of actions to be taken in the following year.

4. Construction, Operation and Maintenance Specifications

a. Wastewater treatment facilities subject to this Order shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to CCR, title 23, division 3, chapter 26 (CWC sections 13625 – 13633).

b. The Discharger shall maintain in good working order a sufficient alternate power source for operating the wastewater treatment and disposal facilities. All equipment shall be located to minimize failure due to moisture, liquid spray, flooding, and other physical phenomena. The alternate power source shall be designed to permit inspection and maintenance and shall provide for periodic testing. If such alternate power source is not in existence, the discharger shall halt, reduce, or otherwise control all discharges upon the reduction, loss, or failure of the primary source of power.

c. The Discharger shall provide standby or emergency power facilities and/or storage capacity or other means so that in the event of plant upset or outage due to power failure or other cause, discharge of raw or inadequately treated sewage does not occur.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Sludge Disposal Requirements

i. All sludge generated at the wastewater treatment plant must be disposed of, treated, or applied to land in accordance with federal regulations contained in 40 CFR part 503. These requirements are enforceable by USEPA.

ii. The Discharger shall ensure compliance with the requirements in State Water Board Order No. 2004-10-DWQ, *General WDRs for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural and Land Reclamation Activities* for those sites receiving the Discharger's biosolids which a Regional Water Quality Control Board has placed under this general order, and with

the requirements in individual WDRs issued by a Regional Water Board for sites receiving the Discharger's biosolids.

iii. The Discharger shall comply, if applicable, with WDRs issued by other Regional Water Boards to which jurisdiction the biosolids are transported and applied.

iv. The Discharger shall furnish this Regional Water Board with a copy of any report submitted to USEPA, the State Water Board or other Regional Water Board, with respect to municipal sludge or biosolids.

b. Pretreatment Requirements

i. This Order includes the Discharger's Pretreatment Program as previously submitted to this Regional Water Board. Any change to the program shall be reported to the Regional Water Board in writing and shall not become effective until approved by the Executive Officer in accordance with procedures established in 40 CFR part 403.18.

ii. Please refer to Attachment J – Pretreatment Reporting Requirements.

c. Collection System Requirements

i. The Discharger's collection system is part of the system that is subject to this Order. As such, the Discharger must properly operate and maintain its collection system (40 CFR part 122.41(e)). The Discharger must report any non-compliance (40 CFR part 122.41(l)(6) and (7)) and mitigate any discharge from the collection system in violation of this Order (40 CFR part 122.41(d)). See the Order at Attachment D, subsections I.D, V.E, V.H, and I.C., and the following section of this Order.

6. Spill Reporting Requirements

a. Initial Notification

Although state and Regional Water Board staff do not have duties as first responders, this requirement is an appropriate mechanism to ensure that the agencies that do have first responder duties are notified in a timely manner in order to protect public health and beneficial uses. For certain spills, overflows and bypasses, the Discharger shall make notifications as required below:

i. In accordance with the requirements of Health and Safety Code section 5411.5, the Discharger shall provide notification to the local health officer or the director of environmental health with jurisdiction over the affected water body of any unauthorized release of sewage or other waste that causes, or probably will cause, a discharge to any waters of the state as soon as possible, but no later than two hours after becoming aware of the release.

ii. In accordance with the requirements of CWC section 13271, the Discharger shall provide notification to the California Emergency Management Agency (Cal EMA) of the release of reportable amounts of hazardous substances or sewage that causes, or probably will cause, a discharge to any waters of the state as soon as possible, but not later than two hours after becoming aware of the release. The CCR, Title 23, section 2250, defines a reportable amount of sewage as being 1,000 gallons. The phone number for reporting these releases to the Cal EMA is (800) 852-7550.

iii. The Discharger shall notify the Regional Water Board of any unauthorized release of sewage from its POTWs that causes, or probably will cause, a discharge to a water of the state as soon as possible, but not later than two hours after becoming aware of the release. This initial notification does not need to be made if the Discharger has notified Cal EMA and the local health officer or the director of environmental health with jurisdiction over the affected waterbody. The phone number for reporting these releases of sewage to the Regional Water Board is (213) 576-6657. The phone numbers for after hours and weekend reporting of releases of sewage to the Regional Water Board are (213) 305-2284 and (213) 305-2253.

At a minimum, the following information shall be provided to the Regional Water Board:

(1) The location, date, and time of the release;

(2) The water body that received or will receive the discharge;

(3) An estimate of the amount of sewage or other waste released and the amount that reached a surface water at the time of notification;

(4) If ongoing, the estimated flow rate of the release at the time of the notification;

(5) The name, organization, phone number and email address of the reporting representative; and,

(6) A certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over the affected water bodies have been notified of the discharge.

b. Monitoring

For spills, overflows and bypasses reported under section V.C.6.a, the Discharger shall monitor as required below:

i. To define the geographical extent of the spill's impact, the Discharger shall obtain grab samples (if feasible, accessible, and safe) for all spills, overflows or bypasses of any volume that reach any waters of the State (including surface and ground waters). The Discharger shall analyze the samples for total coliform, fecal coliform, E. coli (if fecal coliform test shows positive), enterococcus, and relevant pollutants of concern, upstream and downstream of the point of entry of the spill (if feasible, accessible, and safe). This monitoring shall be done on a daily basis from the time the spill is known until the results of two consecutive sets of bacteriological monitoring indicate the return to the background level or the County Department of Public Health authorizes cessation of monitoring.

c. Reporting

The initial notification required under section V.C.6.a shall be followed by:

i. As soon as possible, but not later than twenty-four hours after becoming aware of an unauthorized discharge of sewage or other waste from its wastewater treatment plant to a water of the state, the Discharger shall submit a statement to the Regional

Water Board by email at aanijielo@waterboards.ca.gov . If the discharge is 1,000 gallons or more, this statement shall certify that Cal EMA has been notified of the discharge in accordance with CWC section 13271. The statement shall also certify that the local health officer or director of environmental health with jurisdiction over the affected water bodies has been notified of the discharge in accordance with Health and Safety Code section 5411.5. The statement shall also include at a minimum the following information:

(1) Agency, NPDES No., Order No., and MRP CI No., if applicable;

(2) The location, date, and time of the discharge;

(3) The water body that received the discharge;

(4) A description of the level of treatment of the sewage or other waste discharged;

(5) An initial estimate of the amount of sewage or other waste released and the amount that reached a surface water;

(6) The Cal EMA control number and the date and time that notification of the incident was provided to Cal EMA; and,

(7) The name of the local health officer or director of environmental health representative notified (if contacted directly); the date and time of notification; and the method of notification (e.g., phone, fax, email).

ii. A written preliminary report five working days after disclosure of the incident is required. Submission to the Regional Water Board of the California Integrated Water Quality System (CIWQS) Sanitary Sewer Overflow (SSO) event number shall satisfy this requirement. Within 30 days after submitting the preliminary report, the Discharger shall submit the final written report to this Regional Water Board. (A copy of the final written report, for a given incident, already submitted pursuant to a statewide General WDRs for Wastewater Collection System Agencies, may be submitted to the Regional Water Board to satisfy this requirement.) The written report shall document the information required in paragraph d below, monitoring results and any other information required in provisions of the Standard Provisions document including corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences. The Executive Officer for just cause can grant an extension for submittal of the final written report.

iii. The Discharger shall include a certification in the annual summary report (due according to the schedule in the MRP) that states that the sewer system emergency equipment, including alarm systems, backup pumps, standby power generators, and other critical emergency pump station components were maintained and tested in accordance with the Discharger's preventive maintenance plan. Any deviations from or modifications to the Plan shall be discussed.

d. Records

The Discharger shall develop and maintain a record of all spills, overflows or bypasses of raw or partially treated sewage from its collection system or treatment plant. This

record shall be made available to the Regional Water Board upon request and a spill summary shall be included in the annual summary report. The records shall contain:

i. The date and time of each spill, overflow, or bypass;

ii. The location of each spill, overflow, or bypass;

iii. The estimated volume of each spill, overflow, and bypass including gross volume, amount recovered and amount not recovered, monitoring results as required by section V.C.6.b;

iv. The cause of each spill, overflow, or bypass;

v. Whether each spill, overflow, or bypass entered a receiving water and, if so, the name of the water body and whether it entered via storm drains or other man-made conveyances;

vi. Any mitigation measures implemented;

vii. Any corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences; and,

viii. The mandatory information included in SSO online reporting for finalizing and certifying the SSO report for each spill, overflow, or bypass under the SSO WDR.

e. Activities Coordination

In addition, Regional Water Board expects that the Publicly-Owned Treatment Work's (POTW) owners/operators will coordinate their compliance activities for consistency and efficiency with other entities that have responsibilities to implement: (i) this NPDES permit, including the Pretreatment Program; (ii) a MS4 NPDES permit that may contain spill prevention, sewer maintenance, reporting requirements; and, (iii) the SSO WDR.

f. Consistency with SSO WDRs

The CWA prohibits the discharge of pollutants from point sources to surface waters of the United States unless authorized under an NPDES permit. (33 United States Code sections 1311, 1342). The State Water Board adopted *General Waste Discharge Requirements for Sanitary Sewer Systems*, (WQ Order No. 2006-0003-DWQ; SSO WDR) on May 2, 2006, to provide a consistent, statewide regulatory approach to address sanitary sewer overflows. The SSO WDR requires public agencies that own or operate sanitary sewer systems to apply for coverage under the SSO WDR, develop and implement sewer system management plans, and report all SSO to the State Water Board's online SSOs database. Regardless of the coverage obtained under the SSO WDR, the Discharger's collection system is part of the Publicly Owned Treatment Works (POTW) that is subject to this NPDES 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(1)(6) and (7)), and mitigate any discharge from the collection system in violation of this NPDES permit (40 CFR 122.41(d)).

The requirements contained in this Order in sections V.C.3.b (SCCP Plan section), V.C.4 (Construction, Operation and Maintenance Specifications section), and V.C.6 (Spill Reporting Requirements section) are intended to be consistent with the requirements of the SSO WDR. The Regional Water Board recognizes that there may be some overlap between these NPDES permit provisions and SSO WDR requirements, related to the collection systems. The requirements of the SSO WDR are considered the minimum thresholds (see finding 11 of State Water Board Order No. 2006-0003-DWQ). To encourage efficiency, the Regional Water Board will accept the documentation prepared by the Permittees under the SSO WDR for compliance purposes as satisfying the requirements in sections V.C.3.b, V.C.4, and V.C.6 provided the more stringent provisions contained in this NPDES permit are also addressed. Pursuant to SSO WDR, section D, provision 2(iii) and (iv), the provisions of this NPDES permit supercede the SSO WDR, for all purposes, including enforcement, to the extent the requirements may be deemed duplicative

g. The Discharger shall provide standby or emergency power facilities and/or storage capacity or other means so that in the event of plant upset or outage due to power failure or other cause, discharge of raw or inadequately treated sewage does not occur.

VI. COMPLIANCE DETERMINATION

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

A. General

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.

B. Multiple Sample Data

When determining compliance with a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses and the data set contains one or more reported determinations of DNQ or ND, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

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

C. Sufficient Sampling and Analysis

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, quarterly, semiannually, or annually, exceeds the average monthly effluent limitation (AMEL), the Discharger shall increase sampling frequency to weekly until compliance with the AMEL is demonstrated. All analytical results shall be reported as specified in the MRP.

D. Average Monthly Effluent Limitation (AMEL)

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

If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for a given parameter, the Discharger will have demonstrated compliance with the AMEL for each day of that month for that parameter.

If the analytical result of any single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any parameter, the Discharger may collect up to four additional samples within the same calendar month. All analytical results shall be reported in the monitoring report for that month. The concentration of pollutant (an arithmetic mean or a median) in these samples estimated from the "Multiple Sample Data Reduction" section above, will be used for compliance determination.

In the event of noncompliance with an AMEL, the sampling frequency for that parameter shall be increased to weekly and shall continue at this level until compliance with the AMEL has been demonstrated.

E. Average Weekly Effluent Limitation (AWEL)

If the average 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, resulting in seven days of non-compliance. The average of daily discharges over the calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the discharger will be considered out of compliance for that calendar week. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week with respect to the AWEL.

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

F. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for that parameter for that day only within the reporting period. For any day during which no sample is taken, no compliance determination can be made for that day with respect to the MDEL.

G. Instantaneous Minimum Effluent Limitation

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

H. Instantaneous Maximum Effluent Limitation

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

I. Six-month Median Effluent Limitation

If the median of daily discharges over any 180-day period exceeds the six-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 for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 180-day period and the analytical result for that sample exceeds the six-month median, the discharger will be considered out of compliance for the 180-day period. For any 180-period during which no sample is taken, no compliance determination can be made for the six-month median effluent limitation.

I. Percent Removal

The average monthly percent removal is the removal efficiency expressed in percentage across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of pollutant concentrations (C in mg/L) of influent and effluent samples collected at about the same time using the following equation:

Percent Removal (%) = $[1-(C_{Effluent}/C_{Influent})] \times 100\ \%$

When preferred, the Discharger may substitute mass loadings and mass emissions for the concentrations.

J. Mass and Concentration Limitations

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

K. Compliance with single constituent effluent limitations

Dischargers may be considered out of compliance with the effluent limitation if the concentration of the pollutant (see section B "Multiple Sample Data Reduction" above) in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.

L. Compliance with effluent limitations expressed as a 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., PCB's) 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 ND or DNQ.

M. Mass Emission Rate

The mass emission rate shall be obtained from the following calculation for any calendar day:

$$\text{Mass emission rate (lb/day)} = \frac{8.34}{N}\sum_{i=1}^{N} Q_i C_i$$

$$\text{Mass emission rate (kg/day)} = \frac{3.79}{N}\sum_{i=1}^{N} Q_i C_i$$

in which 'N' is the number of samples analyzed in any calendar day. Qi and Ci are the flow rate (mgd) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' grab samples, which may be taken in any calendar day. If a composite sample is taken, 'Ci' is the concentration measured in the composite sample and Qi is the average flow rate occurring during the period over which samples are composited.

The daily concentration of all constituents shall be determined from the flow-weighted average of the same constituents in the combined waste streams as follows:

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

in which N is the number of component waste streams. Qi and Ci are the flow rate (mgd) and the constituent concentration (mg/L), respectively, which are associated with each of the N waste streams. Qt is the total flow rate of the combined waste streams.

N. Bacterial Standards and Analysis.

1. The geometric mean used for determining compliance with bacterial standards is calculated with the following equation:

   $$\text{Geometric Mean} = (C_1 \times C_2 \times \ldots \times C_n)^{1/n}$$

   where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 mL or CFU/100 mL) found on each day of sampling.

2. For bacterial analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 ml for total and fecal coliform, at a minimum, and 1 to 1000 per 100 ml for enterococcus). The detection methods used for each analysis shall be reported with the results of the analyses.

3. Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 CFR part 136 unless alternate methods have been approved by USEPA pursuant to 40 CFR part 136, or improved methods have been determined by the Executive Officer and/or USEPA.

4. Detection methods used for enterococcus shall be those presented in Table 1A of 40 CFR part 136 or in the USEPA publication EPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure* or any improved method determined by the Executive Officer and/or USEPA to be appropriate.

O. Single Operational Upset

A single operational upset (SOU) that leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation and limits the Discharger's liability in accordance with the following conditions:

1. A single operational upset is broadly defined as a single unusual event that temporarily disrupts the usually satisfactory operation of a system in such a way that it results in violation of multiple pollutant parameters.

2. A Discharger may assert SOU to limit liability only for those violations which the Discharger submitted notice of the upset as required in Provision V.E.2(b) of Attachment D – Standard Provisions.

3. For purpose outside of CWC section 13385 (h) and (i), determination of compliance and civil liability (including any more specific definition of SOU, the requirements for Dischargers to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with USEPA Memorandum "Issuance of Guidance Interpreting Single Operational Upset" (September 27, 1989).

4. For purposes of CWC section 13385, subdivisions (h) and (i), determination of compliance and civil liability (including any more specific definition of SOU, the requirements for Dischargers to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with CWC section 13385, subdivision (f)(2)

ATTACHMENT A – DEFINITIONS

Acute Toxicity

a. Acute Toxicity (TUa)

Expressed in Toxic Units Acute (TUa)

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

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. 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)
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)
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.

Average Weekly Effluent Limitation (AWEL)
he 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.

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

Chronic Toxicity
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 II.

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

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

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

DDT (Dichlorodiphenyltrichloroethane)
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)
Sample results that are 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
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
Indentations along the coast that 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
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 of the California Water Code (CWC), Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

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
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 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 limitation).

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

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
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 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)
The highest allowable daily discharge of a pollutant.

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

Minimum Level (ML)
The concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

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)
Those sample results less than the laboratory's MDL.

Ocean Waters
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)
The sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

PCBs (polychlorinated biphenyls)
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.

PCB derivatives: At a minimum, 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, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be individually quantified.

Pesticides are, for purposes of this order, those six constituents referred to in 40 CFR, part 125.58 (p) (methoxychlor, demeton, guthion, malathion, mirex, and parathion).

Pollutant Minimization Program (PMP)
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 Ocean Plan Table B pollutants through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to CWC section 13263.3(d), shall be considered to fulfill the PMP requirements.

Reported Minimum Level (RML)
The ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix II of the Ocean Plan in accordance with section III.C.5.a. of the Ocean Plan or established in accordance with section III.C.5.b. of the Ocean Plan. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the reported ML.

Satellite Collection System
The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

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

Significant Difference
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.

Sludge means the solids, semi-liquid suspensions of solids, residues, screenings, grit, scum, and precipitates separated from, or created in, wastewater by the unit processes of a treatment system. It also includes, but is not limited to, all supernatant, filtrate, centrate, decantate, and thickener overflow/underflow in the solids handling parts of the wastewater treatment system.

State Water Quality Protection Areas (SWQPAs)
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 Resolution No.s 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
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.

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

Toxicity Reduction Evaluation (TRE)
A study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

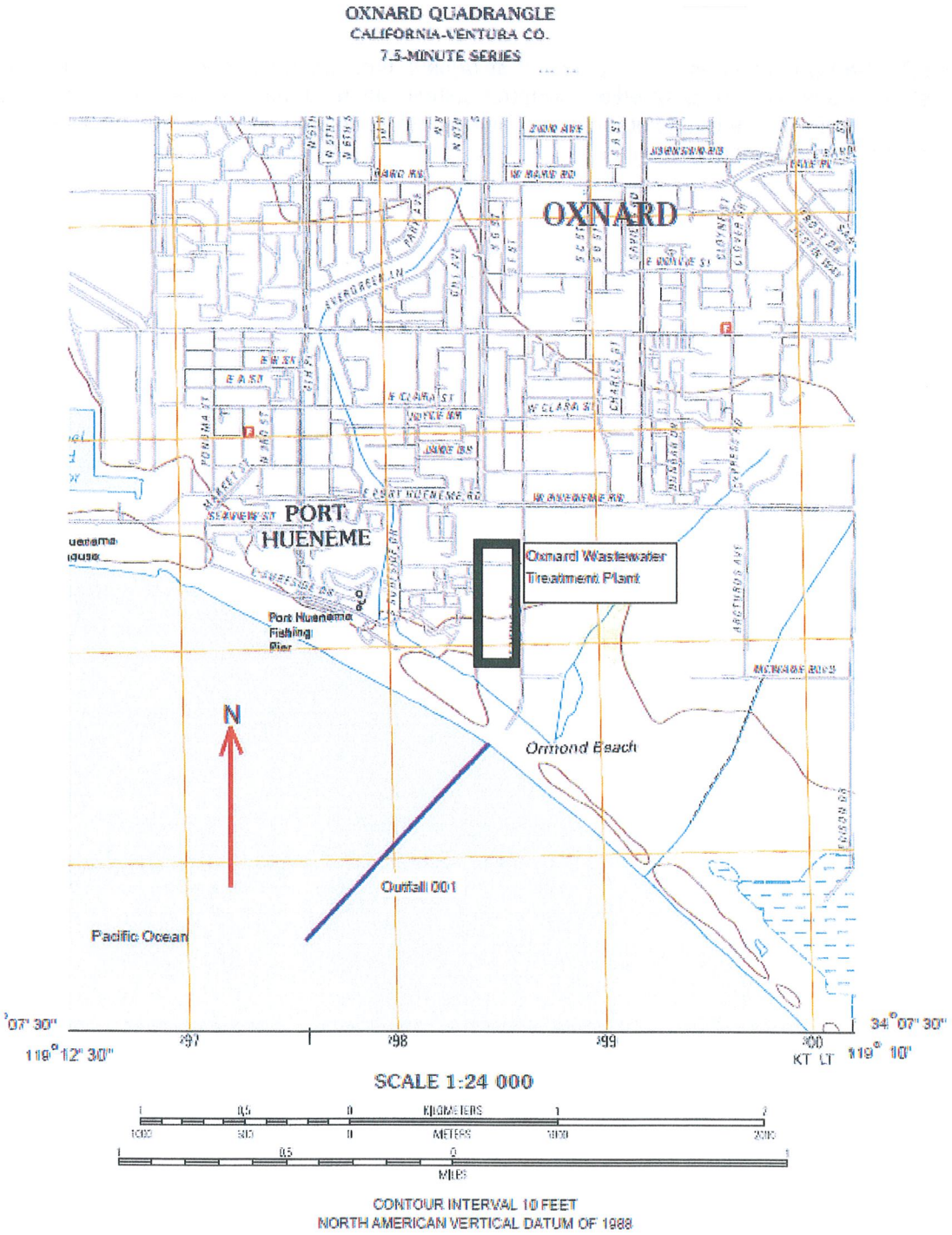
Waste
As used in the Ocean Plan, waste includes a Discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

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.

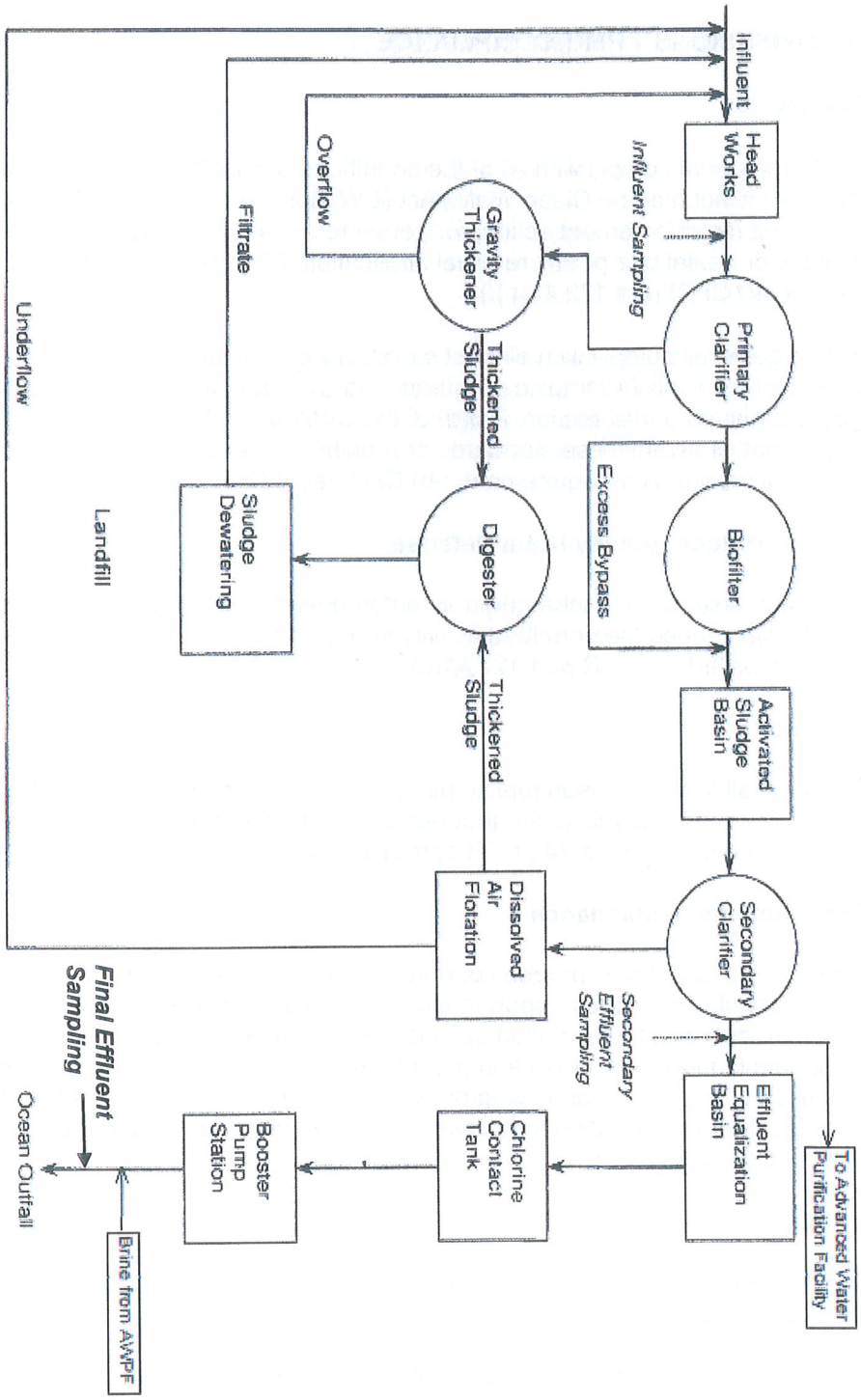
Whole Effluent Toxicity (WET) The total toxic effect of an effluent measured directly with a toxicity test.

Zone of Initial Dilution (ZID) means, for purposes of designating monitoring stations, the region within a horizontal distance equal to a specified water depth (usually depth of outfall or average depth of diffuser) from any point of the diffuser or end of the outfall and the water column above and below that region, including the underlying seabed.

ATTACHMENT B – MAP



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any 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. (Title 40, Code of Federal Regulations (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, even if this Order 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. (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 that 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. 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 that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR part 122.41(e).)

E. Property Rights

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

2. The issuance of this Order 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, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their 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 are kept under the conditions of this Order (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 (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 (40 CFR part 122.41(i)(3)); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order 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 that 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 exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR part 122.41(m)(2).)

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

   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 that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR part 122.41(m)(4)(i)(B)); and

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

4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (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 a notice, if possible at least 10 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 below (24-hour notice). (40 CFR part 122.41(m)(3)(ii).)

H. Upset

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 below 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 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));

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

d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (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. General

This Order 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 condition. (40 CFR part 122.41(f).)

B. Duty to Reapply

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

C. Transfers

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

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 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 unless other test procedures have been specified in this Order. (40 CFR part 122.41(j)(4); part 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order 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, and records of all data used to complete the application for this Order, for a period of at least three (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 at any time. (40 CFR part 122.41(j)(2).)

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 and attachments, 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 or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR part 122.41(h); CWC section 13267.)

B. Signatory and Certification Requirements

1. All 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 below. (40 CFR part 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, 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 this Order 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 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (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 and State Water Board. (40 CFR part 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above 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 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR part 122.22(c).)

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

   "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 in the MRP (Attachment E) in this Order. (40 CFR part 122.22(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 or State Water Board 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 this Order 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 this Order, 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. (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 this Order. (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, 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. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall 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 that must be reported within 24 hours under this paragraph (40 CFR part 122.41(l)(6)(ii)):

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR part 122.41(l)(6)(ii)(A).)

   b. Any upset that exceeds any effluent limitation in this Order. (40 CFR part 122.41(l)(6)(ii)(B).)

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an 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 as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision 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 section 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 that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.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 permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the 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 of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 CFR part 122.41(l)(2).)

H. Other Noncompliance

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

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a 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 permit under several 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 CWA, 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 CWA, 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 CWA, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the CWA, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one 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 two years, or both. Any person who *knowingly* violates 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 three 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 CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, 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)).

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 CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA. 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 part 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 permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two 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 four years, or both. (40 CFR part 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 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 six months per violation, or by both. (40 CFR part 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 of the following (40 CFR part 122.42(b)):

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

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 adoption of the Order. (40 CFR part 122.42(b)(2).)

3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as 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).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP), CI-2022

Title 40 of the Code of Federal Regulations (40 CFR) part 122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California law and regulations.

I. GENERAL MONITORING PROVISIONS

A. Principles, Framework, and Design of Monitoring Program

1. NPDES compliance monitoring focuses on the effects of a specific point source discharge. Generally, it is not designed to assess impacts from other sources of pollution (e.g., nonpoint source runoff, aerial fallout) or to evaluate the current status of important ecological resources in the waterbody. The scale of existing compliance monitoring programs does not match the spatial and, to some extent, temporal boundaries of the important physical and biological processes in the ocean. In addition, the spatial coverage provided by compliance monitoring programs is less than ten percent of the nearshore ocean environment. Better technical information is needed about status and trends in ocean waters to guide management and regulatory decisions, to verify the effectiveness of existing programs, and to shape policy on marine environmental protection.

2. The Regional Water Board and the United States Environmental Protection Agency (USEPA), working with other groups, have developed a comprehensive basis for effluent and receiving water monitoring appropriate to large publicly owned treatment works (POTWs) discharging to waters of the Southern California Bight. This effort has culminated in the publication by the Southern California Coastal Water Research Project (SCCWRP) of the Model Monitoring Program guidance document (Schiff, K.C., J.S. Brown and S.B. Weisberg. 2001. *Model Monitoring Program for Large Ocean Dischargers in Southern California*. SCCWRP Tech. Rep #357. Southern California Coastal Water Research Project, Westminster, CA. 101 pp.). This guidance provides the principles, framework and recommended design for effluent and receiving water monitoring elements that have guided development of the monitoring program described below.

3. The conceptual framework for the 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.

   a. Core monitoring is local in nature and focused on monitoring trends in quality and effects of the point source discharge. This includes effluent monitoring as well as some aspects of receiving water monitoring. In the monitoring program described below these core components are typically referred to as local monitoring.

   b. Regional monitoring is focused on questions that are best answered by a region-wide approach that incorporates coordinated survey design and sampling techniques. The major objective of regional monitoring is to collect information required to assess how safe it is to swim in the ocean, how safe it is to eat seafood from the ocean, and whether the marine ecosystem is being protected. Key components of regional monitoring include elements to address pollutant mass emission estimations, public health concerns, monitoring of trends in natural resources, assessment of regional impacts from all

contaminant sources, and protection of beneficial uses. The final design of regional monitoring programs is developed by means of steering committees and technical committees comprised of participating agencies and organizations, and is not specified in this permit. Instead, for each regional component, the degree and nature of participation of the Discharger is specified. For this permit, these levels of effort are based upon past participation of the City of Oxnard in regional monitoring programs.

The Discharger shall participate in regional monitoring activities coordinated by the SCCWRP or any other appropriate agency approved by the Regional Water Board. The procedures and time lines for the Regional Water Board approval shall be the same as detailed for special studies, below.

c. Special 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 multiyear studies may also be needed. Questions regarding effluent 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 special studies. These studies are by nature ad hoc and cannot be typically anticipated in advance of the five-year permit cycle.

   The Discharger and the Regional Water Board shall consult annually to determine the need for special studies. Each year, the Discharger shall submit proposals for any proposed special studies to the Regional Water Board by December 15, for the following year's monitoring effort (July through June). The following year, detailed scopes of work for proposals, including reporting schedules, shall be presented by the Discharger at a Spring Regional Water Board meeting, to obtain the Regional Water Board approval and to inform the public. Upon approval by the Regional Water Board, the Discharger shall implement its special study or studies.

4. In an attempt to bridge the foregoing gap in information, this monitoring program for the City of Oxnard is comprised of requirements to demonstrate compliance with the conditions of the NPDES permit, ensure compliance with state water quality standards, and mandate participation in regional monitoring and/or area-wide studies.

5. Discharger participation in regional monitoring programs is required as a condition of this permit. The Discharger shall complete collection and analysis of samples in accordance with the schedule established by the Steering Committee directing the bight-wide regional monitoring surveys. The level of participation shall be similar to that provided by the Discharger in previous regional surveys conducted in 1994, 1998, 2003 and 2008. The regional programs which must be conducted under this permit include:

a. Future Southern California Bight regional surveys, including benthic infauna, sediment chemistry, fish communities and fish predator risk;

b. Central Region Kelp Monitoring Program – coordinated by the Regional Water Board; and,

c. Central Bight Water Quality Cooperative Program – coordinated monitoring conducted by the 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.

6. Future Southern California Bight Regional Surveys

   Regular regional monitoring for the Southern California Bight has been established, occurring at four- to five-year intervals, and coordinated through SCCWRP with discharger agencies and numerous other entities. The fourth regional monitoring program (Bight '08) took place during 2008 and 2009. The fifth regional monitoring program is expected to begin during 2013. While participation in regional programs is required under this Order, revisions to the Discharger's monitoring program at the direction of the Regional Water Board may be necessary to accomplish the goals of regional monitoring or to allow the performance of special studies to investigate regional or site-specific water issues of concern. These revisions may include a reduction or increase in the number of 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 Executive Officer upon written notification to the Discharger.

7. Central Region Kelp Monitoring Program

   The Regional Water Board has helped to establish the Central Region Kelp Survey Consortium to conduct regional kelp bed monitoring. This program is designed to require ocean dischargers in the Regional Water Board's jurisdiction to undertake a collaborative program (which may include participation by Orange County ocean dischargers) to monitor kelp beds in the Southern California Bight, patterned after the successful program implemented by the San Diego Regional Water Board since 1985. Data collected in this regional survey will be used to assess status and trends in kelp bed health and spatial extent. The regional nature of the survey will allow the status of beds local to specific dischargers to be compared to regional trends. The regional kelp monitoring survey was initiated during 2003.

   The regional survey will consist primarily of quarterly aerial overflights to assess the size and health of existing kelp beds. The Discharger shall participate in the management and technical committee's responsibility for the final survey design and shall provide appropriate financial support to help fund the survey (share base) on the number of participates in the study, but not to exceed a maximum of $10,000 per year.

B. All samples shall be representative of the waste discharge under conditions of peak load. Quarterly effluent analyses shall be performed during the months of February, May, August, and November. Semiannual analyses shall be performed during the months of February and August. Annual analyses shall be performed during the month of August. Should there be instances when monitoring could not be done during these specified months, the Discharger must notify the Regional Water Board, state the reason why monitoring could not be conducted, and obtain approval from the Executive Officer for an alternate schedule. Results of quarterly, semiannual, and annual analyses shall be reported in the monthly monitoring report following the analyses.

C. Pollutants shall be analyzed using the analytical methods described in 40 CFR parts 136.3, 136.4, and 136.5; or where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. Laboratories analyzing effluent samples and receiving water samples shall be certified by the California Department of Public Health (CDPH) Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer and must include quality assurance/quality control (QA/QC) data in their reports. A copy of the laboratory certification shall be provided each time a new certification and/or renewal of the certification is obtained from ELAP.

D. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR part 136.3. All QA/QC analyses must be run on the same dates that samples are actually analyzed. The Discharger shall retain the QA/QC documentation in its files and make available for inspection and/or submit them when requested by the Regional Water Board. Proper chain of custody procedures must be followed and a copy of that documentation shall be submitted with the monthly report.

E. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to ensure accuracy of measurements, or shall ensure that both equipment activities will be conducted.

F. For any analyses performed for which no procedure is specified in the USEPA guidelines, or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.

G. Each monitoring report must affirm in writing that "all analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health or approved by the Executive Officer and in accordance with current USEPA guideline procedures or as specified in this Monitoring and Reporting Program."

H. The monitoring report shall specify the USEPA analytical method used, the Method Detection Limit (MDL), and the Reporting Level (RL) [the applicable minimum level (ML) or reported Minimum Level (RML)] for each pollutant. The MLs are those published by the State Water Board in the 2009 Ocean Plan, Appendix II. The ML represents the lowest quantifiable concentration in a sample, based on the proper application of all method-based analytical procedures and the absence of any matrix interference. When all specific analytical steps are followed and after appropriate application of method specific factors, the ML also represents the lowest standard in the calibration curve for that specific analytical technique. When there is deviation from the method analytical procedures, such as dilution or concentration of samples, other factors may be applied to the ML depending on the sample preparation. The resulting value is the reported ML.

I. The Discharger shall select the analytical method that provides an ML lower than the permit limit established for a given parameter, unless the Discharger can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR part 136, and obtains approval for a higher ML from the Executive Officer, as provided for in section K. below. If the effluent limitation is lower than all the MLs in Appendix II of the 2009 Ocean Plan, the Discharge must select the method with the lowest ML for compliance purposes. The Discharger shall include in the Annual Summary Report a list of the analytical methods employed for each test.

J. The Discharger shall instruct its 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 section K. below, the Discharger's laboratory may employ a calibration standard lower than the ML in Appendix II of the 2009 Ocean Plan.

K. In accordance with section III.C.5.b of the 2009 Ocean Plan, the Regional Water Board Executive Officer, in consultation with the State Water Board's Quality Assurance Program Manager, may establish an ML that is not contained in Appendix II of the 2009 Ocean Plan to be included in the discharger's permit in any of the following situations:

1. When a pollutant under consideration is not listed in Appendix II;

2. When the discharger and the Regional Water Board agree to include in the permit a test method that is more sensitive than those specified in 40 CFR part 136;

3. When the discharger agrees to use an ML that is lower than those listed in Appendix II;

4. When the discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Appendix II and proposes an appropriate ML for the matrix; or,

5. When the discharger uses a method, which quantification practices are not consistent with the definition of the ML. Examples of such methods are USEPA-approved method 1613 for dioxins, and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the discharger, the Regional Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

L. If the Discharger samples and performs analyses (other than for process/operational control, startup, research, or equipment testing) on any influent, effluent, or receiving water constituent more frequently than required by this program using approved analytical methods, the results of those analyses shall be included in the report. These results shall be reflected in the calculation of the average used in demonstrating compliance with average effluent, receiving water, etc., limitations.

M. The Discharger shall develop and maintain a record of all spills and bypasses of raw or partially treated sewage from its collection system or treatment plant according to the requirements in the WDR section of this Order. This record shall be made available to the Regional Water Board upon request and a spill summary shall be included in the Annual Summary Report.

N. For all bacteriological analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 ml for total and fecal coliform, at a minimum, and 1 to 1000 per 100 ml for enterococcus). The detection methods used for each analysis shall be reported with the results of the analyses.

1. Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 CFR part 136, unless alternate methods have been approved in advance by the USEPA pursuant to 40 CFR part 136.

2. Detection methods used for enterococcus shall be those presented in Table 1A of 40 CFR part 136 or in the USEPA publication EPA 600/4-85/076, Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure, or any improved method determined by the Regional Water Board to be appropriate.

O. Laboratory Certification

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

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:

The City of Oxnard is currently constructing a permanent sampling facility to incorporate a sampling location that enables complete mixing of the secondary-treated effluent and the brine waste from the AWPF. This sampling facility is expected to be completed by December 2013. This sampling point is referred to as monitoring location EFF-001B. Once this permanent sampling facility becomes operable, the interim monitoring location EFF-001A shall be automatically superseded by monitoring location EFF-001B, which will become the final effluent point of compliance.

Table 1. Monitoring Station Locations

Influent and Effluent Monitoring Stations		
Discharge Point Name	**Monitoring Location Name**	**Monitoring Location Description**
--	**INF-001**	Sampling stations shall be established at each point of inflow to the sewage treatment plant and shall be located upstream of any in-plant return flows and where representative samples of the influent can be obtained.
001	**EFF-001A**	The interim effluent sampling station shall consist of sampling stations at: (1) a location that will represent the secondary-treated effluent before mixing with the brine waste, and (2) a location that will represent the total brine waste discharged to the outfall. The samples collected from (1) and (2) will be combined proportionate to the flow, and shall conduct the required testing analysis on a single, blended sample.
001	**EFF-001B**	The effluent sampling station shall be located downstream of any in-plant return flows and after the brine waste produced from the AWPF has commingled with the final secondary effluent, where representative samples of the effluent can be obtained.

Receiving Water Column Monitoring Stations								
Station	RWC-4101 RWC-4102 RWC-4102 RWC-4104 RWC-4105 RWC-4106	RWC-4201 RWC-4202 RWC-4203 RWC-4204 RWC-4205 RWC-4206	RWC-4301 RWC-4302 RWC-4303 RWC-4304 RWC-4305 RWC-4306	RWC-4391 RWC-4392 RWC-4393 RWC-4394 RWC-4395 RWC-4396	RWC-4401 RWC-4402 RWC-4403 RWC-4404 RWC-4405 RWC-4406	RWC-4501 RWC-4502 RWC-4503 RWC-4504 RWC-4505 RWC-4506	RWC-4601 RWC-4602 RWC-4603 RWC-4604 RWC-4605 RWC-4606	RWC-4701 RWC-4702 RWC-4703 RWC-4704 RWC-4705 RWC-4706
Latitude	34°03'54.4" 34°02'57.1" 34°01'68.8" 33°99'22.2" 33°97'15.4" 33°94'65.2"	34°06'18.4" 34°05'43.9" 34°04'70.3" 34°02'75.6" 34°00'42.3" 33°97'66.7"	34°09'35.8" 34°08'61.2" 34°06'62.8" 34°04'71.9" 34°03'02.1" 34°00'90.5"	34°07'57.5" 34°07'29.8" 34°06'59.7" 34°06'02.8" 34°04'17.2" 34°03'10.2"	34°13'50. 6" 34°12'22.5" 34°10'87.1" 34°09'25.3" 34°07'94.1" 34°06'68.7"	34°15'65.9" 34°15'16.7" 34°14'80.7" 34°13'99.2" 34°12'87.6" 34°11'83.9"	34°23'06.5" 34°22'73.2" 34°22'16.6" 34°21'45.2" 34°20'63.7" 34°19'53.1"	34°27'12.3" 34°26'35.0" 34°25'55.7" 34°24'85.3" 34°24'05.4" 34°23'30.3"
Longitude	118°90'77.3" 118°91'23.5" 118°91'68.5" 118°92'71.3" 118°93'64.5" 118°94'70.6"	119°00'71.6" 119°01'03.5" 119°01'41.3" 119°02'27.3" 119°03'31.4" 119°04'53.2"	119°09'77.4" 119°10'06.0" 119°11'03.1" 119°11'95.5" 119°12'65.9" 119°13'77.9"	119°11'25.6" 119°11'53.6" 119°12'10.0" 119°12'44.9" 119°13'40.6" 119°14'10.3"	119°19'02.0" 119°20'38.1" 119°21'82.7" 119°23'64.3" 119°25'04.3" 119°26'41.1"	119°22'99.3" 119°24'17.8" 119°25'16.1" 119°27'19.9" 119°30'29.9" 119°32'96.8"	119°26'73.0" 119°27'85.0" 119°29'41.3" 119°31'48.3" 119°33'99.7" 119°37'20.7"	119°31'04.1" 119°32'90.9" 119°35'09.1" 119°37'05.8" 119°39'23.9" 119°41'25.7"

Station Depth (m)	10 49 60 100 450 788	12 30 60 100 100 782	28 60 149 100 325 525	11 30 30 60 134 333	12 30 60 100 205 282	10 20 20 20 30 81	10 11 30 30 30 30	10 20 20 23 30 30
Dist. From Outfall Transect (km)	24.3	16.0	8.3	0.1	0.1	4.9	10.0	15.4

Receiving Water Benthic Monitoring Stations

Station	RWS-001	RWS-002	RWS-003	RWS-004	RWS-005	RWS-006	RWS-007
Latitude	34^{0}07'65.01"	34^{0}07'39.59"	34^{0}07'37.21	34^{0}07'36.52	34^{0}07'34.20	34^{0}07'28.00	34^{0}05'34.15
Longitude	119^{0}02'84.87"	119^{0}11'45.75"	119^{0}11'42.33"	119^{0}11'41.34"	119^{0}11'36.24"	119^{0}11'25.20"	119^{0}11'32.25"
Station Depth (m)	15.0	15.0	15.3	15.0	15.3	15.3	15.3
Dist. From Outfall Transect (m)	1000	150	18	18	150	500	4000

Receiving Water Trawl Stations

Station	RWT-001	RWT-002	RWT-003
Latitude	34^{0}07'56.79"	34^{0}07'26.96"	34^{0}05'31.73"
Longitude	119^{0}11'40.42"	119^{0}11'33.32"	119^{0}09'35.22"
Station Depth (m)	15.6	15.6	15.6
Dist. From Outfall Transect (m)	380	380	4000

Ventura County Shoreline Bacteriological Monitoring Stations

Ventura County ID	**Location**	**Latitude**	**Longitude**
35000	Hollywood Beach, Los Robles St	34^{0}09'45"	119^{0}13'48"
37000	Channel Islands Harbor Beach	34^{0}09'34"	119^{0}13'19"
38000	Silverstrand Beach, San Nicholas Ave	34^{0}09'26"	119^{0}13'31"
39000	Silverstrand Beach, Santa Paula Ave	34^{0}09'09"	119^{0}13'11"
40000	Silverstrand Beach, Sawtell, Ave	34^{0}08'51"	119^{0}12'59"
41000	Port Hueneme Beach Park	34^0 08'30"	119^{0}11'40"
42000	Ormond Beach, J Street Drain	34^0 08'20"	119^{0}11'20"
43000	Ormond Beach, Industrial Drain	34^{0}08'09"	119^{0}11'03"
44000	Ormond Beach, Arnold Rd	34^{0}07'11"	119^{0}09'36"

III. INFLUENT MONITORING REQUIREMENTS

Influent monitoring is required to:

- Determine compliance with NPDES permit conditions.
- Assess treatment plant performance.
- Assess effectiveness of the Pretreatment Program.

A. Monitoring Location INF-001

1. The Discharger shall monitor influent to the facility at INF001 as follows:

Table 2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Recorder/totalizer	Continuous[1]	[2]
pH	pH units	Grab	Daily	[2]
TSS	mg/L	24-hr composite	Daily	[2]
$BOD_5$20°C	mg/L	24-hr composite	Daily	[2]
Oil and grease	mg/L	Grab[3]	Weekly	[2]
Benzidine	µg/L	24-hr composite	Quarterly	[2]
Heptachlor epoxide	µg/L	24-hr composite	Quarterly	[2]
PCBs	µg/L	24-hr composite	Quarterly	[2]
TCDD equivalents	ng/L	24-hr composite	Quarterly	[2]
Remaining pollutants in Table B of the 2009 Ocean Plan (excluding residual chlorine, acute and chronic toxicity, and ammonia)	µg/L	24-hr composite, or grab, as applicable according to 40 CFR part 136	Semiannually	[2]
Pesticides	µg/L	24-hr composite	Semiannually	[2]

IV. EFFLUENT MONITORING REQUIREMENTS

Effluent monitoring is required to:

- Determine compliance with NPDES permit conditions and water quality standards.
- Assess plant performance, identify operational problems and improve plant performance.

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1 When continuous monitoring of flow is required, total daily flow and peak daily flow (24-hr basis) should be reported.

2 Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136; where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or State Water Board. For any pollutant whose effluent limitation is lower than all the MLs specified in Appendix II of the Ocean Plan, the analytical method with the lowest ML must be selected.

3 Oil and grease monitoring in the influent and effluent shall consist of a single grab sample at peak flow over a 24-hour period.

- Provide information on wastewater characteristics and flows for use in interpreting water quality and biological data.

A. Monitoring Location EFF-001A or EFF-001B

1. The Discharger shall monitor effluent at EFF-001A (interim location) or EFF-001B (upon becoming operable) as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding ML:

Table 3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total waste flow	mgd	Continuous[1]	--	--
Total residual chlorine	mg/L	Continuous[1]	---	[2]
Turbidity	NTU	Continuous[1]	---	[2]
Temperature	°C	Grab	---	[2]
pH	pH unit	Grab	Daily	[2]
Settleable solids	mL/L	Grab	Daily	[2]
Suspended solids	mg/L	24-hr composite	Daily	[2]
Oil and grease	mg/L	Grab	Daily	[2]
$BOD_5$20°C	mg/L	24-hr composite	Daily	[2]
Total coliform	MPN/ 100mL or CFU/100ml	Grab	Daily	[2]
Fecal coliform	MPN/ 100mL or CFU/100ml	Grab	5 times/month	[2]
Enterococcus	MPN/ 100mL or CFU/100ml	Grab	5 times/month	[2]
Ammonia nitrogen	mg/L	24-hr composite	Monthly	[2]
Nitrate nitrogen	mg/L	24-hr composite	Monthly	[2]
Nitrite nitrogen	mg/L	24-hr composite	Monthly	[2]
Organic nitrogen	mg/L	24-hr composite	Monthly	[2]
Chronic toxicity	TUc	24-hr composite	Monthly	[2]
Benzidine	ng/L	24-hr composite	Quarterly	[2]
Heptachlor epoxide	ng/L	24-hr composite	Quarterly	[2]
PCBs	µg/L	24-hr composite	Quarterly	[2]
TCDD equivalents	pg/L	24-hr composite	Quarterly	[2]
Remaining pollutants in Table B of the 2009 Ocean Plan (excluding acute toxicity)	µg/L	24-hr composite, or grab, as applicable according to 40 CFR part 136	Semiannually	[2]
Radioactivity[4]				

[4] Analyze these radiochemicals by the following USEPA methods: 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 & 228

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
(Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 and uranium)	pCi/L	24-hr composite	Semiannually	[2]
Pesticides[5]	µg/L	24-hr composite	Semiannually	[2]

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Chronic Toxicity Testing

1. **Methods and test species**. The Discharger shall conduct critical life stage chronic toxicity tests on 24-hour composite, 100 percent effluent samples in accordance with USEPA's *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). Pursuant to the 2009 California Ocean Plan, upon the approval of the Executive Officer of the Regional Water Board, the Discharger may use a second tier organism (e.g., silverside) if first tier organisms (e.g., topsmelt) are not available. However, the Discharger is required to immediately resume the chronic toxicity test using the original testing organism as soon as this organism becomes available.

2. **Frequency**

   a. Screening - The Discharger shall conduct the first chronic toxicity test screening for three consecutive months in 2014. Re-screening is required every 24 months. The Discharger shall re-screen with a marine vertebrate species, a marine invertebrate species, and a marine alga species and continue to monitor with the most sensitive species. If the first suite of re-screening tests demonstrate that the same species is the most sensitive, then the re-screening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is ambiguity, then the Discharger shall proceed with suites of screening tests for a minimum of three, but not to exceed five, suites.

   b. Regular toxicity tests - After the screening period, monitoring shall be conducted monthly using the most sensitive species.

3. **Toxicity Units.** The chronic toxicity of the effluent shall be expressed and reported in Chronic Toxic Units, TUc, where,

$$TU_c = \frac{100}{NOEC}$$

The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

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shall be conducted only if Gross alpha results for the same sample exceed 15 pCi/L or Beta greater than 50 pCi/L. If Radium-226 & 228 exceeds the stipulated criteria, analyze for Tritium, Strontium-90 and Uranium.

5 Pesticides are, for purposes of this order, those six constituents referred to in 40 CFR part 125.58(p) (Methoxychlor, Demeton, Guthion, Malathion, Mirex, and Parathion).

B. Quality Assurance

1. Concurrent testing with a reference toxicant shall be conducted. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).

2. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the test methods manual (EPA-821-R-02-012 and/or EPA/600/R-95/136), then the Discharger must re-sample and re-test within 14 days.

3. Control and dilution water should be laboratory water, as appropriate, as described in the manual. If the dilution water used is different from the culture water, a second control using culture water shall be used.

4. A series of at least five dilutions and a control shall be tested. The dilution series shall include the instream waste concentration (IWC), and two dilutions above and two below the IWC. The chronic IWC for Discharge Serial No. 001 is 0.01% effluent. (0.01% is the result of 1 divided by 99, which is sum of dilution credit 98 plus 1).

5. Following paragraph 10.2.6.2 of USEPA's chronic freshwater test methods manual (EPA/821/R-02/013, 2002, as specified in CFR part 136), the Discharger shall review the concentration-response relationship for each multi-concentration test to ensure that calculated test results are interpreted appropriately. All WET test results should be reviewed and reported following *Method Guidance and Recommendations for WET Testing* (EPA/821/B-00-004, 2000).

6. Because this permit requires sublethal hypothesis testing endpoints from the 1995 West Coast marine and estuarine WET test methods manual and the 2002 East Coast marine and estuarine WET test methods manual, within test variability must be reviewed and variability criteria [e.g., Minimum Significance Difference (MSD) bound, Percent, Minimum Significance Difference (PMSD) bounds] must be applied, as specified in the test methods manuals. The calculated MSD (or PMSDs) for both reference toxicant test and effluent toxicity test results must meet the MDS bound (or PMSD bounds) variability criteria specified in the test methods manuals.

7. 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 11.3.6.1 of the test methods manual, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002). Toxicity is confirmed to be artifactual and due to pH drift when no toxicity above the chronic WET permit limit or trigger 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 11.3.6.2 of the test methods manual to control sample pH during the toxicity test.

C. Accelerated Monitoring

If the effluent toxicity test result exceeds the limitation, then the Discharger shall immediately implement accelerated toxicity testing that consists of six additional tests, approximately every two

weeks, over a 12-week period. Effluent sampling for the first test of the six additional tests shall commence within five working days of receipt of the test results exceeding the toxicity limitation.

1. If all the results of the six additional tests are in compliance with the toxicity limitation, the Discharger may resume regular monthly testing.

2. If the result of any of the six additional tests exceeds the limitation, then the Discharger shall continue to monitor once every two weeks until six consecutive biweekly tests are in compliance. At that time, the Discharger may resume regular monthly testing.

3. If the results of any two of the six tests (any two tests in a 12-week period) exceed the limitation, the Discharger shall initiate a Toxicity Identification Evaluation (TIE) and implement the initial investigation Toxicity Reduction Evaluation (TRE) work plan.

4. If implementation of the initial investigation TRE work plan (see item E below) indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger shall return to the regular testing frequency.

D. Preparation of an Initial Investigation TRE Work Plan

The Discharger shall prepare and submit a copy of the Discharger's initial investigation TRE (TRE) work plan to the Executive Officer of the Regional Water Board for approval within 90 days of the effective date of this permit. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use USEPA manual EPA/833B-99/002 (municipal) as guidance, or most current version. At a minimum, the TRE work plan must contain the provisions in Attachment G. This work plan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include the following, at a minimum:

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

2. A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the facility; and,

3. If a TIE is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor). See MRP section V.E.3 below for guidance manuals.

E. Steps in TRE and TIE

1. If results of the implementation of the facility's initial investigation TRE work plan indicate the need to continue the TRE/TIE, the Discharger shall expeditiously develop a more detailed TRE work plan for submittal to the Executive Officer within 15 days of completion of the initial investigation TRE. The detailed work plan shall include, but not be limited to the following:

   a. Further actions to investigate and identify the cause of toxicity;

   b. Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and,

   c. A schedule for these actions.

2. The following section summarizes the stepwise approach used in conducting the TRE:

   a. Step 1 includes basic data collection.

   b. Step 2 evaluates optimization of the treatment system operation, facility housekeeping, and selection and use of in-plant process chemicals.

   c. If Steps 1 and 2 are unsuccessful, Step 3 implements a TIE and employment of all reasonable efforts using currently available TIE methodologies. The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity.

   d. Assuming successful identification or characterization of the toxicant(s), Step 4 evaluates final effluent treatment options.

   e. Step 5 evaluates in-plant treatment options.

   f. Step 6 consists of confirmation once a toxicity control method has been implemented.

   Many recommended TRE elements parallel source control, pollution prevention, and storm water control program best management practices (BMPs). To prevent duplication of efforts, evidence of compliance with those requirements may be sufficient to comply with TRE requirements. By requiring the first steps of a TRE to be accelerated testing and review of the facility's TRE work plan, a TRE may be ended in its early stages. All reasonable steps shall be taken to reduce toxicity to the required level. The TRE may be ended at any stage if monitoring indicates there are no longer toxicity violations.

3. The Discharger may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. The Discharger shall use the USEPA acute manual, chronic manual, EPA/600/R-96-054 (Phase I), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III), as guidance.

4. If a TRE/TIE is initiated prior to completion of the accelerated testing required in section V.C. of this program, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer .

5. The Regional Water Board recognizes that toxicity may be episodic and identification of causes of and reduction of sources of toxicity may not be successful in all cases. Consideration of enforcement action by the Board will be based, in part, on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

F. Ammonia Removal

1. Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from bioassay samples. The Discharger must demonstrate the effluent toxicity is caused by ammonia because of increasing test pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following may be steps to demonstrate that the toxicity is caused by ammonia and not other toxicants before the Executive Officer would allow for control of pH in the test.

a. There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.

b. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.

c. Conduct graduated pH tests as specified in the TIE methods. For example, mortality should be higher at pH 8 and lower at pH 6.

d. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.

2. When it has been demonstrated that toxicity is due to ammonia because of increasing test pH, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent, after submitting a written request to the Regional Water Board, and receiving written permission expressing approval from the Executive Officer of the Regional Water Board.

G. Reporting

The Discharger shall submit a full report of the toxicity test results, including any accelerated testing conducted during the month, as required by this permit. Test results shall be reported in Chronic Toxicity Units (TUc), as required, with the self-monitoring report (SMR) for the month in which the test is conducted.

If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, pursuant to section V.C.4, then those results also shall be submitted with the SMR for the period in which the investigation occurred.

1. The full report shall be received by the Regional Water Board by the 15th day of the second month following sampling.

2. The full report shall consist of (1) the results; (2) the dates of sample collection and initiation of each toxicity test; (3) the toxicity limit.

3. Test results for toxicity tests also shall be reported according to the appropriate manual chapter on Report Preparation and shall be attached to the SMR. Routine reporting shall include the following, at a minimum, as applicable, for each test, as appropriate:

   a. sample date(s)

   b. test initiation date

   c. test species

   d. end point values for each dilution (e.g. number of young, growth rate, percent survival)

   e. LC_{50} value(s) in percent effluent

   f. TUa value(s) $\left(TU_a = \frac{100}{LC50}\right)$

g. NOEC value(s) in percent effluent

h. TUc values $\left(TU_c = \frac{100}{NOEC}\right)$

i. Mean percent mortality (+standard deviation) after 96 hours in 100% effluent (if applicable)

j. IC/EC_{25} values(s) in percent effluent

Inhibition Concentration (IC_P) is a point estimate of the toxicant concentration that causes a given percent reduction (p) in a non-quantal biological endpoint (e.g., reproduction, growth) calculated from a continuous model (e.g., EPA Interpolation Model).

Effective Concentration (EC_P) is a point estimate of the toxicant concentration that causes a given percent reduction (p) in a quantal biological measurement (e.g., development, survival) calculated from a continuous model (e.g., Probit).

k. NOEC and LOEC (Lowest Observable Effect Concentration) values for reference toxicant test(s)

l. Available water quality measurements for each test (e.g., pH, D.O., temperature, conductivity, hardness, salinity, ammonia).

4. The Discharger shall provide a compliance summary that includes a summary table of toxicity data from at least eleven of the most recent samples.

5. The Discharger shall notify this Regional Water Board immediately of any toxicity exceedance and in writing 14 days after the receipt of the results of an effluent limit. The notification will describe actions the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by the permit, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

VI. RECLAMATION MONITORING REQUIREMENTS

The reuse of the reclaimed water is regulated under a separate WDRs and Water Recycling Requirements (WRRs) for City of Oxnard Groundwater Recovery, Enhancement, and Treatment Program – Non Potable Reuse Phase 1 Project (GREAT Program – Phase 1 Project), Order No. R4-2008-0083 as amended by Order No. R4-2011-0079, File No. 64-104 and File No. 08-070, CI-9456.

VII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Offshore Water Quality Monitoring

This survey addresses the compliance questions: "Are Ocean Plan and Basin Plan objectives for parameters listed in Tables 4a and 4b being met?" Data collected provide the information necessary to demonstrate compliance with the standards for local monitoring. In addition, data

collected by the Discharger contribute to the Central Bight Cooperative Water Quality Survey. This regionally coordinated survey provides integrated water quality surveys on a quarterly basis. These surveys cover 200 kilometers of coast in Ventura, Los Angeles, and Orange Counties, from the nearshore to approximately 10 kilometers offshore. This cooperative program contributes to a regional understanding of seasonal patterns in nearshore water column structure. The regional view provides context for determining the significance and causes of locally observed patterns in the area of wastewater outfalls.

1. The Discharger shall monitor receiving water quality at 48 Receiving Water Column Monitoring Stations from RWC-4101 to RWC-4706 (See Table 1) as follows:

Table 4a. Receiving Water Monitoring Requirements – 1

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved oxygen	mg/L	continuous profile	quarterly	[2]
Water temperature	°C	continuous profile	quarterly	[2]
Light transmittance	% transmittance	continuous profile	quarterly	[6]
Salinity	ppt	continuous profile	quarterly	[2]
pH	pH units	continuous profile	quarterly	[2]
Chlorophyll a	µg/L	continuous profile	quarterly	[2]
Visual observations	---	---	quarterly	[7]

Sampling techniques shall follow protocols described in the most current edition of the *Field Operations Manual for Marine Water-Column, Benthic, and Trawl Monitoring in Southern California, SCCWRP*. Data shall be analyzed to approximate the typical wastewater plume movement and data from 1998 and forward shall be analyzed to determine and map out the wastewater plume movement under different seasonal and weather conditions.

2. The Discharger shall monitor bacteria and ammonia at 18 receiving water column monitoring stations of RWC-4301 to RWC-4306, and RWC-4391 to RWC-4396, and RWC-4401 to RWC-4406 (See Table 1) as follows:

[6] Light transmittance (transmissivity) shall be measured with a transmissometer, using equipment and procedure similar to that described by L.V. Whitney [*Transmission of Solar Energy and the Scattering Produced by Suspensoids in Lake Waters*, Transactions of the Wisconsin Academy of Sciences, Arts, and Letters, Vol. 31 (1938)]. Results shall be expressed as the percent of light transmittance. Path length of transmissometer should be noted.

[7] Observations of wind (direction and speed), weather (e.g., cloudy, sunny, or rainy), current (e.g., direction), and tidal conditions (e.g., high or low tide) shall be made and recorded (every four hours during offshore sampling) at the time samples of the waters of the Pacific Ocean (shore, nearshore, and all offshore stations) are collected.
Observations of water color, discoloration, oil and grease, turbidity, odor, materials of sewage origin in the water or on the beach, and unusual or abnormal amounts of floating or suspended matter in the water or on the beach, rocks and jetties, or beach structures shall also be made and recorded at stations or while in transit. The character and extent of such matter shall be described. The dates, times and depths of sampling and these observations shall also be reported.

Table 4b. Receiving Water Monitoring Requirements – 2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total coliform	MPN or CFU/100 mL	grab, surface and mid-depth and near bottom[8]	quarterly	[2]
Fecal coliform	MPN or CFU/100 mL	grab, surface and mid-depth and near bottom[8]	quarterly	[2]
Enterococcus	MPN or CFU/100 mL	grab, surface and mid-depth and near bottom[8]	quarterly	[2]
Ammonia nitrogen	mg/L	grab, surface and mid-depth and near bottom[8]	quarterly	[2]

B. Benthic Monitoring

Benthic monitoring includes Infauna and sediment. The Discharger shall annually monitor Infauna and sediment at 7 receiving water benthic monitoring stations of RWS-001 to RWS-007 (See Table E-1).

1. **Local Benthic Survey** – This survey addresses the question: "Are benthic conditions under the influence of the discharge changing over time?" The data collected are used for regular assessment of trends in sediment contamination and biological response along a fixed grid of sites within the influence of the discharge.

   a. Local Benthic Trends Survey

      (1) Infaunal Community Survey – The benthic stations shall be conducted for benthic infaunal sampling[9]. These stations shall be sampled during late summer (August/ September). Bottom samples for benthic infaunal analyses shall be taken at each benthic station prior to trawl sampling. The following determinations shall be made at each station, where appropriate:

         i. Identification of all organisms to lowest possible taxon (usually species); and,

         ii. Total biomass of:

            - Mollusks;
            - Echinoderms;
            - Annelids/polychaetes;
            - Crustaceans; and,
            - All other macroinvertebrates.

[8] Bottom sampling shall be done 2.0 m (6.6 ft) above the seabed.

[9] These bottom samples shall be taken by means of a 0.1 m^2 (1.1 ft^2) modified Van Veen sediment grab sampler. The entire contents of each sample shall be passed through a 1.0 mm (0.039 in.) mesh screen to retrieve the benthic organisms. These organisms shall be fixed in 10% buffered formalin and transferred to 70% ethanol within two to seven days for storage. Organisms can be strained with Rose Bengalto to facilitate sorting. All specimens retrieved shall be archived.

iii. Community structure analysis for benthic infaunal[10] for each station and each replicate.

Mean, median, range, standard deviation, and 95% confidence limits, if appropriate, for values determined above in iii. The Discharger may be required to conduct additional "statistical analyses" to determine temporal and spatial trends in the marine environment.

(2) Sediment Chemistry Survey – All benthic sediment samples shall be taken at each station by means of a 0.1 m^2 (1.1 ft^2) modified Van Veen sediment grab sampler. Sub-samples (upper two centimeters) of sediment from each sample shall be collected and analyzed separately for the following parameters at each station:

i. Total organic carbon (TOC) (mg/kg dry wt);

ii. Dissolved sulfides (water soluble) (mg/kg dry wt);

iii. Total Kjeldahl nitrogen (mg/kg dry wt);

iv. Grain size (sufficiently detailed to calculate percent weight in relation to phi size); and,

v. Arsenic; Cadmium; Chromium (total); Copper; Lead; Mercury; Nickel; Silver; Zinc; Cyanide; Phenolic compounds (non-chlorinated); Phenolic compounds (chlorinated); Total halogenated organic compounds; Aldrin and Dieldrin; Endrin; HCH; Chlordane and related compounds; Total DDT; DDT derivatives; Total PCB; PCB derivatives; Toxaphene; Total PAH; PAH derivatives. The data for these parameters shall be expressed in μg/kg dry weight.

Annual testing shall be required for these parameters during late summer (August/ September). Bottom samples for sediment chemistry analyses shall be taken at each benthic station prior to trawl sampling.

In August/September of the third year of the permit, full priority pollutant scans shall be performed on sediment samples from all stations.

(3) Sediment Toxicity Survey – Sediment toxicity testing shall be conducted annually (August/September) at two receiving water sediment monitoring stations of RWS-003 and RWS-007. Three replicate samples shall be collected for testing at each station. Sub-samples (upper two centimeters) shall be taken from each sediment sample and tested with amphipod Eohaustorius - survival end point; using standard protocols approved by the Executive Officer of this Regional Water Board.

[10] Community structure analysis of benthic infauna shall include number of species, number of individuals per species, total numerical abundance, species abundance per grab, species richness, species diversity (e.g., Shannon-Wiener), species evenness and dominance per station and replicate, similarity analyses (e.g., Bray-Curtis, Jaccard or Sorensen), cluster analyses (using unweighted pair-group method) or other appropriate multivariate statistical techniques approved by the Executive Officer of this Regional Water Board and USEPA Region IX, and the Infaunal Index.

2. Regional Benthic Survey

a. This regional survey addresses the questions: 1) What is the extent, distribution, magnitude and trend of ecological change in soft-bottom benthic habitats within the Southern California Bight? and 2) What is the relationship between biological response and contaminant exposure? The data collected will be used to assess the condition of the sea-floor environment and the health of the biological resources in the Bight.

b. Sampling Design - A regional survey of benthic conditions within the Southern California Bight took place in 2008 (Bight'08). The final survey design was determined cooperatively by the participants represented on the Regional Steering Committee. The Discharger provided support to the Bight'08 benthic survey by participating in or performing the following activities:

(1) Participation on the Steering Committee;

(2) Participation on the relevant Technical Committees (e.g., Information Management, Field Methods & Logistics, Benthos, and Chemistry);

(3) Field sampling at sea;

(4) Infaunal sample analysis;

(5) Sediment chemistry analysis; and,

(6) Data management

This level of participation in the 2008 survey was consistent with that provided by the Discharger during the 1994, 1998 and 2003 Regional Benthic Surveys. The next regional survey is expected to take place in 2013 and the Discharger's level of participation shall be consistent with that provided in previous survey.

C. Fish and Macroinvertebrate Monitoring

1. **Local Fish and Macroinvertebrate Survey** – This survey addresses two questions: 1) "Are the health of demersal fish and epibenthic invertebrate communities?" and 2) "Are fish tissue contamination levels in the vicinity of the discharge changing over time?" The data collected are used for regular assessment of temporal trends in community structure and bioaccumulation along an array of sites within the influence of the discharge. Data will also be collected on trash and debris to contribute to the Santa Monica Bay Restoration Project (SMBRP's) Sources and Loadings program. The Discharger shall monitor fish and macroinvertebrate at three receiving water trawling stations of RWT-001 to RWT-003 (See Table 1) as follows:

a. Local Fish and Macroinvertebrate Population Survey

(1) The offshore trawling stations shall be sampled annually (August/September) for demersal fish and epibenthic macroinvertebrates.

(2) Trawling methods shall follow the protocols described in the most current edition of the *Field Operations Manual for Marine Water-Column, Benthic, and Trawl Monitoring in Southern California, SCCWRP*.

(3) Fish and macroinvertebrates collected by trawls shall be identified to the lowest taxon possible. At all stations and for each replicate, community structure analysis for fish and macroinvertebrates[11] shall be conducted for fish and macroinvertebrates for each station.

(4) Mean, range, standard deviation, and 95% confidence limits, if appropriate, shall be reported for the values determined in the community analysis. The Discharger may be required to conduct additional "statistical analyses" to determine temporal and spatial trends in the marine environment.

(5) Abnormalities and disease symptoms shall be described and recorded (e.g., fin erosion, external lesions, tumors, ectoparasites, and color anomalies). The frequency of abnormalities and incidence of disease shall be compared between the Zone of Initial Dilution (ZID) boundary and the reference station, and trends in these values shall be measured over time. The results of this inspection shall be included in the monitoring report.

b. Local Fish and Macroinvertebrate Tissue Survey

Fish and macroinvertebrate tissues shall be obtained from fish collected by trawls and from invertebrates collected by trawls or SCUBA at the trawling stations.

Annually, tissues of two species (one demersal fish and one macroinvertebrate) of importance to commercial and/or sport fishers or of obvious ecological significance shall be analyzed for priority pollutants (i.e., for bioaccumulation of toxic pollutants). If possible, for the duration of this permit and order, the same species shall be used at all stations.

(1) Fish Tissues

i. Tissue, as applied to the analysis of priority pollutants, signifies separate analyses for muscle and liver. All tissue samples shall be analyzed for wet weight and percent lipid.

ii. Annual testing shall be required in late summer (August/September) and shall include analysis for: Arsenic; Cadmium; Chromium (total); Copper; Lead; Mercury; Nickel; Silver; Zinc; Cyanide; Phenolic compounds (non-chlorinated); Phenolic compounds (chlorinated); Total halogenated organic compounds; Aldrin and Dieldrin; Endrin; HCH; Chlordane and related compounds; Total DDT; DDT derivatives; Total PCB; PCB derivatives; Toxaphene; Total PAH; PAH derivatives.

iii. The data for these parameters shall be expressed in μg/kg dry weight.

[11] Community structure analysis of fish and macroinvertebrates shall include wet weight of fish and macroinvertebrate species (when combined weight of individuals of one species exceeds 0.2 kg), standard length of each individual, number of species, number of individuals per species, total numerical abundance per station, number of individuals in each 1-cm size class for each species of fish, species abundance per trawl and per station, species richness, species diversity (e.g., Shannon-Wiener), species evenness, similarity analyses (e.g., Bray-Curtis, Jaccard or Sorensen), cluster analyses (using unweighted pair-group method) or other appropriate multivariate statistical techniques approved by the Executive Officer of the Regional Water Board and USEPA Region IX.

iv. In August/September of the third year of the permit, full priority pollutant scans shall be performed on fish tissue samples from all offshore trawling stations.

v. For fish tissue analysis, individuals of the species of interest shall be combined from the trawls to form a single pooled sample at a station[12]. Three composite samples shall be analyzed for each of the tissue types. Each composite sample shall consist of tissues[13] taken from fish of one species and include at least six individuals. In order to obtain the required number of individuals, additional trawls may be necessary.

vi. Reference specimens for tissue analysis may be collected at a different depth or area beyond the reference station (RWT-003), if necessary. If areas other than RWT-003 are sampled for reference material, data on the location and depth of the sampling point(s) shall be provided to this Regional Board and the USEPA Region IX.

vii. The following fish species are recommended for the tissue analysis of priority pollutants: White Croaker (Genyonemus lineatus) and Speckled sanddab (Citharichthys stigmaeus).

(2) Macroinvertebrate Tissues

i. Tissue, as applied to the analysis of priority pollutants in macroinvertebrates, signifies analyses for muscle or other tissue, if muscle is impractical. All tissue samples shall be analyzed for wet weight and percent lipid.

ii. Annual testing shall be required in late summer (August/September) and shall include analysis for: Arsenic; Cadmium; Chromium (total); Copper; Lead; Mercury; Nickel; Silver; Zinc; Cyanide; Phenolic compounds (non-chlorinated); Phenolic compounds (chlorinated); Total halogenated organic compounds; Aldrin and Dieldrin; Endrin; HCH; Chlordane and related compounds; Total DDT; DDT derivatives; Total PCB; PCB derivatives; Toxaphene; Total PAH; PAH derivatives.

iii. The data for these parameters shall be expressed in μg/kg dry weight.

iv. In August/September of the third year of the permit, full priority pollutant scans shall be performed on macroinvertebrate tissue samples from all offshore trawling stations.

v. For macroinvertebrate tissue analysis, individuals of the species of interest shall be combined from the trawls to form a single pooled sample at a station. Three composite samples shall be analyzed for each of the tissue types. Each composite sample shall consist of sufficient tissue taken from at least three individual organisms of one species. In order to obtain the required number of individuals, additional trawls may be necessary. When feasible, tissues from

[12] Where appropriate, individuals (from trawls) comprising the smallest 10 percent by weight shall not be used as part of the composite sample. Individuals for tissue analysis shall be randomly selected from the remaining organisms.

[13] Tissue samples removed from individuals shall be of uniform weight. To the extent feasible, individual fish selected for analysis should be of the same sex.

organisms of the same species should be analyzed from year to year to facilitate comparability.

vi. Reference specimens for tissue analysis may be collected at a different depth or area beyond the reference station (RWT-003), if necessary. If areas other than RWT-003 are sampled for reference material, data on the location and depth of the sampling point(s) shall be provided to the LA Regional Board and USEPA Region IX.

vii. The following macroinvertebrate species are recommended for the tissue analysis of priority pollutants: Sandstar (Astropecten spp), Shrimp (Crangon spp), and Crab (Cancer spp).

(3) Bagged Mussel Tissue

i. The City of Oxnard currently is conducting a special study using bagged bivalves to assess bioaccumulation of contaminants in mussel tissue. If the results of this special study support a change, the City of Oxnard may request written approval from the Executive Officer to substitute mussels in lieu of the fish and invertebrate species identified above.

2. Regional Fish and Macroinvertebrate Survey

a. This survey addresses the questions: 1) What is the extent, distribution, magnitude and trend of ecological change in demersal fish and epibenthic communities within the Southern California Bight? and 2) What is the relationship between biological response and contaminant exposure? The data collected will be used to assess the condition of the seafloor environment and health of biological resources in the Bight.

b. A regional survey of trawl-caught demersal fish and epibenthic invertebrates within the Southern California Bight took place in 2008 (Bight'08). The final survey design was determined cooperatively by the participants as represented on the Regional Steering Committee. The Discharger provided support to the Bight'08 surveys by participating in or performing the following activities:

i. Participation on the Steering Committee;

ii. Participation on the relevant Technical Committees (e.g., Information Management, Field Methods and Logistics, Fish and Invertebrates);

iii. Field sampling at sea;

iv. Trawl sample analysis; and,

v. Data management

The level of participation in the 2008 survey was consistent with that provided by the Discharger during the 1998 and 2003 Regional Surveys. The next regional survey is expected to take place in 2013 and the Discharger's level of participation shall be consistent with that provided in previous surveys.

D. Seafood Safety Monitoring

1. Local Seafood Safety Survey

a. This survey addresses two questions: 1) Where seafood consumption advisories exist locally, do tissue concentrations of contaminants continue to exceed the Advisory Tissue Concentration (ATC)? and 2) What are the tissue contaminant trends relative to the ATC in other species not currently subject to local consumption advisories? The data collected will be used to provide information necessary for the management of local seafood consumption advisories.

b. One species from each of five groups of fish (rockfish, kelpbass, sandbass, surfperches and croakers) shall be sampled from each of the three zones in years one, three and five of the permit. For rockfishes, scorpionfish (Scorpaena guttata) is the preferred species, followed by bocaccio (Sebastes paucispinis) and then by any other abundant and preferably benthic rockfish species. For surfperches, black surfperch (Embiotoca jacksoni) is the preferred species, followed by white surfperch (Phanerodon furcatus) and then by walleye surfperch (Hyperprosopon argenteum).

c. For fish tissue analysis, one composite sample of ten individuals of each target shall be collected within each of the three zones. Sampling should take place within the same season of the year (preferably late summer/early fall) and should focus upon a consistent size class of fish. All tissue samples shall be analyzed for: Mercury, DDTs, PCBs, Aldrin, Dieldrin, Endrin and Chlordane.

2. Regional Seafood Safety Survey

a. This regional survey addresses the question: "Are seafood tissue levels within the Southern California Bight below levels that ensure public safety?" The data collected will be used to assess levels of contaminants in the edible tissue of commercial or recreationally important fish within the Bight relative to Advisory Tissue Concentrations.

b. Sampling Design - A regional survey of edible tissue contaminant levels in fish within the Southern California Bight shall be conducted at least once every ten years, encompassing a broader set of sampling sites and target species than those addressed in the local seafood survey. The objective is to determine whether any unexpected increases or decreases in contaminant levels have occurred in non-target species and/or at unsampled sites. The final survey design may be determined cooperatively by participants represented on a Regional Steering Committee or by the State of California's Office of Environmental Health and Hazard Assessment. A regional seafood safety survey within the Southern California Bight took place in 2009 (Bight'08). The final survey design was determined cooperatively by participants represented on the Regional Steering Committee and the Surface Water Ambient Monitoring Program (SWAMP). The Discharger provided support to the Bight'08 Seafood Safety Survey by participating in or performing the following activities:

i. Participation on the Steering Committee;

ii. Participation on relevant Technical Committees (e.g., Information Management, Field Methods & Logistics, and Chemistry); and,

iii. Tissue chemical analysis.

This level of participation in the Bight'08 survey was consistent with that provided by the Discharger to the previous surveys. The next regional survey is expected to occur in 2013 and the Discharger's level of participation shall be consistent with that provided in previous surveys.

E. Kelp Bed Monitoring

1. This regional survey is to address the question: "Is the extent of kelp beds in the Southern California Bight changing over time and are some beds changing at rates different than others?" The data collected in this regional survey will be used to assess status and trends in kelp bed health and spatial extent. The regional nature of the survey will allow the status of beds local to the discharge to be compared to regional trends.

2. The Discharger shall participate in the Central Region Kelp Survey Consortium (CRKSC) to conduct regional kelp bed monitoring in Southern California coastal waters. The CRKSC design is based upon quarterly measures of kelp canopy extent using aerial imaging. The Discharger shall provide up to $10,000 per year in financial support to the CRKSC (annual level of support will depend on the number of participants in the program). The Discharger shall participate in the regional management and technical committees responsible for the development of the survey design and implementation of the assessment of kelp bed resources in the Bight. This support is intended to ensure that kelp beds in Ventura County are included in the quarterly surveys of kelp beds in the Bight, and that these beds are included in any data products resulting from those surveys.

3. In the event that Ventura County kelp beds are found to deviate from the broader regional pattern, the Discharger will carry out special studies to address unexplained deterioration of local beds.

F. Sampling, Analysis, and Reporting Notes for Receiving Water Monitoring

1. Receiving water monitoring shall be performed during daylight hours.

2. In addition to reporting the actual concentration of bacterial organisms obtained in each sample collected from shoreline, nearshore, and offshore stations, the running median of the latest 6-month period shall also be determined and reported each month. Bacterial data obtained at shoreline stations during or within 48 hours following a major storm event shall not be used in determining medians.

3. Reports regarding receiving water monitoring shall be transmitted with the corresponding effluent monitoring reports. Ocean water quality monitoring (shoreline, nearshore, and offshore components) reports shall be submitted with the effluent reports by the fifteenth day of the second month following the sampling period. The offshore sediment and biological monitoring data shall be submitted with the annual report.

4. Currently, Ventura County monitors nine shoreline stations for bacteriological indicators in the area of Oxnard's previous shoreline monitoring program (see Table 1 in section II).

5. Ventura County shoreline bacteriological monitoring data from these stations shall be included with the bacteriological data from Oxnard's water quality sampling in monthly reports and the annual assessment report.

6. If Ventura County reduces the shoreline bacteriological monitoring program in frequency (less often then weekly) or seasonally, or reduces the number of stations in the area defined by these stations, then the Discharger shall initiate a weekly shoreline bacteriological monitoring program to replace the Ventura County's effort. This program shall be submitted to this Regional Water Board for approval by the Executive Officer.

7. If Ventura County restores the shoreline bacteriological monitoring program, the Discharger shall inform this Regional Water Board for authorization to rescind the shoreline bacteriological monitoring program conducted by the Discharger.

VIII. OTHER MONITORING REQUIREMENTS

A. Special Study

1. CEC Monitoring in the Effluent

In recent years, the Los Angeles Regional Water Board has incorporated monitoring of a select group of man-made chemicals, particularly pesticides, pharmaceuticals and personal care products, known collectively as CECs, into permits issued to publicly-owned treatment works (POTWs) to better understand the propensity, persistence and effects of CECs in our environment. Recently adopted permits in this region contain requirements for CEC effluent monitoring and submittal of a work plan identifying the CECs to be monitored in the effluent, sample type, sampling frequency and sampling methodology. Based on feedback we have received from permittees and our review of the results of a recent CEC-related study by the Southern California Coastal Water Research Project (SCCWRP) and the State Water Board, we have modified our CEC monitoring program to respond to feedback while proceeding to fill identified data gaps without overly burdening any one permittee.

The Discharger shall conduct a special study to investigate the CECs in the effluent discharge as listed in the Table below. These consituents shall be monitored annually for at least 2 years. The Regional Water Board has determined that 2 years is an appropriate time period to determine those CECs that are present in POTW effluent. Monitoring results shall be reported as part of the annual report. Within six months of the effective date of this Order, the Discharger shall submit to the Executive Officer a CECs special study work plan for approval. Upon approval, the Discharger shall implement the work plan.

Table 5. CEC Monitoring Requirements

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Analytical Test Method and (Minimum Level, units)
17α-Ethinyl Estradiol	ng/L	To be proposed	Annually	To be proposed
17β-Estradiol	ng/L	To be proposed	Annually	To be proposed
Estrone	ng/L	To be proposed	Annually	To be proposed
Bisphenol A	ng/L	To be proposed	Annually	To be proposed
Nonylphenol & Nonylphenol polyethoxylates	ng/L	To be proposed	Annually	To be proposed
Octylphenol & octylphenol polyethoxylates	ng/L	To be proposed	Annually	To be proposed
Polybrominated diphenyl ethers	ng/L	To be proposed	Annually	To be proposed

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Analytical Test Method and (Minimum Level, units)
Acetaminophen	ng/L	To be proposed	Annually	To be proposed
Amoxicillin	ng/L	To be proposed	Annually	To be proposed
Azithromycin	ng/L	To be proposed	Annually	To be proposed
Carbamazepine	ng/L	To be proposed	Annually	To be proposed
Caffeine	ng/L	To be proposed	Annually	To be proposed
Ciprofloxacin	ng/L	To be proposed	Annually	To be proposed
N,N-Diethyl-m-toluamide (DEET)	ng/L	To be proposed	Annually	To be proposed
Dilantin	ng/L	To be proposed	Annually	To be proposed
Gemfibrozil	ng/L	To be proposed	Annually	To be proposed
Ibuprofen	ng/L	To be proposed	Annually	To be proposed
Lipitor (Atorvastain)	ng/L	To be proposed	Annually	To be proposed
Iodinated contrast media (iopromide)	ng/L	To be proposed	Annually	To be proposed
Sulfamethoxazole	ng/L	To be proposed	Annually	To be proposed
Trimethoprim	ng/L	To be proposed	Annually	To be proposed
Salicylic acid	ng/L	To be proposed	Annually	To be proposed
TCEP, TCPP and TDCPP	ng/L	To be proposed	Annually	To be proposed
Triclosan	ng/L	To be proposed	Annually	To be proposed
Bifenthrin	ng/L	To be proposed	Annually	To be proposed
Permethrin	ng/L	To be proposed	Annually	To be proposed
Chlorpyrifos	ng/L	To be proposed	Annually	To be proposed
Galaxolide	ng/L	To be proposed	Annually	To be proposed
Diclofenac	ng/L	To be proposed	Annually	To be proposed
Butylbenzyl Phthalate	ng/L	To be proposed	Annually	To be proposed
Perfluorooctane Sulfonate (PFOS)	ng/L	To be proposed	Annually	To be proposed
Fipronil	ng/L	To be proposed	Annually	To be proposed
Meprobamate	ng/L	To be proposed	Annually	To be proposed

B. Outfall and Diffuser Inspection

An annual survey shall be performed in October or November. This shall consist of:

1. An examination of the outfall and diffuser port system for plugs, leaks, rotation, and flow distribution. A detailed structural analysis of the pipes every five years submitted with the Report of Waste Discharge (ROWD) shall be conducted using underwater television/videotape and submarine visual inspection, where appropriate, to provide a

comprehensive report on the discharge pipe systems from shallow water to their respective termini. The annual visual inspection shall be conducted on the external condition of the outfall, diffuser, and ballast systems. A written report documenting conditions shall be prepared and submitted with the Annual Summary Report to this Regional Water Board.

2. A visual inspection at and in the vicinity of the outfall and diffuser port system to determine thickness of any "cloud" of unsettled solids, bottom flora and fauna, and any other biological and physical conditions. Inspections shall include general observations and photographic records of the outfall pipe and the surrounding ocean bottom. A report (including photographs) discussing the above information shall be submitted with the Annual Summary Report to this Regional Water Board.

C. Sludge Monitoring and Reporting

1. The Discharger must comply with all requirements of 40 CFR parts 257, 258, 501, and 503, including all applicable monitoring, record keeping, and reporting requirements.

2. The Discharger must comply with the monitoring and reporting requirements outlined in Attachment I in this Order, [Biosolids/Sludge Management].

3. A monthly report shall be provided, noting the moisture content, weight, and volume of screenings, sludges, grit, and other solids removed from the wastewater. The point(s) from which these wastes were obtained and the disposal sites to which waste solids are transported shall be specified in the monthly reports.

IX. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. If there is no discharge during any reporting period, the report shall so state.
3. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with discharge requirements, as well as all excursions of effluent limitations.
4. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.

B. Self-Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS website will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through VIII. The Discharger shall submit monthly, quarterly, semiannual, annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, 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 6. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with monthly SMR
Hourly	Permit effective date	Hourly	Submit with monthly SMR
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	Submit with monthly SMR
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	By the 15th day of the second month after the month of sampling
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit 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
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	August 15 February 15
Annually	January 1 following (or on) permit effective date	January 1 through December 31	April 15

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. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

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

c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D). Paper SMRs should be converted to a Portable Document Format (PDF). Documents that are less than 10 megabytes (MB) should be emailed to losangeles@waterboards.ca.gov. Documents that are 10 MB or larger should be transferred to a disk and mailed to the address listed below: (Reference the reports to **Compliance File No. 2022** to facilitate routing to the appropriate staff and file.)

California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013
Attention: Information Technology Unit

Dischargers who have been certified to only submit electronic SMRs to CIWQS should continue doing so, as previously required.

C. Discharge Monitoring Reports (DMRs)

1. As described in section IX.B.1 above, at any time during the term of this permit, the state or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

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

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

D. Other Reports

1. Annual Summary Report

By April 15 of each year, the Discharger shall submit an annual summary report containing a discussion of the previous year's influent/effluent analytical results and receiving water bacterial monitoring data. The annual summary report shall also contain an overview of any plans for upgrades to the treatment plant's collection system, the treatment processes, or the outfall system, and sewer and plant maintenance activities. The Discharger shall submit an electronic annual report to the Regional Water Board in accordance with the requirements described in subsection B.4 above.

Each annual monitoring report shall contain a separate section titled "Reasonable Potential Analysis" which discusses whether or not reasonable potential was triggered for pollutants which do not have a final effluent limitation in the NPDES permit. This section shall contain the following statement: "The analytical results for this sampling period did/ did not trigger reasonable potential." If reasonable potential was triggered, then the following information should also be provided:

a. A list of the pollutant(s) that triggered reasonable potential;

b. The Basin Plan or CTR criteria that was exceeded for each given pollutant;

c. The concentration of the pollutant(s);

d. The test method used to analyze the sample; and,

e. The date and time of sample collection.

The Discharger shall submit to the Regional Water Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect this waste discharge, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly.

2. Receiving Water Monitoring Report

An annual summary of the receiving water monitoring data collected during each sampling year (January-December) shall be prepared and submitted so that it is received by the Regional Water Board by August 15 of the following year.

A detailed receiving water monitoring biennial assessment report of the data collected during the two previous calendar sampling years (January-December) shall be prepared and submitted so that it is received by the Regional Water Board by August 15 of every other year. This report shall include an annual data summary and shall also include an in-depth analysis of the biological and chemical data following recommendations in the Model Monitoring Program guidance document (Schiff, K.C., J.S. Brown and S.B. Weisberg. 2001. Model Monitoring Program for Large Ocean Dischargers in Southern California. SCCWRP Tech. Rep #357. SCCWRP, Westminster, CA. 101 pp.). Data shall be tabulated, summarized, and graphed where appropriate, analyzed, interpreted, and generally presented in such a way as to facilitate ready understanding of its significance. Spatial and temporal trends shall be examined and compared. The relation of physical and chemical parameters to biological parameters shall be evaluated. See, also, section V.G. of this MRP. All receiving water monitoring data shall be submitted in accordance with the data submittal formats developed for the Southern California Bight Regional Monitoring Surveys.

The first assessment report shall be due August 15, 2015, and cover the sampling periods of January-December 2013 and January-December 2014. Subsequent reports shall be due August 1, 2017, and August 1, 2019, to cover sampling periods of January 2015-December 2016 and January 2017-December 2018, respectively.

3. Outfall Inspection Report

A summary report of the Outfall Inspection findings shall be provided annually. This written report, augmented with videographic and/or photographic images, shall provide a

description of the observed external condition of the discharge pipes from shallow water to their respective termini. This report shall be submitted so that it is received by August 15 of the following year.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section I of this Order, the Regional Water Board incorporates this Fact Sheet as findings of the Regional Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table 1. Facility Information

WDID	4A560105001
Discharger	City of Oxnard Municipal Corporation
Name of Facility	Oxnard Wastewater Treatment Plant and its associated wastewater collection system and outfall, City of Oxnard
Facility Address	6001 South Perkins Road
	Oxnard, CA 93033-9047
	Ventura County
Facility Contact, Title and Phone	Mark S. Moise, Wastewater Operations Manager, (805) 271-2203
Authorized Person to Sign and Submit Reports	Mark S. Moise, Wastewater Operations Manager, (805) 271-2203
Mailing Address	SAME
Billing Address	SAME
Type of Facility	POTW
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Yes
Reclamation Requirements	Producer
Facility Permitted Flow	31.7 (million gallons per day)
Facility Design Flow	31.7 (million gallons per day)
Watershed	Ventura Coastal Stream Watershed Management Area
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean waters

A. The City of Oxnard Municipal Corporation (Discharger) owns and operates a publicly-owned treatment works (POTW) comprised of Oxnard Wastewater Treatment Plant (Oxnard WWTP or Facility) and its associated wastewater collection system and outfalls.

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

B. The Facility discharges wastewater to the Pacific Ocean, a water of the United States. The Discharger was previously regulated by Order No. R4-2008-0029, as amended by Order No R4-2010-0048, adopted on May 1, 2008, and March 4, 2010, respectively. These orders expired on April 10, 2013. The terms and conditions of the current order have been automatically continued and remain in effect until new Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

On March 4, 2010, Order No. R4-2008-0029 was amended by Order No. R4-2010-0048 to reflect the diversion of 8 to 9 mgd of secondary effluent for further treatment at the advanced water purification facility (AWPF) under the City of Oxnard's Groundwater Enhancement and Treatment (GREAT) Program for non-potable reuse. The GREAT Program operates under a separate Water Recycling Requirement and Waste Discharge Requirements Order No. R4-2008-0083, as amended by Order No. R4-2011-0079.

The backwash wastewater produced at the AWPF will be returned to the Facility's headworks. The brine waste produced at the AWPF, commingled with the treatment plant's secondary-treated effluent will be discharged to the Pacific Ocean through Discharge Point 001.

C. The Discharger filed a report of waste discharge (ROWD) and submitted an application for renewal of its WDRs and NPDES permit on October 23, 2012. Supplemental information was requested on November 2, 2012, and received on November 13, 2012. The application was deemed complete on November 13, 2012. A site visit was conducted on March 28, 2013, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

1. The treatment system consists of bar screening, aerated grit removal, primary clarification, bio-filtration, activated sludge, secondary clarification, flow equalization, chlorine disinfection, and dechlorination. Solid fractions recovered from the wastewater treatment processes include screenings, grit, primary sludge and skimmings, and thickened waste activated sludge. The fine solids (screenings and grit) which are primarily inorganic materials are hauled away to a landfill. The remaining solid fractions (primary sludge, skimmings, and thickened waste activated sludge) are anaerobically digested at the treatment plant. The digested solids are dewatered using belt filter presses. The dewatered cake contains approximately 20% solids (Class B biosolids). The Facility generates approximately 500 wet tons of Class B biosolids per week. The biosolids are taken to the Toland Landfill in Ventura County. The biosolids at Toland are either added to the landfill, or dried in a dryer to approximately 70%, and then used as alternative daily cover (ADC).

   In addition, the Discharger operates an oil and grease program through which it cleans interceptors for food establishments and uses the oil and grease in its digesters to

increase methane production. The methane is then used to generate electricity, providing approximately 60% of total electricity needed for the Facility.

2. The Facility serves a population of approximately 230,900 in the city of Oxnard, the city of Port Hueneme, the United States Naval Base, Ventura County, and some unincorporated areas of Ventura County. Flow to the plant consists of domestic, commercial and industrial wastewater. For Fiscal Year 2012, industrial wastewater represented about 11% (low peak) and 21% (high peak) of the total flow to the Facility.

B. Discharge Points and Receiving Waters

1. The secondary-treated wastewater is discharged through an ocean outfall (Discharge Point No. 001) off Ormond Beach into the Pacific Ocean, a water of the United States. The brine waste produced at the AWPF will also be discharged through Discharge Point No. 001. The description of the outfall is as follows:

Table 2. Outfall Description

Discharge Point Number	001
Diameter of Pipe at Discharge Terminus (feet)	4
Outfall Distance Offshore (feet)	5,950 (including a 1,016-foot diffuser section)
Discharge Depth Below Surface Water (feet)	60
Latitude	34° 07' 34" North
Longitude	119° 11' 26" West

2. The receiving water (Pacific Ocean) off Ormond Beach for the Oxnard WWTP discharge is part of the open coastline of the Regional Water Board-designated Ventura Coastal Watershed Management Area. In addition to the Oxnard WWTP, there are two other major dischargers to the Ventura Coastal Watershed Management Area – Ormond Beach and Mandalay Generating Stations, owned by Reliant Energy, Inc. (formerly owned by Southern California Edison).

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

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

Table 3. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data (From August 2008 –December 2012)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Conventional/Non-Conventional							
Biochemical Oxygen Demand (BOD)	mg/L	30	45	--	23		

Parameter	Units	Effluent Limitation			Monitoring Data (From August 2008 –December 2012)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Total Suspended Solids (TSS)	mg/L	30	45	--	12		
Oil & Grease	mg/L	25	40	--	6.8		
Settleable Solids	mL/L	1.0	1.5	3.0	<0.1		
Total Coliform	MPN/100mL	--	--	--	136420		
Fecal Coliform	MPN/100mL	--	--	--	118800		
Enterococcus	MPN/100mL	--	--	--	12400		
Nitrate-N	mg/L	--	--	--	3.4		
Nitrite-N	mg/L	--	--	--	2.4	--	--
Organic-N	mg/L	--	--	--	5.1	--	--
pH	pH Unit	6.0 – 9.0			7.5		
Temperature	^{o}C				26		
Turbidity	NTU	75	100	225	7.6		
Marine Aquatic Life							
Arsenic (As)	µg/L	--	--	--	2	--	--
Cadmium (Cd)	µg/L	--	--	--	0.8	--	--
Chromium Total (Cr)	µg/L	--	--	--	8	--	--
Copper (Cu)	µg/L	--	--	--	30	--	--
Lead (Pb)	µg/L	--	--	--	<5	--	--
Mercury (Hg)	µg/L	--	--	--	<0.2	--	--
Nickel (Ni)	µg/L	--	--	--	8	--	--
Selenium (Se)	µg/L	--	--	--	4.7	--	--
Silver (Ag)	µg/L	--	--	--	2.3	--	--
Zinc (Zn)	µg/L	--	--	--	36	--	--
Cyanide	µg/L	--	--	--	<5	--	--
Residual Chlorine	mg/L	--	--	--	0.13	--	--
Ammonia-N	mg/L	--	--	--	31.7	--	--
Acute Toxicity	TUa	--	--	--	--	--	--
Chronic Toxicity (Survival)	TUc	--	--	--	100	--	--
Chronic Toxicity (Growth)	TUc	--	--	--	17.86	--	--
Non-Chlorinated Phenolic Compouds	µg/L	--	--	--	<40	--	--
Chlorinated Phenolic Compouds	µg/L	--	--	--	<40	--	--
Endosulfan	µg/L	--	--	--	<0.005	--	--
Endrin	µg/L	--	--	--	<0.005	--	--
HCH	µg/L	--	--	--	<0.02	--	--
Radioactivity							
Gross alpha	pCi/L	--	--	15			16.8

Parameter	Units	Effluent Limitation			Monitoring Data (From August 2008 –December 2012)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Gross beta	pCi/L	--	--	50			46.5
Human Health - Noncarcinogens							
Acrolein	µg/L	--	--	--	<20	--	--
Antimony	µg/L	--	--	--	<2	--	--
Bis (2-Chloroethoxy) methane	µg/L	--	--	--	<20	--	--
Bis (2-Chloroisopropyl) ether	µg/L	--	--	--	<20	--	--
Chlorobenzene	µg/L	--	--	--	<2	--	--
Chromium III (Cr)	µg/L	--	--	--	--	--	--
Di-n-Butyl Phthalate	µg/L	--	--	--	0.19	--	--
Dichlorobenzene	µg/L	--	--	--	<20	--	--
Diethyl phthalate	µg/L	--	--	--	<20	--	--
Dimethyl phthalate	µg/L	--	--	--	0.06	--	--
4,6-dinitro-2-methylphenol	µg/L	--	--	--	<40	--	--
2,4-dinitrophenol	µg/L	--	--	--	0.14	--	--
Ethylbenzene	µg/L	--	--	--	<2	--	--
Fluoranthene	µg/L	--	--	--	0.04	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--	<20	--	--
Nitrobenzene	µg/L	--	--	--	<40	--	--
Thallium	µg/L	--	--	--	<2	--	--
Toluene	µg/L	--	--	--	<2	--	--
Tributyltin	µg/L	--	--	--	<0.002	--	--
1,1,1-trichloroethane	µg/L	--	--	--	<2	--	--
Human Health - Carcinogens							
Acrylonitrile	µg/L	--	--	--	<10	--	--
Aldrin	µg/L	--	--	--	<0.005	--	--
Benzene	µg/L	--	--	--	<2	--	--
Benzidine	µg/L	0.0068	--	--	<40	--	--
Berylium (Be)	µg/L	--	--	--	<0.5	--	--
Bis (2-Chloroethyl) ether	µg/L	--	--	--	<20	--	--
Bis(2-ethylhexyl)-phthalate	µg/L	--	--	--	86	--	--
Carbon tetrachloride	µg/L	--	--	--	<5	--	--
Chlordane	µg/L	--	--	--	<0.1	--	--
Chlorodibromomethane	µg/L	--	--	--	0.61	--	--
Chloroform	µg/L	--	--	--	1.2	--	--
DDT	µg/L	--	--	--	0.0086	--	--

Parameter	Units	Effluent Limitation			Monitoring Data (From August 2008 –December 2012)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
1,4-Dichlorobenzene	µg/L	--	--	--	0.041	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--	<40	--	--
1,2-dichloroethane	µg/L	--	--	--	<2	--	--
1,1-dichloroethylene	µg/L	--	--	--	<2	--	--
Dichlorobromomethane	µg/L	--	--	--	<2	--	--
Dichloromethane	µg/L	--	--	--	<5	--	--
1,3-dichloropropene	µg/L	--	--	--	<2	--	--
Dieldrin	µg/L	--	--	--	<0.005	--	--
2,4-Dinitrotolulene	µg/L	--	--	--	<10	--	--
1,2-Diphenylhydrazine	µg/L	--	--	--	<40	--	--
Halomethanes	µg/L	--	--	--	<10	--	--
Heptachlor	µg/L	--	--	--	<0.01	--	--
Heptachlor epoxide	µg/L	0.002	--	--	<0.1	--	--
Hexachlorobenzene	µg/L	--	--	--	<20	--	--
Hexachlorobutadiene	µg/L	--	--	--	<20	--	--
Hexachloroethane	µg/L	--	--	--	<20	--	--
Isophorone	µg/L	--	--	--	<20	--	--
N-Nitrosodimethylamine	µg/L	--	--	--	<40	--	--
N-Nitrosodi-N-propylamine	µg/L	--	--	--	<20	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--	<20	--	--
PAH	µg/L	--	--	--	<20	--	--
PCBs	µg/L	0.0019	--	--	<0.5	--	--
TCDD	µg/L	0.00000039	--	--	<10	--	--
1,1,2,2-tetrachloroethane	µg/L	--	--	--	<2	--	--
Tetrachloroethylene	µg/L	--	--	--	<2	--	--
Toxaphene	µg/L	--	--	--	<0.5	--	--
Trichloroethylene	µg/L	--	--	--	<5	--	--
1,1,2-trichloroethane	µg/L	--	--	--	<2	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--	0.35	--	--
Vinyl chloride	µg/L	--	--	--	<5	--	--

D. Compliance Summary

Below is the preliminary list of effluent and reporting violations abstracted from CIWQS that occurred during the permit cycle 2008-2012.

Table 4. Preliminary List of Exceedances

Date of Exceedance	Description of Exceedance
04/04/2012	Bypass of approximately 20,000 gallons of primary effluent commingled with secondary effluent and was discharged at the outfall.
09/02/2011	Bypass of approximately 100,000 gallons of primary effluent commingled with secondary effluent and was discharged at the outfall.
05/18/2009	Influent flow was not measured.
02/04/2009	Reported detection limit for benzidine exceeded the permit effluent limit (0.050 / 0.0068 ug/L).

E. Planned Changes

The Discharger has completed the construction of an AWPF. The GREAT Program - Phase I is designed to produce 6.25 mgd of recycled water. Phase II is designed to produce an additional 25 mgd of recycled water. Recycled water is produced by further processing a portion of the secondary-treated wastewater from the Oxnard WWTP through microfiltration, ultrafiltration, reverse osmosis, and ultraviolet-light-based advanced oxidation.

The diversion of portion of the secondary-treated wastewater will reduce the flow that will be discharged to the Pacific Ocean. The City of Oxnard is currently constructing a permanent sampling facility to incorporate a sampling location that will provide a complete mixing of the secondary-treated effluent and the brine waste from the AWPF. This sampling facility is expected to be completed by December 2013.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

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

B. California Environmental Quality Act (CEQA)

Under CWC section 13389, this action to adopt an NPDES permit is exempt from the provisions of chapter 3 of CEQA, (commencing with section 21100) of division 13 of Public Resources Code (PRC).

C. State and Federal Regulations, Policies, and Plans

1. **Basin Plan.** The Regional Water Board adopted a Water Quality Control Plan for the Los Angeles Region (Basin Plan) on June 13, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Pacific Ocean. In addition, the Basin Plan implements State Water 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 (MUN). On May 26, 2000, the USEPA approved the revised Basin Plan except for the implementation plan for potential MUN-designated water bodies. MUN is not applicable to this discharge.

   Beneficial uses applicable to the Pacific Ocean are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Ormond Beach	Existing: Industrial water supply (IND); navigation (NAV); hydropower generation (POW); water contact recreation (REC-1); non-contact water recreation (REC-2); commercial and sport fishing (COMM); marine habitat (MAR); wildlife habitat (WILD); rare, threatened or endangered species (RARE); and, shellfish harvesting (SHELL). Potential: Spawning, reproduction, and/or early development (SPWN).
001	Pacific Ocean Nearshore	Existing: IND, NAV, REC-1, REC-2, COMM, MAR, WILD, preservation of biological habitats (BIOL), RARE, migration of aquatic organisms (MIGR), SPWN, and SHELL. Potential: None.
001	Pacific Ocean Offshore	Existing: NAV, REC-1, REC-2, COMM, MAR, WILD, RARE, MIGR, SPWN, and SHELL. Potential: None.

Requirements of this Order implement the Basin Plan.

The Basin Plan relies primarily on the requirements of the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) for protection of the beneficial uses of the state ocean waters. The Basin Plan, however, may contain additional water quality objectives applicable to the Discharger.

2. **Thermal Plan.** The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for coastal waters. Requirements of this Order implement the Thermal Plan.

3. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, and 2009. The State Water Board adopted the most recent amended Ocean Plan on September 15, 2009. The Office of Administration Law approved it on March 10, 2010. USEPA approved it on October 8, 2010. The 2009 Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the state to be protected as summarized below:

Table 6. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
Outfall 001	Pacific Ocean	NAV; REC-1; REC-2; COMM; MAR; WILD; RARE; MIGR; SPWN; SHELL; and, preservation and enhancement of designated Areas of Special Biological Significance (ASBS)[1].

In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan.

4. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 CFR part 131.21, 65 Federal Register 24641 (April 27, 2000)). Under the revised regulation (also known as the 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 contains both technology-based effluent limitations (TBELs) and water quality-based effluent limitations (WQBELs) for individual pollutants. The TBELs consist of restrictions on biological oxygen demand (BOD), total suspended solids (TSS), oil and grease, settleable solids, turbidity, pH, and percent removal of BOD and TSS. Restrictions on BOD, TSS, oil and grease, settleable solids, turbidity, and pH are discussed in section IV.B.2 of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal

[1] There is no ASBS designated area in the vicinity of this discharge.

technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are carried over from the previous permit.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. All beneficial uses and water quality objectives contained in the Basin Plan and the Ocean Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR part 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

6. **Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

7. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. All effluent limitations in the Order are at least as stringent as the effluent limitations in the previous Order.

8. **Endangered Species Act (ESA).** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California ESA (Fish and Game Code (FGC) sections 2050 to 2097) or the federal ESA (16 United States Code (USC) sections 1531 to 1544). This Order 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 ESA.

9. **Water Rights.** Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a surface or subterranean stream, the Discharger must file a petition with the State Water Board (State Water Board), Division of Water Rights, and receive approval for such a change. The State Water Board retains the jurisdictional authority to enforce such requirements under CWC section 1211. However, since this is an ocean discharge, CWC section 1211 is not applicable to this permit.

10. **Monitoring and Reporting.** 40 CFR part 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The

MRP establishes monitoring and reporting requirements to implement federal and state requirements. This MRP is provided in Attachment E.

11. **Sewage Sludge/Biosolids Requirements.** Section 405 of the CWA and implementing regulations at 40 CFR part 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 contains sewage sludge/biosolids requirements pursuant to 40 CFR part 503 that are applicable to the Discharger.

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

The State Water Board proposed the California 2008-2010 Integrated Report from a compilation of the adopted Regional Water Boards' Integrated Reports containing 303(d) List of Impaired Waters and 305(b) Reports following recommendations from the Regional Water Boards and information solicited from the public and other interested parties. The Regional Water Boards' Integrated Reports were used to revise their 2006 303(d) List. On August 4, 2010, the State Water Board adopted the California 2008-2010 Integrated Report. On November 12, 2010, the USEPA approved California 2008-2010 Integrated Report Section 303(d) List of Impaired Waters requiring TMDLs for the Los Angeles Region.

Ormond Beach is in the California 2008-2010 Integrated Report. Indicator bacteria from point and non-point sources is the identified pollutant impacting the receiving water.

E. Other Plans, Polices and Regulations

1. **Secondary Treatment Regulations.** 40 CFR part 133 establishes the minimum levels of effluent quality to be achieved by secondary treatment. These limitations, established by USEPA, are incorporated into this Order, except where more stringent limitations are required by other applicable plans, policies, or regulations.

2. **Storm Water.** CWA section 402(p), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. Pursuant to this requirement, in 1990, USEPA promulgated 40 CFR part 122.26 that established requirements for storm water discharges under an NPDES program. To facilitate compliance with federal regulations, on November 1991, the State Water Board issued the statewide General Industrial Storm Water Permit, *General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities.* This permit was amended in September 1992 and reissued on April 17, 1997 in State Water Board Order No. 97-03-DWQ to regulate storm water discharges associated with industrial activity.

   The Discharger developed and currently implements a Storm Water Pollution Prevention Plan (SWPPP) to comply with the State Water Board's (Order No. 97-03-DWQ).

3. **Sanitary Sewer Overflows (SSOs).** The CWA prohibits the discharge of pollutants from point sources to surface waters of the United States unless authorized under an NPDES permit. (33 USC sections 1311 and 1342). The State Water Board adopted General WDRs for Sanitary Sewer Systems, (Water Quality Order No. 2006-0003-DWQ; SSO WDR) on May 2, 2006, to provide a consistent, statewide regulatory approach to address SSOs. The SSO WDR requires public agencies that own or operate sanitary sewer systems to apply for

coverage under the SSO WDR, develop and implement sewer system management plans, and report all SSOs to the State Water Board's online SSO database. Regardless of the coverage obtained under the SSO WDR, the Discharger's collection system is part of the POTW that is subject to this NPDES permit. As such, pursuant to federal regulations, the Discharger must properly operate and maintain its collection system (40 CFR part 122.41 (e)), report any non-compliance (40 CFR part 122.41(1)(6) and (7)), and mitigate any discharge from the collection system in violation of this NPDES permit (40 CFR part 122.41(d)).

The requirements contained in this Order sections V.C.3.b (SCCP section), V.C.4 (Construction, Operation and Maintenance Specifications section), and V.C.6 (Spill Reporting Requirements section) are intended to be consistent with the requirements of the SSO WDR. The Regional Water Board recognizes that there may be some overlap between these NPDES permit provisions and SSO WDR requirements, related to the collection systems. The requirements of the SSO WDR are considered the minimum thresholds (see Finding 11 of State Water Board Order No. 2006-0003-DWQ). To encourage efficiency, the Regional Water Board will accept the documentation prepared by the Permittees under the SSO WDR for compliance purposes as satisfying the requirements in sections V.C.3.b, V.C.4, and V.C.6, provided the more stringent provisions contained in this NPDES permit are also addressed. Pursuant to SSO WDR, section D, provision 2(iii) and (iv), the provisions of this NPDES permit supercede the SSO WDR, for all purposes, including enforcement, to the extent the requirements may be deemed duplicative.

4. **Watershed Management.** This Regional Water Board has been implementing a Watershed Management Approach (WMA) to address water quality protection in Los Angeles and Ventura Counties. The approach is in accordance with USEPA guidance on *Watershed Protection: A Project Focus* (EPA841-R-95-003, August 1995). The objective is to provide a comprehensive and integrated strategy resulting in water resource protection, enhancement and restoration, while balancing economic and environmental impacts within a hydrologically defined drainage basin or watershed. The WMA emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with the resources available. This Order and the accompanying *MRP* (Attachment E) foster implementation of this approach. The *MRP* requires the Discharger to participate in regional water quality and kelp bed monitoring programs in the Southern California Bight. Information about the Ventura Coastal Stream Watershed Management Area and other watersheds in the region can be obtained from the Regional Water Board's website at http://www.waterboards.ca.gov/losangeles and clicking on the word "Watersheds".

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the 40 CFR part 122.44(a) requires that permits include applicable technology-based effluent limitations and standards (TBELs); and 40 CFR part 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. 40 CFR part 122.44(d) also specifies that WQBELs may be established using: (1) USEPA criteria guidance under CWA

section 304(a); (2) proposed state criteria or a state policy interpreting narrative criteria supplemented with other relevant information; or (3) an indicator parameter. NPDES regulations require WQBELs for any pollutant that causes, has the reasonable potential to cause, or contributes to the exceedance of a receiving water quality criterion or objective.

Mass-based effluent limitations are established to ensure that proper treatment, and not dilution, is employed to comply with effluent concentration limitations. 40 CFR part 122.45(f)(1) requires that all permit limitations, standards, or prohibitions be expressed in terms of mass, except under the following conditions: (1) for pH, temperature, radiation, or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if in establishing a technology-based permit limitation on a case-by-case basis, a limitation based on mass is infeasible because the mass of the pollutant cannot be related to a measure of operation, although the limitation must ensure that dilution will not be used as a substitute for treatment.

A. Discharge Prohibitions

The Order authorizes the discharge of secondary-treated wastewater through Discharge Point No. 001. Discharge prohibitions in this Order are based on the requirements in section III.I of the Ocean Plan (2009).

B. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR part 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR part 133.

2. Applicable TBELs

Pursuant to section 301 (b)(1)(B) and 304 (d)(1) of the CWA, USEPA has established standards of performance for secondary treatment at 40 CFR part 133. Secondary treatment is defined in terms of three parameters: 5-day BOD, TSS, and pH. The following summarizes the technology-based requirements for secondary treatment, which are applicable to the Plant:

Table 7. Summary of TBELs for Secondary Treatment Facility established by 40 CFR part 133.102

Constituent	Average Monthly	Average Weekly	Percent Removal
$BOD_5$20°C	30 mg/L	45 mg/L	85%
TSS	30 mg/L	45 mg/L	85%
pH	6.0 to 9.0		

Table A of the Ocean Plan also establishes the following TBELs for POTWs, which are applicable to the Plant:

Table 8. Summary of TBELs for POTWs established by the Ocean Plan

Constituent	Average Monthly	Average Weekly	Instantaneous Maximum	Percent Removal
Oil & Grease	25 mg/L	40 mg/L	75 mg/L	--
TSS	--	--	--	75%[2]
Settleable Solids	1.0 ml/L	1.5 ml/L	3.0 ml/L	--
Turbidity	75 NTU	100 NTU	225 NTU	--
pH	6.0 to 9.0			

All TBELs from Order No. R4-2008-0029, as amended by Order No. R4-2010-0048 for BOD, TSS, oil and grease, settleable solids, pH, and turbidity, are retained by this Order. All TBELs are independent of the dilution ratio for the discharge outfall. In addition to the concentration-based effluent limitations, mass-based effluent limitations based on a design flow rate of 31.7 mgd are also included.

The following table summarizes the TBELs for the discharge from the Facility.

Table 9. Summary of TBELS for Discharge Point No. 001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
$BOD_5 20^0C$	mg/L	30	45	--	--	--
	lbs/day[3]	7,960	11,900	--	--	--
	% removal	85	--	--	--	--
TSS	mg/L	30	45	--	--	--
	lbs/day[5]	7,960	11,900	--	--	--
	% removal	85	--	--	--	--
Oil and Grease	mg/L	25	40	--	--	75
	lbs/day[5]	6,630	10,600	--	--	19,900
Settleable Solids	ml/L	1.0	1.5	--	--	3.0
Turbidity	NTU	75	100	--	--	225
pH	pH unit	--	--	--	6.0	9.0

[2] Dischargers shall, as a monthly average, remove 75% of TSS from the influent stream before discharging wastewaters to the ocean, except that the effluent limitation to be met shall not be lower than 60 mg/L.

[3] The mass emission rates are based on the plant design flow rate of 31.7 mgd, and are calculated as follows: Flow (mgd) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and 40 CFR part 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

40 CFR part 122.44(d)(1)(i) requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, 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 section 122.44(d)(1)(vi).

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan and the Ocean Plan establish the beneficial uses for ocean waters of the state. The beneficial uses of the receiving waters affected by the discharge have been described previously in this Fact Sheet. The Ocean Plan also contains water quality objectives for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity. The Basin Plan also contains the bacteria objectives for water bodies designated for water contact recreation that was amended by Resolution No. 01-018. The water quality objectives from the Ocean Plan and the bacteria objective from the Basin Plan were included as receiving water limitations in this Order.

Table B of the Ocean Plan includes the numerical water quality objectives for toxic pollutants:

a. Six-month median, daily maximum, and instantaneous maximum objectives for 21 chemicals and chemical characteristics, including total residual chlorine, acute and chronic toxicity, for the protection of marine aquatic life;

b. 30-day average objectives for 20 non-carcinogenic chemicals for the protection of human health; and,

c. 30-day average objectives for 42 carcinogenic chemicals for the protection of human health.

3. Expression of WQBELs

Pursuant to 40 CFR part 122.45(d)(2), for POTW continuous discharges, all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall, unless impracticable, be stated as average weekly and average monthly discharge limitations (AMEL and AWEL). It is impracticable to include only average weekly and average monthly effluent limitations in the permit, because a single daily discharge of certain pollutants, in excess amounts, can cause violations of water quality objectives. The effects of pollutants on aquatic organisms are often rapid. For many pollutants, an average weekly or average monthly effluent limitation alone is not sufficiently protective of beneficial uses. As a result, MDELs, as referenced in 40 CFR part 122.45(d)(1), are included in the permit for certain constituents.

The WQBELs for marine aquatic life toxicants contained in this Order are based on water quality objectives contained in the 2009 Ocean Plan that are expressed as six-month median, daily maximum, and instantaneous maximum water quality objectives. Applying the Anti-backsliding Policy, this Order retains the same approach to set effluent limitations for marine aquatic life toxicants in Table B of the 2009 Ocean Plan as AMELs.

4. Determining the Need for WQBELs

Order No. R4-2008-0029, as amended by Order No. R4-2010-0048, contains effluent limitations for non-conventional and toxic pollutant parameters in Table B of the Ocean Plan. For this Order, the need for effluent limitations based on water quality objectives in Table B of the 2009 Ocean Plan was reevaluated in accordance with the reasonable potential analysis (RPA) procedures contained in Appendix VI of the 2009 Ocean Plan. This statistical RPA method (performed using RPcalc version 2.0) accounts for the averaging period of the water quality objective, accounts for and captures the long-term variability of the pollutant in the effluent, accounts for limitations associated with sparse data sets, accounts for uncertainty associated with censored data sets, and assumes a lognormal distribution of the facility-specific effluent data. The program calculates the upper confidence bound (UCB) of an effluent population percentile after complete mixing. In the evaluation employed in this Order, the UCB is calculated as the one-sided, upper 95th percent confidence bound for the 95th percentile of the effluent distribution after complete mixing. The calculated $UCB_{95/95}$ is then compared to the appropriate objective to determine the potential for an exceedance of that objective and the need for an effluent limitation. For constituents that have insufficient number of monitoring data or have substantial number of non-detected data with a reporting limit higher than the respective water quality objective, the RPA result is likely to be inconclusive. As required by the Ocean Plan, existing effluent limitations for these constituents are retained in the new permit. In addition, the MRP (Attachment E) of this Order also requires the Discharger to continue to monitor for these constituents for the determination of reasonable potential for these constituents in future permit renewals and/or updates.

Using this statistical procedure in combination with effluent data provided by the Discharger from January 2008 to December 2012 and a minimum initial dilution ratio of 98:1 for Discharger Point 001, Regional Water Board staff has determined that no constituents, when discharged through Discharge Point 001 have a reasonable potential to exceed Ocean Plan objectives. However, the results of reasonable potential analysis for Benzidine, Heptachlor epoxide, PCBs, and TCDD were inconclusive. Therefore, effluent limitations for these

constituents are carried over from the existing Order No R4-2008-0029, as amended by Order No. R4-2010-0048.

5. WQBEL Calculations

From the Table B water quality objectives of the Ocean Plan, WQBELs are calculated according to the following equation for all pollutants, except for acute toxicity (if applicable) and radioactivity:

Ce=Co+Dm(Co-Cs)

where

Ce = the effluent limitation (μg/L)

Co = the water quality objective to be met at the completion of initial dilution (μg/L)

Cs = background seawater concentration (μg/L) (see Table below)

Dm = minimum probable initial dilution expressed as parts seawater per part wastewater

The Dm is based on observed waste flow characteristics, receiving water density structure, and the assumption that no currents of sufficient strength to influence the initial dilution process flow across the discharge structure. Prior to issuance of Order No. R4-2002-0129, staff of the State Water Board had determined the minimum probable initial dilution for Discharge Point 001 to be 98:1. In this permit, same dilution ratio of 98:1 has also been applied to Discharge Point 001. Dm is equal to 98.

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. As site-specific water quality data is not available, in accordance with Table B implementing procedures, Cs equals zero for all pollutants, except the following:

Table 10. Pollutants with Background Seawater Concentrations

Constituent	Background Seawater Concentration (Cs)
Arsenic	3 μg/L
Copper	2 μg/L
Mercury	0.0005 μg/L
Silver	0.16 μg/L
Zinc	8 μg/L

As examples, WQBELs for Copper, Tributylin (neither have effluent limitation in this Order) and Chronic toxicity are calculated as follows:

Table 11. Ocean Plan Water Quality Objectives (Co) for Copper, Chronic Toxicity and Tributyltin

Constituents	6-Month Median	Daily Maximum	Instantaneous Maximum	30 Day Average
Copper	3 µg/L	12 µg/L	30 µg/L	--
Chronic toxicity	--	1 TUc	--	--
Tributyltin	--	--	--	0.0014 µg/L

Using the equation, **Ce=Co+Dm(Co-Cs)**, effluent limitations are calculated as follows before rounding to two significant digits. All calculations are based on discharge through Discharge Point 001 and, therefore, a dilution ratio (Dm) of 98:1 is applied.

Copper (not a prescribed effluent limitation in this Order, for showing calculations only)
Ce = 3 + 98 (3-2) = 101 µg/L (prescribed as Average Monthly, see section 3 above)
Ce = 12 + 98 (12-2) = 992 µg/L (Daily Maximum)
Ce = 30 + 98 (30-2) = 2,774 µg/L (Instantaneous Maximum)

Chronic Toxicity
Ce = 1 + 98 (1-0) = 99 TUc (Daily Maximum)

Tributyltin (not a prescribed effluent limitation in this Order, for showing calculations only)
Ce = 0.0014 + 98 (0.0014-0) = 0.1386 µg/L (Average Monthly)

Based on the procedures described above, WQBELs would have been calculated for all Table B pollutants (excluding radioactivity) from the Ocean Plan and incorporated into this Order as applicable. However, all the constituents show no reasonable potential or were inconclusive.

Determination of radioactivity limitation: Since the descriptive water quality objective for radioactivity in the 2009 California Ocean Plan fails to establish an applicable narrative or numerical effluent limit for radionuclides, Regional Water Board staff used Best Professional Judgment (BPJ) to establish radioactivity limitations for the effluent using Maximum Contaminant Levels (MCLs) for the drinking water specified in Title 22, California Code of Regulations (CCR) because it is the only scientifically-based regulatory criteria available.

Table 12. Summary of WQBELs for Discharge Point No. 001

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instanta-neous Minimum	Instanta-neous Maximum	Six-Month Median
Chronic toxicity	TUc	--	--	99	--	--	--
Radioactivity							--
Gross alpha	pCi/L	--	--	15	--	--	--
Gross beta	pCi/L	--	--	50	--	--	--
Combined Radium-226 & Radium-228	pCi/L	--	--	5.0	--	--	--

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instanta-neous Minimum	Instanta-neous Maximum	Six-Month Median
Tritium	pCi/L	--	--	20,000	--	--	--
Strontium-90	pCi/L	--	--	8.0	--	--	--
Uranium	pCi/L	--	--	20	--	--	--
Benzidine	µg/L	0.0068	--	--	--	--	--
	lbs/day[4]	0.0018	--	--	--	--	--
Heptachlor epoxide	µg/L	0.002	--	--	--	--	--
	lbs/day[4]	0.00053	--	--	--	--	--
PCBs	µg/L	0.0019	--	--	--	--	--
	lbs/day[4]	0.0005	--	--	--	--	--
TCDD	µg/L	0.00000039	--	--	--	--	--
	lbs/day[4]	0.0000001	--	--	--	--	--

6. Whole Effluent Toxicity (WET)

The 2009 Ocean Plan specifies that the Discharger shall conduct chronic toxicity testing for ocean water discharges if the minimum dilution of the effluent falls below 100:1 at the edge of the mixing zone. At this dilution ratio condition, the Ocean Plant does not require acute toxicity testing. Since the applicable dilution factor of 98:1 for the Facility outfall is below 100:1, this Order requires the Discharger to only conduct chronic toxicity testing.

Although all chronic toxicity testing results reported during the term of the previous Order exhibited compliance with the chronic toxicity limit, the chronic toxicity limit shall be retained in the Order in order to provide a backstop to prevent the discharge of toxic pollutants in toxic amounts.

D. Final Effluent Limitations

1. Satisfaction of Anti-Backsliding Requirements

Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR part 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order. The results of reasonable potential analyses for benzidine, heptachlor epoxide, PCBs, and TCDDs were inconclusive, therefore, for the purpose of satisfying Anti-Backsliding requirements; the effluent limitations for these four pollutants in Order R4-2008-0029, as amended by Order No. R4-2010-0048, were carried over.

[4] The mass emission rates are based on the plant design flow rate of 31.7 mgd, and are calculated as follows: Flow (mgd) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day, or Flow (mgd) x Concentration (µg/L) x 0.00834 (conversion factor) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

2. Satisfaction of Antidegradation Policy

On October 28, 1968, the State Water Board adopted Resolution No. 68-16, *Maintaining High Quality Water*, establishing an antidegradation policy for the State and Regional Water Boards. The State Water Board has, in State Water Board Order No. 86-17 and an October 7, 1987 guidance memorandum, interpreted Resolution No. 68-16 to be fully consistent with the federal antidegradation policy. Similarly, the CWA section 304(d)(4)(B) and 40 CFR part 131.12 require that all permitting actions be consistent with the federal antidegradation policy. Together, the state and federal policies are designed to ensure that a water body will not be degraded resulting from the permitted discharge. The provisions of this Order are consistent with the antidegradation policies.

E. Performance Goals

Chapter III, section F.1, of the 2009 Ocean Plan allows the Regional Water Board to establish more restrictive water quality objectives and effluent limitations than those set forth in the Ocean Plan, as necessary for the protection of the beneficial uses of ocean waters.

Pursuant to this provision and to implement the recommendation of the Water Quality Advisory Task Force (*Working Together for an Affordable Clean Water Environment, A final report presented to the California Water Quality Control Board, Los Angeles Region by Water Quality Advisory Task Force*, September 30, 1993) that was adopted by the Regional Water Board on November 1, 1993, performance goals that are more stringent than those based on Ocean Plan objectives are prescribed in this Order. This approach is consistent with the antidegradation policy in that it requires the Discharger to maintain its treatment level and effluent quality, recognizing normal variations in treatment efficiency and sampling and analytical techniques. However, this approach does not address substantial changes in treatment plant operations that could significantly affect the quality of the treated effluent.

While performance goals were previously placed in many POTW permits in the Region, they have not been continued for discharges that are to inland surface waters. For inland surface waters, the California Toxics Rule (CTR; 40 CFR part 131.38) has resulted in effluent limits as stringent as many performance goals. However, the Ocean Plan allows for significant dilution, and the continued use of performance goals serves to maintain existing treatment levels and effluent quality and supports state and federal antidegradation policies.

The performance goals are based upon the actual performance of the Oxnard WWTP and are specified only as an indication of the treatment efficiency of the Facility. Performance goals are intended to minimize pollutant loading (primarily for toxics), while maintaining the incentive for future voluntary improvement of water quality whenever feasible, without the imposition of more stringent limits based on improved performance. They are not considered as enforceable limitations or standards for the regulation of the discharge from the treatment facility. The Executive Officer may modify any of the performance goals if the Discharger requests and has demonstrated that the change is warranted.

Procedures for the determination of performance goals

1. For constituents that have been routinely detected in the effluent (at least 20 percent detectable data), performance goals are based on the one-sided, $UCB_{95/95}$ of January 2008 through December 2012 performance data (after complete mixing) using the RPA protocol contained in the 2009 Ocean Plan. Effluent data are assumed lognormally distributed.

Performance goals are calculated according to the equation $C_{PG} = Co+Dm(Co-Cs)$ in the Ocean Plan and by setting $Co=UCB_{95/95}$.

a. If the maximum detected effluent concentration (MEC) is greater than the calculated performance goal, the calculated performance goal is used as the performance goal; or

b. If the MEC is less than the calculated performance goal, the MEC is used as the performance goal.

For example, the performance goals for silver and arsenic at Discharge Point 001 are calculated as follows:

Silver

$Co = UCB_{95/95} = 0.178\ \mu g/L$; $Dm = 98$; $Cs = 0.16\ \mu g/L$; $MEC = 2.3\ \mu g/L$
C_{PG} = Performance Goal = $0.178\ \mu g/L + 98(0.178\ \mu g/L - 0.16\ \mu g/L) = 1.94\ \mu g/L$

Since the MEC of 2.3 μg/L is greater than the calculated PG of 1.94 μg/L, the performance goal for silver is prescribed as 1.94 μg/L.

Arsenic
$Co = UCB_{95/95} = 3\ \mu g/L$; $Dm = 98$; $Cs = 3\ \mu g/L$; $MEC = 2\ \mu g/L$
C_{PG} = Performance Goal = $3\ \mu g/L + 98(3\ \mu g/L - 3\ \mu g/L) = 3\ \mu g/L$

Since the MEC of 2 μg/L is less than the calculated PG of 3 μg/L, the performance goal for Arsenic is prescribed as 2 μg/L.

2. For constituents where monitoring data have consistently shown nondetectable levels (less than 20 percent detectable data), performance goals are set at five times the Minimum Levels (MLs) listed in the 2009 Ocean Plan. However, if the MEC is less than the calculated value based on ML, the MEC is used as the performance goal.

3. For constituents with no effluent limitations, if the performance goal derived from above steps exceeds the respective calculated Ocean Plan effluent limitation, the calculated effluent limitation is then prescribed as the performance goal for that constituent.

4. For constituents with effluent limitations, if the performance goal derived from above steps exceeds respective effluent limitation, then performance goal is not prescribed for that constituent.

The performance goals for Discharge Point 001 are prescribed in this Order. The listed performance goals are not enforceable effluent limitations or standards. However, the Discharger shall maintain, if not improve, its treatment efficiency. Any exceedance of the performance goals shall trigger an investigation into the cause of the exceedance. If the exceedance persists in three successive monitoring periods, the Discharger shall submit a written report within 90 days to the Regional Water Board discussing the nature of the exceedance, the results of the investigation as to the cause of the exceedance, and the corrective actions taken or proposed corrective measures with timetable for implementation, if necessary.

Table 13. Summary of Final Effluent Limitations for Discharge Point No. 001

Parameter	Units	Effluent Limitations				Performance Goal[5]	Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum		
$BOD_5 20^0C$	mg/L	30	45	--	--	--	Existing/ Secondary treatment standard
	lbs/day[5]	7,960	11,900	--	--		
	% removal	85	--	--	--		
TSS	mg/L	30	45	--	--	--	Existing/ Secondary treatment standard
	lbs/day[5]	7,960	11,900	--	--		
	% removal	85	--	--	--		
pH	pH unit	6.0 – 9.0				--	Existing/Ocean Plan
Oil and Grease	mg/L	25	40	--	75	--	Existing/Ocean Plan
	lbs/day[5]	6,630	10,600	--	19,900		
Settleable Solids	ml/L	1.0	1.5	--	3.0	--	Existing/Ocean Plan
Turbidity	NTU	75	100	--	225	--	Existing/Ocean Plan
Marine Aquatic Life Toxicants							
Arsenic	µg/L	--	--	--	--	2	No RP
	lbs/day[5]	--	--	--	--	0.5	
Cadmium	µg/L	--	--	--	--	1	No RP
	lbs/day[5]	--	--	--	--	0.26	
Chromium (VI)	µg/L	--	--	--	--	8	No RP
	lbs/day[5]	--	--	--	--	2.1	
Copper	µg/L	--	--	--	--	30	No RP
	lbs/day[5]	--	--	--	--	7.9	
Lead	µg/L	--	--	--	--	23	No RP
	lbs/day[5]	--	--	--	--	6.1	
Mercury	µg/L	--	--	--	--	0.3	No RP
	lbs/day[5]	--	--	--	--	0.08	
Nickel	µg/L	--	--	--	--	8	No RP
	lbs/day[5]	--	--	--	--	2.1	
Selenium	µg/L	--	--	--	--	4.7	No RP
	lbs/day[5]	--	--	--	--	1.2	
Silver	µg/L	--	--	--	--	1.9	No RP
	lbs/day[5]	--	--	--	--	0.5	
Zinc	µg/L	--	--	--	--	36	No RP
	lbs/day[5]	--	--	--	--	9.5	
Cyanide	µg/L	--	--	--	--	25	No RP

[5] See Procedures for the determination of performance goals at section IV.E.1. of Fact Sheet.

Parameter	Units	Effluent Limitations				Performance Goal[5]	Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum		
	lbs/day[5]	--	--	--	--	6.6	
Chlorine Residual	mg/L	--	--	--	--	0.13	No RP
	lbs/day[5]	--	--	--	--	0.03	
Ammonia as N	mg/L	--	--	--	--	32	No RP
	lbs/day[5]	--	--	--	--	8.5	
Phenolic compounds (non-chlorinated)	µg/L	--	--	--	--	5	No RP
	lbs/day[5]	--	--	--	--	1.3	
Phenolic compounds (chlorinated)	µg/L	--	--	--	--	0.42	No RP
	lbs/day[5]	--	--	--	--	0.11	
Endosulfan	µg/L	--	--	--	--	0.05	No RP
	lbs/day[5]	--	--	--	--	0.013	
HCH	µg/L	--	--	--	--	0.1	No RP
	lbs/day[5]	--	--	--	--	0.026	
Endrin	µg/L	--	--	--	--	0.05	No RP
	lbs/day[5]	--	--	--	--	0.013	
Acute toxicity	TUa	--	--	--	--	--	
Chronic toxicity	TUc	--	--	99	--	--	BPJ
Radioactivity							
Gross alpha	pCi/L	--	--	15	--	--	BPJ
Gross beta	pCi/L	--	--	50	--	--	BPJ
Combined Radium-226 & Radium-228	pCi/L	--	--	5.0	--	--	BPJ
Tritium	pCi/L	--	--	20,000	--	--	BPJ
Strontium-90	pCi/L	--	--	8.0	--	--	BPJ
Uranium	pCi/L	--	--	20	--	--	BPJ
Human Health Toxicants – Non Carcinogens							
Acrolein	µg/L	--	--	--	--	10	No RP
	lbs/day[5]	--	--	--	--	2.6	
Antimony	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
Bis(2-chloroethoxy) methane	µg/L	--	--	--	--	25	No RP
	lbs/day[5]	--	--	--	--	6.6	
Bis(2-chloroisopropyl) ether	µg/L	--	--	--	--	10	No RP
	lbs/day[5]	--	--	--	--	2.6	
Chlorobenzene	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
Chromium (III)	µg/L	--	--	--	--	8	No RP
	lbs/day[5]	--	--	--	--	2.1	

Parameter	Units	Effluent Limitations				Performance Goal[5]	Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum		
Di-n-butyl-phthalate	µg/L	--	--	--	--	0.19	No RP
	lbs/day[5]	--	--	--	--	0.05	
Dichlorobenzenes	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
Diethyl phthalate	µg/L	--	--	--	--	10	No RP
	lbs/day[5]	--	--	--	--	2.6	
Dimethyl phthalate	µg/L	--	--	--	--	10	No RP
	lbs/day[5]	--	--	--	--	2.6	
2-Methyl-4,6-dinitrophenol	µg/L	--	--	--	--	25	No RP
	lbs/day[5]	--	--	--	--	6.6	
2,4-Dinitrophenol	µg/L	--	--	--	--	25	No RP
	lbs/day[5]	--	--	--	--	6.6	
Ethyl benzene	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
Fluoranthene	µg/L	--	--	--	--	0.039	No RP
	lbs/day[5]	--	--	--	--	0.01	
Hexachlorocyclopentadiene	µg/L	--	--	--	--	25	No RP
	lbs/day[5]	--	--	--	--	6.6	
Nitrobenzene	µg/L	--	--	--	--	5	No RP
	lbs/day[5]	--	--	--	--	1.3	
Thallium	µg/L	--	--	--	--	5	No RP
	lbs/day[5]	--	--	--	--	1.3	
Toluene	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
Tributyltin	µg/L	--	--	--	--	0.0263	No RP
	lbs/day[5]	--	--	--	--	0.007	
1,1,1-Trichloroethane	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
Human Health Toxicants – Carcinogens							
Acrylonitrile	µg/L	--	--	--	--	10	No RP
	lbs/day[5]	--	--	--	--	2.6	
Aldrin	µg/L	--	--	--	--	0.025	No RP
	lbs/day[5]	--	--	--	--	0.0066	
Benzene	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
Benzidine	µg/L	0.0068	--	--	--	--	Existing, Carryover
	lbs/day[5]	0.0018	--	--	--	--	
Beryllium	µg/L	--	--	--	--	2.5	No RP

Parameter	Units	Effluent Limitations				Performance Goal[5]	Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum		
	lbs/day[5]	--	--	--	--	0.66	
Bis(2-chloroethyl) ether	µg/L	--	--	--	--	5	No RP
	lbs/day[5]	--	--	--	--	1.3	
Bis(2-ethylhexyl) phthalate	µg/L	--	--	--	--	50	No RP
	lbs/day[5]	--	--	--	--	13.2	
Carbon tetrachloride	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
Chlordane	µg/L	--	--	--	--	0.5	No RP
	lbs/day[5]	--	--	--	--	0.13	
Chlorodibromomethane	µg/L	--	--	--	--	0.61	No RP
	lbs/day[5]	--	--	--	--	0.16	
Chloroform	µg/L	--	--	--	--	1.2	No RP
	lbs/day[5]	--	--	--	--	0.32	
DDT	µg/L	--	--	--	--	0.25	No RP
	lbs/day[5]	--	--	--	--	0.066	
1,4-Dichlorobenzene	µg/L	--	--	--	--	0.041	No RP
	lbs/day[5]	--	--	--	--	0.011	
3,3'-Dichlorobenzidine	µg/L	--	--	--	--	25	No RP
	lbs/day[5]	--	--	--	--	6.6	
1,2-Dichloroethane	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
1,1-Dichloroethylene	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
Bromodichloromethane	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
Dichloromethane	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
1,3-Dichloropropene	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
Dieldrin	µg/L	--	--	--	--	0.05	No RP
	lbs/day[5]	--	--	--	--	0.013	
2,4-Dinitrotoluene	µg/L	--	--	--	--	25	No RP
	lbs/day[5]	--	--	--	--	6.6	
1,2-Diphenylhydrazine	µg/L	--	--	--	--	5	No RP
	lbs/day[5]	--	--	--	--	1.3	
Halomethanes	µg/L	--	--	--	--	4.4	No RP
	lbs/day[5]	--	--	--	--	1.2	
Heptachlor	µg/L	--	--	--	--	0.05	No RP
	lbs/day[5]	--	--	--	--	0.013	

Parameter	Units	Effluent Limitations				Performance Goal[5]	Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum		
Heptachlor epoxide	µg/L	0.002	--	--	--	--	Existing, Carryover
	lbs/day[5]	0.00053	--	--	--	--	
Hexachlorobenzene	µg/L	--	--	--	--	5	No RP
	lbs/day[5]	--	--	--	--	1.3	
Hexachlorobutadiene	µg/L	--	--	--	--	5	No RP
	lbs/day[5]	--	--	--	--	1.3	
Hexachloroethane	µg/L	--	--	--	--	5	No RP
	lbs/day[5]	--	--	--	--	1.3	
Isophorone	µg/L	--	--	--	--	5	No RP
	lbs/day[5]	--	--	--	--	1.3	
N-Nitrosodimethylamine	µg/L	--	--	--	--	25	No RP
	lbs/day[5]	--	--	--	--	6.6	
N-Nitrosodi-N-propylamine	µg/L	--	--	--	--	25	No RP
	lbs/day[5]	--	--	--	--	6.6	
N-Nitrosodiphenylamine	µg/L	--	--	--	--	5	No RP
	lbs/day[5]	--	--	--	--	1.3	
PAHs	µg/L	--	--	--	--	0.097	No RP
	lbs/day[5]	--	--	--	--	0.026	
PCBs	µg/L	0.0019	--	--	--	--	Existing, Carryover
	lbs/day[5]	0.0005	--	--	--	--	
TCDD equivalents	µg/L	0.00000039	--	--	--	--	Existing, Carryover
	lbs/day[5]	0.0000001	--	--	--	--	
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
Tetrachloroethylene	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
Toxaphene	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
Trichloroethylene	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
1,1,2-Trichloroethane	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	
2,4,6-Trichlorophenol	µg/L	--	--	--	--	0.35	No RP
	lbs/day[5]	--	--	--	--	0.09	
Vinyl chloride	µg/L	--	--	--	--	2.5	No RP
	lbs/day[5]	--	--	--	--	0.66	

F. Reclamation Specifications

The reuse of the reclaimed water is regulated under a separate WDRs and Water Recycling Requirements (WRRs) for GREAT - Phase 1 Project, Order No. R4-2008-0083 as amended by Order No. R4-2011-0079, File No. 64-104 and File No. 08-070, CI-9456.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Basin Plan and the Ocean Plan contain numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (40 CFR 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in the tentative Order are included to ensure protection of beneficial uses of the receiving water.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR part 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The MRP, Attachment E of this Order, 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 facility.

A. Influent Monitoring

Influent monitoring is required to:

- Determine compliance with NPDES permit conditions;
- Assess treatment plant performance; and,
- Assess effectiveness of the Pretreatment Program

Influent monitoring in this Order follows the influent monitoring requirements in the previous Order.

B. Effluent Monitoring

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are given in the proposed MRP (Attachment E). This provision requires compliance with the MRP, and is based on 40 CFR parts 122.44(i), 122.62, 122.63, and 124.5. The MRP is a standard requirement in almost all NPDES permits (including the proposed Order) issued by the Regional Water Board. In addition to containing definition of terms, it specifies general sampling/analytical protocols and the requirements of reporting spills, violation, and routine monitoring data in accordance with NPDES regulations, the CWC, and Regional Water Board policies. The MRP also contains sampling program specific for the Discharger's wastewater treatment plant. It defines the sampling stations and frequency, pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all pollutants for which effluent limitations are specified.

Monitoring for those pollutants expected to be present in the discharge from the facility, will be required as shown on the proposed MRP (Attachment E) and as required in the Ocean Plan.

Table 14. Monitoring Frequency Comparison

Parameter	Monitoring Frequency (2008 Permit)	Monitoring Frequency (2013 Permit)
Total waste flow	continuous	continuous
Total residual chlorine	continuous	continuous
Turbidity	continuous	continuous
Temperature	weekly	weekly
pH	daily	daily
Settleable solids	daily	daily
Suspended solids	daily	daily
Oil and grease	daily	daily
BOD520oC	daily	daily
Total coliform	daily	daily
Fecal Coliform	5 times/month	5 times/month
Enterococcus	5 times/month	5 times/month
Ammonia nitrogen	monthly	monthly
Nitrate nitrogen	monthly	monthly
Nitrite nitrogen	monthly	monthly
Organic nitrogen	monthly	monthly
Chronic toxicity	monthly	monthly
Benzidine	quarterly	quarterly
Heptachlor epoxide	quarterly	quarterly
PCBs	quarterly	quarterly
TCDD equivalents	quarterly	quarterly
Remaining pollutants in Table B of the 2009 Ocean Plan	semiannually	semiannually
Radioactivity	semiannually	semiannually
Pesticides	semiannually	semiannually

C. WET Testing Requirements

Chronic Toxicity. The Ocean Plan requires the use of critical life stage toxicity tests specified in Appendix III of the Ocean Plan to measure chronic toxicity, TU_c. A minimum of three test species with approved test protocols shall be used to measure compliance with the toxicity objective. If possible, the test species shall include a fish, an invertebrate, and an aquatic plant. After a screening period, monitoring can be reduced to the most sensitive species. Dilution and control water should be laboratory water. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with the test results. Chronic toxicity testing requirements defined in section V.A of the MRP (Attachment E) are specified on the basis of these Ocean Plan requirements.

D. Receiving Water Monitoring

1. Surface Water

Receiving water monitoring is required to determine compliance with receiving water limitations and to characterize the water quality of the receiving water. Requirements are based on the Basin Plan, Bight Regional Monitoring Program, and the Ocean Plan.

The receiving water monitoring program contains the following components: (a) nearshore microbiological monitoring, (b) nearshore/offshore water quality monitoring, and (c) benthic sediments monitoring.

Detail about the monitoring program are contained in Attachment E.

E. Other Monitoring Requirements

1. Outfall Inspection

The data collected will be used for a periodic assessment of the integrity of the outfall pipes and ballasting system.

2. Biosolids/Sludge Monitoring

This section establishes monitoring and reporting requirements for the storage, handling and disposal practices of sludge generated from the operation of this Facility.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR part 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D to the order.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order.

B. Special Provisions

1. Reopener Provisions

This provision is based on 40 CFR part 123. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new regulations, modification in sludge use or disposal practices, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan and the Ocean Plan.

2. Special Studies and Additional Monitoring Requirements

a. Constituent of Emerging Concern (CEC).

The Discharger shall conduct a special study to investigate the CECs in the effluent discharge. Within 90 days of the effective date of this Order, the Discharger shall submit to the Executive Officer a CECs special study work plan for approval. Upon approval, the Discharger shall implement the work plan.

The Discharger shall follow the requirements of the special study work plan as discussed in the MRP and the Fact Sheet.

3. Best Management Practices and Pollution Prevention

a. Spill Clean-Up Contingency Plan (SCCP)

Since spill or overflow is a common event in the treatment plant service areas, this Order requires the Discharger to review and update, if necessary, the SCCP after each incident. The Discharger shall ensure that the up-to-date SCCP is readily available to the sewage system personnel at all times and that the sewage personnel are familiar with it.

b. Pollutant Minimization Program.

This provision is based on the requirements of section 2.4.5 of the State Implementation Plan (SIP).

4. Construction, Operation, and Maintenance Specifications

This provision is based on the requirements of 40 CFR part 122.41(e) and the previous Order.

5. Special Provisions for Municipal Facilities

a. **Biosolids Requirements.**

To implement CWA section 405(d), on February 19, 1993, USEPA promulgated 40 CFR 503 to regulate the use and disposal of municipal sewage sludge. This regulation was amended on September 3, 1999. The regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. It is the responsibility of the Discharger to comply with said regulations that are enforceable by USEPA, because California has not been delegated the authority to implement this program. The Discharger is also responsible for compliance with WDRs and NPDES

permits for the generation, transport and application of biosolids issued by the State Water Board, other Regional Water Boards, Arizona Department of Environmental Quality or USEPA, to whose jurisdiction the Facility's biosolids will be transported and applied.

b. **Pretreatment Requirements.**

This permit contains pretreatment requirements consistent with applicable effluent limitations, national standards of performance, and toxic and performance effluent standards established pursuant to sections 208(b), 301, 302, 303(d), 304, 306, 307, 403, 404, 405, and 501 of the CWA, and amendments thereto. This permit contains requirements for the implementation of an effective pretreatment program pursuant to section 307 of the CWA; 40 CFR parts 35 and 403; and/or section 2233, title 23 CCR.

6. Spill Reporting Requirements

This Order established a reporting protocol for how different types of spills, overflow, or bypasses of raw or partially treated sewage from its collection system or treatment plant covered by this Order shall be reported to regulatory agencies.

The State Water Board issued the SSO WDR on May 2, 2006. The SSO WDR 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 SSO WDR. The SSO WDR requires agencies to develop sanitary sewer management plans (SSMPs) and report all SSOs, among other requirements and prohibitions.

Furthermore, the SSO WDR contains requirements for operation and maintenance of collection systems and for reporting and mitigating SSOs. The Discharger must comply with both the SSO WDR and this Order.

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of WDRs that will serve as a NPDES permit for Oxnard WWTP. As a step in the WDR adoption process, the Regional Water Board staff developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the following: (1) by posting the Notice of Public Hearing at the main entrance gate of the Wastewater Treatment Plant at 6001 S. Perkins Road, Oxnard, CA 93033, and (2) by posting the Notice of Public Hearing to a bulletin board in City Hall at 305 W. Third Street, Oxnard, CA 93030.

The Regional Board's web address is http://www.waterboards.ca.gov/losangeles/. The public was provided access to the agenda including any changes in dates and locations.

B. Written Comments

Interested persons where invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments where due either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order, or by email submitted to losangeles@waterboards.ca.gov.

To be fully responded to by staff and considered by the Regional Water Board, written comments were due at the Regional Water Board offices by 12:00 p.m. (noon) on **May 7, 2013**.

C. Public Hearing

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

Date: June 6, 2013
Time: 9:00 a.m.
Location: Metropolitan Water District of Southern California, Board Room
700 North Alameda Street
Los Angeles, California

Interested persons were invited to attend and make oral comments. At the public hearing, the Regional Water Board heard testimony pertinent to the discharge and tentative WDRs. For accuracy of the record, important testimony was requested to be in writing.

D. WDRs Petitions

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be *received* by the State Water Board within 30 days of the Regional Water Board's action. Petitions should be sent to the following address:

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

E. Information and Copying

The tentative WDRs, ROWD, comments received, responses to comments (once generated), and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (213) 576-6600.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Raul Medina at (213) 620-2160.

ATTACHMENT G – GENERIC TOXICITY REDUCTION EVALUATION (TRE) WORKPLAN (POTW)

1. Information and Data Acquisition

a. Operations and performance review

i. NPDES permit requirements
   (1) Effluent limitations
   (2) Special conditions
   (3) Monitoring data and compliance history

ii. POTW design criteria
   (1) Hydraulic loading capacities
   (2) Pollutant loading capacities
   (3) Biodegradation kinetics calculations/assumptions

iii. Influent and effluent conventional pollutant data
   (1) Biochemical oxygen demand (BOD_5)
   (2) Chemical oxygen demand (COD)
   (3) Suspended solids (SS)
   (4) Ammonia
   (5) Residual chlorine
   (6) pH

iv. Process control data
   (1) Primary sedimentation - hydraulic loading capacity and BOD and SS removal
   (2) Activated sludge - Food-to-microorganism (F/M) ratio, mean cell residence time (MCRT), mixed liquor suspended solids (MLSS), sludge yield, and BOD and COD removal
   (3) Secondary clarification - hydraulic and solids loading capacity, sludge volume index and sludge blanket depth

v. Operations information
   (1) Operating logs
   (2) Standard operating procedures
   (3) Operations and maintenance practices

vi. Process sidestream characterization data
   (1) Sludge processing sidestreams
   (2) Tertiary filter backwash
   (3) Cooling water

vii. Combined sewer overflow (CSO) bypass data
   (1) Frequency
   (2) Volume

viii. Chemical coagulant usage for wastewater treatment and sludge processing
   (1) Polymer
   (2) Ferric chloride
   (3) Alum

b. POTW influent and effluent characterization data

i. Toxicity
ii. Priority pollutants
iii. Hazardous pollutants
iv. SARA 313 pollutants,
v. Other chemical-specific monitoring results

c. Sewage residuals (raw, digested, thickened and dewatered sludge and incinerator ash) characterization data

i. EP toxicity
ii. Toxicity Characteristic Leaching Procedure (TCLP)
iii. Chemical analysis

d. Industrial waste survey (IWS)

i. Information on IUs with categorical standards or local limits and other significant non-categorical IUs
ii. Number of IUs
iii. Discharge flow
iv. Standard Industrial Classification (SIC) code
v. Wastewater flow
   (1) Types and concentrations of pollutants in the discharge
   (2) Products manufactured
vi. Description of pretreatment facilities and operating practices
vii. Annual pretreatment report
viii. Schematic of sewer collection system
ix. POTW monitoring data
   (1) Discharge characterization data
   (2) Spill prevention and control procedures
   (3) Hazardous waste generation
x. IU self-monitoring data
   (1) Description of operations
   (2) Flow measurements
   (3) Discharge characterization data
   (4) Notice of sludge loading
   (5) Compliance schedule (if out of compliance)
xi. Technically based local limits compliance reports
xii. Waste hauler monitoring data manifests
xiii. Evidence of POTW treatment interferences (i.e., biological process inhibition

ATTACHMENT I – BIOSOLIDS AND SLUDGE MANAGEMENT

I. GENERAL REQUIREMENTS

A. All biosolids generated by the City of Oxnard (Discharger or City) at its Oxnard Wastewater Treatment Plant (Facility) shall be used or disposed of in compliance with the applicable portions of 40 CFR parts 257, 258, and 503, and the applicable portions of the California Biosolids General Order (*State Water Resources Control Board Water Quality Order No. 2004-10-DWQ, General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities)*, or site-specific Waste Discharge Requirements, issued by the Regional Water Board(s) for land application sites in the jurisdiction(s) in which biosolids from Facility are applied.

B. The Discharger is responsible for assuring that all biosolids produced at Facility are used or disposed of in accordance with these rules, whether the permittee uses or disposes of the biosolids itself or transfers them to another party for further treatment, use, or disposal. The Discharger are responsible for informing subsequent preparers, appliers, and disposers of the requirements that they must meet under these rules, and any monitoring requirements, including required frequencies of monitoring and maximum hold times for pathogen and indicator organism samples.

C. 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.

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

E. Biosolids treatment, storage, and use or disposal shall not contaminate groundwater.

F. Biosolids treatment, storage, and use or disposal shall be performed in a manner as to minimize nuisances such as objectionable odors or flies.

G. 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. The Discharger shall maintain and have haulers adhere to a spill clean-up plan. Any spills shall be reported to U.S. Environmental Protection Agency (USEPA) and the Regional Water Board or state agency in which the spill occurred. All trucks hauling biosolids shall be thoroughly washed after unloading at the field or at the receiving facility.

H. Trucks used to haul biosolids shall not be used to haul animal feed or food, except if authorized to do so by the Regional Water Board after consultation with USEPA and California Department of Food and Agriculture.

I. If biosolids are stored for over two years from the time they are generated by the Discharger or their contractor, the permittee must ensure compliance with all the requirements for surface disposal under 40 CFR 503 Subpart C, or must submit a written notification to USEPA with the information in 503.20 (b), demonstrating the need for longer temporary storage.

J. 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 in the site to escape from the site. Adequate protection is defined as protection from at least a 100-year storm and from the highest tidal stage that may occur.

II. INSPECTION AND ENTRY:

The Los Angeles Regional Water Board and USEPA, or an authorized representative thereof, upon the presentation of credentials, shall be allowed by the City, 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, either by the Discharger or by another party to whom the Discharger transfer the biosolids for treatment, storage, use, or disposal,

B. Have access to and copy any records that must be kept under the conditions of this permit or of 40 CFR 503, by the Discharger or by another party to whom the Discharger transfer the biosolids for further treatment, storage, use, or disposal,

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

III. MONITORING:

A. A representative sample shall be collected and analyzed on a monthly basis for the pollutants required under the applicable portions of 40 CFR 503, organic nitrogen, and ammonium nitrogen. The results shall be reported on a 100% dry weight basis.

B. Prior to land application, the Discharger shall demonstrate that the biosolids meet Class A or Class B pathogen reduction levels by one of the methods listed in 503.32. If pathogen reduction is demonstrated using a Process to Significantly/Further Reduce Pathogens, the Discharger shall maintain daily records of the operating parameters used to achieve this reduction.

C. If Class A or B pathogen requirements are met by monitoring pathogens and/or indicator organisms, samples must be collected in sterile containers, immediately placed on ice and analysis started within the USEPA-specified holding times for these analyses (24 hours for fecal coliform and salmonella, or 6 hours for fecal coliform in Arizona, 2 weeks for enteric viruses if frozen, one month for helminth ova if cooled to 4 degrees C).

D. 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 Vector Attraction Reduction requirements in 503.33(b).

E. The biosolids shall be sampled and analyzed once per year using the Toxicity Characteristic Leachate Procedure or California Waste Extraction Test.

F. Biosolids shall be monitored semi-annually for all pollutants listed under Section 307(a) of the CWA. Results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis.

NOTIFICATION REQUIREMENTS

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

1. Notification of non-compliance: The Discharger shall notify USEPA Region 9 and the applicable Regional Water Board or State agency of any non-compliance within 24 hours by phone or e-mail if the non-compliance may seriously endanger public health or the environment. A written report shall also be submitted within 5 working days of knowing the non-compliance. For other instances of non-compliance, the Discharger shall notify USEPA Region 9 and the Regional Water Board 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 Region 9 and the Regional Water Board of any non-compliance within the same time-frames.

2. If biosolids are shipped to another state or to Indian Lands, the Discharger must send 30 days prior notice of the shipment to the USEPA and permitting authorities in the receiving State or Indian Land. In case of emergency situations, the Discharger shall notify USEPA and permitting authorities in the receiving State or Indian Lands, by phone or e-mail, 48 hours prior to shipment and shall obtain approval from the State or Indian Land authority prior to shipment.

3. If the Discharger receives complaints of health problems associated with biosolids treatment, use, or disposal directly, or become aware of complaints reported to their biosolids management contractors, the USEPA and applicable County Health Department staff shall be notified of the complaints within 48 hours of such knowledge. The Discharger shall also require that their biosolids management contractors report any complaints of health problems associated with biosolids treatment, use, or disposal, to the USEPA and applicable County Health Department staff within 48 hours of such knowledge.

B. The Discharger shall require their biosolids management contractors that apply Class B biosolids to notify USEPA Region 9 and the applicable Regional Water Board or State Agency by e-mail, at least 24 hours prior to changing application fields, of the new field to which they will be moving. If circumstances arise in which the contractors need to select an alternate field, the Discharger shall require their biosolids management contractors to notify USEPA and the applicable Regional Water Board or State Agency within 72 hours after changing fields.

C. Following completion of application to any field, in the case where actual calculated Plant Available Nitrogen (PAN) exceeds the agronomic rate, the Discharger shall, within 7 days of knowledge of the occurrence, have its contractor submit an explanation of the exceedance.

D. The Discharger shall notify USEPA and the Regional Water Board at least 60 days prior to starting a new use or disposal practice.

V. REPORTING REQUIREMENTS:

A. The Discharger shall submit, and require its contractor(s) to submit an annual biosolids report to the USEPA Region 9 Biosolids Coordinator, Los Angeles Regional Water Quality Control Board, and all other Regional Water Boards/State Agencies where biosolids are applied by February 19 of each year for the period covering the previous calendar year. The report shall include:

1. The amount of biosolids generated that year, in dry metric tons, and the amount used or disposed by each use/disposal practices. For contracted use or disposal, the volume taken by each contractor shall be reported.

2. Results of all monitoring required under Monitoring Requirements above. All results must be reported on a 100% dry weight basis. Locations of sample collection shall be reported.

3. Documentation of those operational parameters used to demonstrate compliance with pathogen reduction and vector attraction reduction, and certifications.

4. For land application sites:

   a. Name of each field; location, ownership, size in acres

   b. Actual dates of applications, seedings, harvesting

   c. Number of truckloads to each field

   d. Actual tonnage applied to field, in actual and dry weight

   e. Calculated Plant Available Nitrogen before and after application, including methodology used to calculate plant available nitrogen and agronomic rate

   f. Copies of applier's certifications of management practices

   g. Copies of applier's certifications of site restrictions

B. Reports shall be submitted to:

Los Angeles Regional Water Quality Control Board
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Regional Biosolids Coordinator
US EPA (WTR-7)
75 Hawthorne St.
San Francisco, CA 94105-3901

ATTACHMENT J – PRETREATMENT REPORTING REQUIREMENTS

The Discharger is required to submit annual Pretreatment Program Compliance Report (Report) to the Regional Water Board and USEPA Region 9. This Attachment outlines the minimum reporting requirements of the Report. If there is any conflict between requirements stated in this attachment and provisions stated in the Waste Discharge Requirements (WDR), those contained in the WDR will prevail.

A. Pretreatment Requirements

1. The City shall be responsible and liable for the performance of all Control Authority pretreatment requirements contained in 40 CFR Part 403, including any subsequent regulatory revisions to Part 403. Where Part 403 or subsequent revision places mandatory actions upon the City as Control Authority but does not specify a timetable for completion of the actions, the City shall complete the required actions within six months from the issuance date of this permit or the effective date of the Part 403 revisions, whichever comes later. For violations of pretreatment requirements, the City shall be subject to enforcement actions, penalties, fines and other remedies by the U.S. Environmental Protection Agency (EPA) or other appropriate parties, as provided in the Act. EPA may initiate enforcement action against a nondomestic user for noncompliance with applicable standards and requirements as provided in the act.

2. The City shall enforce the requirements promulgated under sections 307(b), 307(c), 307(d) and 402(b) of the Act with timely, appropriate and effective enforcement actions. The City 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 the discharge.

3. The City shall perform the pretreatment functions as required in 40 CFR Part 403 including, but not limited to:

    a. Implement the necessary legal authorities as provided in 40 CFR Part 403.8(f)(1);

    b. Enforce the pretreatment requirements under 40 CFR Part 403.5 and 403.6;

    c. Implement the programmatic functions as provided in 40 CFR Part 403.8(f)(2); and

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

4. The City shall submit annually a report to EPA Pacific Southwest Region, and the State describing its pretreatment activities over the previous year. In the event the City is not in compliance with any conditions or requirements of this permit, then the City shall also include the reasons for noncompliance and state how and when the City shall comply with such conditions and requirements. This annual report shall cover operations from January 1 through December 31 and is due on March 1 of each year. The report shall contain, but not be limited to, the following information:

    a. A summary of analytical results from representative, flow proportioned, 24-hour composite sampling of the POTW's influent and effluent for those pollutants EPA has identified under section 307(a) of the Act which are known or suspected to be discharged by nondomestic users. This will consist of an annual full priority pollutant scan, with quarterly samples

analyzed only for those pollutants detected in the full scan. The City is not required to sample and analyze for asbestos. Sludge sampling and analysis are covered in the sludge section of this permit. The City shall also provide any influent or effluent monitoring data for nonpriority pollutants which the City believes may be causing or contributing to interference or pass through. Sampling and analysis shall be performed with the techniques prescribed in 40 CFR Part 136;

b. A discussion of Upset, Interference or Pass Through incidents, if any, at the treatment plant which the City knows or suspects were caused by nondomestic users of the POTW system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the nondomestic user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any additional limitations, or changes to existing requirements, may be necessary to prevent pass through or interference;

c. An updated list of the City's significant industrial users (SIUs) including their names and addresses, and a list of deletions, additions and SIU name changes keyed to the previously submitted list. The City 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 standards are applicable to each SIU. The list shall also indicate which SIUs are subject to local limitations;

d. The City shall characterize the compliance status of each SIU by providing a list or table which includes the following information:

   i. Name of the SIU;
   ii. Category, if subject to federal categorical standards;
   iii. The type of wastewater treatment or control processes in place;
   iv. The number of samples taken by the POTW during the year;
   v. The number of samples taken by the SIU during the year;
   vi. For an SIU subject to discharge requirements for total toxic organics, whether all required certifications were provided;
   vii. A list of the standards violated during the year. Identify whether the violations were for categorical standards or local limits;
   viii. Whether the facility is in significant noncompliance (SNC) as defined at 40 CFR part 403.8(f)(2)(viii) at any time during the year; and
   ix. A summary of enforcement or other actions taken during the year to return the SIU to compliance. Describe the type of action, final compliance date, and the amount of fines and penalties collected, if any. Describe any proposed actions for bringing the SIU into compliance.

e. A brief description of any programs the POTW implements to reduce pollutants from nondomestic users that are 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 concerning the program's administrative structure, local limits, monitoring program or monitoring frequencies, legal authority, enforcement policy, funding levels, or staffing levels;

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

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

B. LOCAL LIMITS EVALUATION

1. In accordance with 40 CFR 122.44(j)(2)(ii), the POTW shall provide a written technical evaluation of the need to revise local limits under 40 CFR Part 4035.(c)(1) within 180 days of issuance or reissuance of the NPDES permit.

C. SIGNATORY REQUIREMENTS AND REPORT SUBMITTAL

1. Signatory Requirements.

The annual report 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 following certification [40 CFR 403.6(a)(2)(ii)]:

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.

2. Report Submittal.

An original copy of the Annual Report must be sent to the Pretreatment Program Coordinator of the Regional Water Board and the duplicate copies of the Report must be sent to USEPA through the following addresses:

Information and Technology Unit
Attn: Pretreatment Program Coordinator
California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Pretreatment Program
CWA Compliance Office (WTR-7)
Water Division
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2008	Feb-2008	Mar-2008	Apr-2008	May-2008	Jun-2008	Jul-2008	Aug-2008	Sep-2008	Oct-2008	Nov-2008	Dec-2008
Conventional/NonConventional (3a)	mg/L												
BOD	mg/L	17.7	23.1	18.5	18.0	19.3	14.4	14.4	11.8	11.0	13.2	14.0	14.3
Total Suspended Solids	mg/L	9	12	7	8	9	6	7	5	5	5	4	5
Oil & Grease	mg/L	< 5	< 5	< 5	5.1	< 5	< 5	5	< 5	< 5	< 5	< 5	< 5
Settleable Solids	ml/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Coliform	MPN/100mL	87,410	77,828	39,845	65,023	79,978	53,714	59,271	57,694	73,510	61,065	57,000	45,675
Fecal Coliform	MPN/100mL	37,500	3,406	21,194	4,840	7,840	3,956	12,160	64,560	38,820	1,754	39,340	1,696
Enterococcus	MPN/100mL	12,400	6,680	4,820	5,040	8,220	4,526	2,434	5,274	1,940	3,774	5,532	4,500
Nitrate-N	mg/L	0.90	0.29	0.33	1.7	0.18	0.73	0.36	0.29	0.25	0.44	0.73	1.50
Nitrite-N	mg/L	0.37	0.65	0.68	0.84	0.51	1	1.2	0.88	1.2	1.1	2.3	2.1
Organic-N	mg/L	5.1	3.2	2.3	2.7	2	2.8	2.2	1.5	1.3	1.3	1.6	1.4
pH		7.3	7.3	7.2	7.2	7.3	7.3	7.3	7.4	7.5	7.5	7.5	7.4
Temp	0C	20	21	22	22	23	24	25	26	25	24	23	21
Turbidity	NTU	6.4	7.5	4.2	5.2	5.4	4.5	4.3	3.3	3	3.1	3.1	3.4
Marine Aquatic Life													
Arsenic (As)	ug/L		2.0			1.0			1.1			1.1	
Cadmium (Cd)	ug/L		<0.2			<0.5			<0.2			<0.5	
Chromium Total (Cr)	ug/L		4			8			5			<5	
Copper (Cu)	ug/L		30			22			12			21	
Lead (Pb)	ug/L		<2.0			<5.0			<2.0			<5.0	
Mercury (Hg)	ug/L		<0.2			<0.2			<0.2			<0.2	
Nickel (Ni)	ug/L		8			<5.0			<5.0			<5.0	
Selenium (Se)	ug/L		4.7						2.1				
Silver (Ag)	ug/L		0.9			1			<0.5			2.3	
Zinc (Zn)	ug/L		35			29			32			36	
Cyanide	ug/L		<5.0			<5.0			<5.0			<5.0	
Residual Chlorine	mg/L	0.023	0.049	0.025	0.036	0.022	0.038	0.048	0.089	0.04	0.036	0.027	0.02
Ammonia-N	mg/L	20	21	18	20	23	23	22	25	25	24	23	21
Acute Toxicity	TUa												
Chronic Toxicity (Survival)	TUc	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86
Chronic Toxicity (Growth)	TUc	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86
Non-Chlorinated Phenolic Compouds	ug/L		<0.1			<0.1			<0.1			<0.1	
Chlorinated Phenolic Compouds	ug/L		<0.2			<0.2			<0.2			<0.2	
Endosulfan	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Endrin	ug/L		<0.001			<0.001			<0.001			<0.001	
HCH	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Radioactivity - Alpha	pCi/L		16.8						1.7				
Radioactivity - Beta	pCi/L		45.6						15.5				
Human Health - Noncarcinogens													
Acrolein	ug/L		<5						<5				
Antimony	ug/L		<1						<2				
Bis (2-Chloroethoxy) methane	ug/L		<0.05			<0.05			<0.05			<0.05	
Bis (2-Chloroisopropyl) ether	ug/L		<0.05			<0.05			<0.05			<0.05	
Chlorobenzene	ug/L		<0.5						<0.5				
Chromium III (Cr)	ug/L												
Di-n-Butyl Phthalate	ug/L		0.094			<0.075			<0.075			<0.075	
Dichlorobenzene	ug/L		<0.05			<0.05			<0.05			<0.05	

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2008	Feb-2008	Mar-2008	Apr-2008	May-2008	Jun-2008	Jul-2008	Aug-2008	Sep-2008	Oct-2008	Nov-2008	Dec-2008
Diethyl phthalate	ug/L		<0.05			<0.1			<0.1			<0.1	
Dimethyl phthalate	ug/L		<0.05			<0.05			<0.05			<0.05	
4,6-dinitro-2-methylphenol	ug/L		<0.1			<0.1			<0.1			<0.1	
2,4-dinitrophenol	ug/L		<0.1			<0.1			<0.1			<0.1	
Ethylbenzene	ug/L		<0.5						<0.5				
Fluoranthene	ug/L		<0.001			0.0044			0.039			0.0226	
Hexachlorocyclopentadiene	ug/L		<0.05			<0.05			<0.05			<0.05	
Nitrobenzene	ug/L		<0.05			<0.05			<0.05			<0.05	
Thallium	ug/L		<0.2						<0.2				
Toluene	ug/L		<0.5						<0.5				
Tributyltin	ug/L		<0.002						<0.002				
1,1,1-trichloroethane	ug/L		<0.5						<0.5				
Human Health - Carcinogens													
Acrylonitrile	ug/L		<2			<2			<2			<10	
Aldrin	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Benzene	ug/L		<0.5						<0.5				
Benzidine	ug/L		<0.05			<0.05			<0.05			<0.05	
Beryllium (Be)	ug/L		<0.2						<0.1			<0.5	
Bis (2-Chloroethyl) ether	ug/L		<0.05			<0.05			<0.05			<0.05	
Bis(2-ethylhexyl)-phthalate	ug/L		0.638			35.4			0.16			1.042	
Carbon tetrachloride	ug/L		<0.5						<0.5				
Chlordane	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chlorodibromomethane	ug/L		<0.5						<0.5				
Chloroform	ug/L		0.5						0.6				
DDT	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,4-Dichlorobenzene	ug/L		<0.5			0.041			0.035			0.03	
3,3'-Dichlorobenzidine	ug/L		<0.05			<0.05			<0.05			<0.05	
1,2-dichloroethane	ug/L		<0.5						<0.5				
1,1-dichloroethylene	ug/L		<0.5						<0.5				
Dichlorobromomethane	ug/L		<0.5						<0.5				
Dichloromethane	ug/L		<0.5						<0.5				
1,3-dichloropropene	ug/L		<0.5						<0.5				
Dieldrin	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2,4-Dinitrotoluene	ug/L		<0.05			<0.05			<0.05			<0.05	
1,2-Diphenylhydrazine	ug/L		<0.05			<0.05			<0.05			<0.5	
Halomethanes	ug/L		<1						<1				
Heptachlor	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Heptachlor epoxide	ug/L		<0.001			<0.001			<0.001			<0.001	
Hexachlorobenzene	ug/L		<0.001			<0.001			<0.001			<0.001	
Hexachlorobutadiene	ug/L		<0.05			<0.05			<0.05			<0.05	
Hexachloroethane	ug/L		<0.05			<0.05			<0.05			<0.05	
Isophorone	ug/L		<0.05			<0.05			0.053			<0.05	
N-Nitrosodimethylamine	ug/L		<0.05			<0.05			<0.05			<0.05	
N-Nitrosodi-N-propylamine	ug/L		<0.05			<0.05			<0.05			<0.05	
N-Nitrosodiphenylamine	ug/L		<0.05			<0.05			<0.05			<0.05	
PAH	ug/L		<0.02			<0.03			<0.02			<0.03	
PCBs	ug/L	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)

Attacnment K
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Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2008	Feb-2008	Mar-2008	Apr-2008	May-2008	Jun-2008	Jul-2008	Aug-2008	Sep-2008	Oct-2008	Nov-2008	Dec-2008
TCDD	pg/L		<1.7			<4.1			<4.5			<0.73	
1,1,2,2-tetrachloroethane	ug/L		<0.5						<0.5				
Tetrachloroethylene	ug/L		<0.5						<0.5				
Toxaphene	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trichloroethylene	ug/L		<0.5						<0.5				
1,1,2-trichloroethane	ug/L		<0.5						<0.5				
2,4,6-Trichlorophenol	ug/L		<0.1			0.108			0.095			0.062	
Vinyl chloride	ug/L		<0.5						<0.5				

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Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2009	Feb-2009	Mar-2009	Apr-2009	May-2009	Jun-2009	Jul-2009	Aug-2009	Sep-2009	Oct-2009	Nov-2009	Dec-2009
Conventional/NonConventional (3a)	mg/L												
BOD	mg/L	17.1	17.0	16.6	19.1	17.2	18.3	13.7	14.7	16.4	16.8	16.2	17.3
Total Suspended Solids	mg/L	5	6	6	6	6	6	5	4	5	6	5	6
Oil & Grease	mg/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	5.1
Settleable Solids	ml/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Coliform	MPN/100mL	55,913	80,829	58,226	45,290	69,323	75,593	88,291	69,678	46,267	105,413	43,677	37,381
Fecal Coliform	MPN/100mL	3,800	29,160	1,454	18,720	1,298	15,740	22,160	4,220	4,760	12,000	5,922	2,036
Enterococcus	MPN/100mL	2,240	5,360	4,260	1,494	7,160	4,600	4,440	4,300	4,296	6,220	5,620	1,200
Nitrate-N	mg/L	1.4	0.81	2.9	3.2	0.93	0.65	0.52	0.29	0.75	0.25	0.29	0.65
Nitrite-N	mg/L	1.6	1.80	2.20	2.20	1.40	1.10	0.97	0.80	1.60	0.75	1.40	0.90
Organic-N	mg/L	1.4	<1	1.4	<1	2.6	1.7	<1	<1	<1	1.8	3.6	2.1
pH		7.4	7.3	7.4	7.4	7.4	7.4	7.4	7.4	7.5	7.5	7.5	7.4
Temp	0C	21	20	21	22	22	24	24	25	25	24	22	21
Turbidity	NTU	3.6	3.5	3.6	3.4	3.6	3.5	3.2	3.1	3	3.6	3	3.6
Marine Aquatic Life													
Arsenic (As)	ug/L		1.4			1.3			<1			<1	
Cadmium (Cd)	ug/L		<0.5			0.8			<0.5			<0.5	
Chromium Total (Cr)	ug/L		<0.3			<5			<5				
Copper (Cu)	ug/L		14			29			18			14	
Lead (Pb)	ug/L		<5			<5			<5			<5	
Mercury (Hg)	ug/L		<0.2			<0.2			<0.2			<0.2	
Nickel (Ni)	ug/L		6.2			<5			<5			6	
Selenium (Se)	ug/L		2			3			3.2			3.3	
Silver (Ag)	ug/L		0.9			0.6			0.7			0.7	
Zinc (Zn)	ug/L		33			26			28			20	
Cyanide	ug/L		<5			<5			<5				
Residual Chlorine	mg/L	0.01	0.02	0.03	0.02	0.03	0.03	0.03	0.04	0.04	0.02	0.03	0.02
Ammonia-N	mg/L	20	22.5	18	18.9	20.8	19.5	21.1	20.7	21.3	22.7	23.4	22.6
Acute Toxicity	TUa												
Chronic Toxicity (Survival)	TUc	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86
Chronic Toxicity (Growth)	TUc	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86
Non-Chlorinated Phenolic Compouds	ug/L		<0.1			<0.1			<0.1			<0.1	
Chlorinated Phenolic Compouds	ug/L		<0.3			<0.4			<0.3			<0.4	
Endosulfan	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Endrin	ug/L		<0.001			<0.001			<0.001			<0.001	
HCH	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Radioactivity - Alpha	pCi/L		2.3						15				
Radioactivity - Beta	pCi/L		46.5						30.7				
Human Health - Noncarcinogens													
Acrolein	ug/L		<20						<4				
Antimony	ug/L		<2			<2			<2			<2	
Bis (2-Chloroethoxy) methane	ug/L		<0.05			<0.05			<0.05			<0.05	
Bis (2-Chloroisopropyl) ether	ug/L		<0.05			<0.05			<0.05			<0.05	
Chlorobenzene	ug/L		<0.5						<2				
Chromium III (Cr)	ug/L												
Di-n-Butyl Phthalate	ug/L		<0.075			<0.075			0.143			0.075	
Dichlorobenzene	ug/L		<0.05			<0.05			<0.05			<0.05	

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2009	Feb-2009	Mar-2009	Apr-2009	May-2009	Jun-2009	Jul-2009	Aug-2009	Sep-2009	Oct-2009	Nov-2009	Dec-2009
Diethyl phthalate	ug/L		<0.1			<0.1			<0.025			<0.1	
Dimethyl phthalate	ug/L		<0.05			<0.05			<0.05			<0.05	
4,6-dinitro-2-methylphenol	ug/L		<0.1			<0.1			<0.1			<0.1	
2,4-dinitrophenol	ug/L		<0.1			<0.1			<0.1			<0.01	
Ethylbenzene	ug/L		<0.5						<2				
Fluoranthene	ug/L		0.0025			0.0038			0.0091			0.0042	
Hexachlorocyclopentadiene	ug/L		<0.05			<0.05			<0.05			<0.05	
Nitrobenzene	ug/L		<0.05			<0.05			<0.05			<0.05	
Thallium	ug/L		<2			<2			<2			<2	
Toluene	ug/L		<0.5						<2				
Tributyltin	ug/L		<0.002						<0.001				
1,1,1-trichloroethane	ug/L		<0.5						<2				
Human Health - Carcinogens													
Acrylonitrile	ug/L		<2						<2				
Aldrin	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Benzene	ug/L		<0.5						<2				
Benzidine	ug/L		<0.05			<0.05			<0.05			<0.05	
Beryllium (Be)	ug/L		<0.5			<0.5			<0.5			<0.5	
Bis (2-Chloroethyl) ether	ug/L		<0.05			<0.05			<0.05			<0.05	
Bis(2-ethylhexyl)-phthalate	ug/L		4.4			36.2			9.889			21.56	
Carbon tetrachloride	ug/L		<0.5						<5				
Chlordane	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chlorodibromomethane	ug/L		<0.5						<2				
Chloroform	ug/L		<0.5						<2				
DDT	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,4-Dichlorobenzene	ug/L		<0.5			<0.01			<2			0.029	
3,3'-Dichlorobenzidine	ug/L		<0.05			<0.05			<0.05			<0.05	
1,2-dichloroethane	ug/L		<0.5						<2				
1,1-dichloroethylene	ug/L		<0.5						<5				
Dichlorobromomethane	ug/L		<0.5						<2				
Dichloromethane	ug/L		<0.5						<5				
1,3-dichloropropene	ug/L		<0.5						<2				
Dieldrin	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2,4-Dinitrotoluene	ug/L		<0.05			<0.05			<0.05			<0.05	
1,2-Diphenylhydrazine	ug/L		<0.05			<0.05			<0.05			<0.05	
Halomethanes	ug/L		<2						<10				
Heptachlor	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Heptachlor epoxide	ug/L		<0.001			<0.01			<0.001			<0.1	
Hexachlorobenzene	ug/L		<0.001			<0.01			<0.001			<0.001	
Hexachlorobutadiene	ug/L		<0.05			<0.05			<0.05			<0.05	
Hexachloroethane	ug/L		<0.05			<0.05			<0.05			<0.05	
Isophorone	ug/L		<0.05			<0.05			0.071			<0.05	
N-Nitrosodimethylamine	ug/L		<0.05			<0.05			<0.05			<0.05	
N-Nitrosodi-N-propylamine	ug/L		<0.05			<0.05			<0.05			<0.05	
N-Nitrosodiphenylamine	ug/L		<0.05			<0.05			<0.05			<0.05	
PAH	ug/L		<0.05			<0.05			<0.05			<0.05	
PCBs	ug/L	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2009	Feb-2009	Mar-2009	Apr-2009	May-2009	Jun-2009	Jul-2009	Aug-2009	Sep-2009	Oct-2009	Nov-2009	Dec-2009
TCDD	pg/L		<3.4			<5.2			1.6			<9.5	
1,1,2,2-tetrachloroethane	ug/L		<0.5						<2				
Tetrachloroethylene	ug/L		<0.5						<2				
Toxaphene	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trichloroethylene	ug/L		<0.5						<2				
1,1,2-trichloroethane	ug/L		<0.5						<2				
2,4,6-Trichlorophenol	ug/L		0.064			0.124			0.063			0.061	
Vinyl chloride	ug/L		<0.5						<5				

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2010	Feb-2010	Mar-2010	Apr-2010	May-2010	Jun-2010	Jul-2010	Aug-2010	Sep-2010	Oct-2010	Nov-2010	Dec-2010
Conventional/NonConventional (3a)	mg/L												
BOD	mg/L	18.3	19.2	18.6	18.0	17.7	19.0	19.9	18.5	15.2	15.2	16.8	16.8
Total Suspended Solids	mg/L	6	7.5	7.5	8	6.5	7.3	8.3	8.6	5.5	5.5	5.7	5.8
Oil & Grease	mg/L	< 5	< 5	5	5.2	5	< 5	5.1	5.1	5.5	5.3	< 5	5.9
Settleable Solids	ml/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Coliform	MPN/100mL	42,626	43,000	65,455	90,333	57,323	76,800	91,226	112,581	73,800	85,323	57,167	39,652
Fecal Coliform	MPN/100mL	5,360	3,888	2,600	3,560	15,340	15,940	13,020	4,380	20,632	39,940	2,360	2,480
Enterococcus	MPN/100mL	2,520	4,660	5,080	4,300	4,080	4,460	5,740	9,500	1,480	4,630	1,430	2,280
Nitrate-N	mg/L	1.50	0.89	0.56	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.58	0.53
Nitrite-N	mg/L	0.80	1.10	1.00	1.20	0.55	1.40	0.52	0.38	1.20	0.75	0.81	1.40
Organic-N	mg/L	<0.5	<0.5	2.9	0.7	1.9	2.8	<0.5	<0.5	<0.5	2.3	1.5	1
pH		7.4	7.3	7.4	7.4	7.3	7.4	7.4	7.4	7.3	7.4	7.3	7.3
Temp	0C	20	21	21	22	22	23	24	24	24	24	22	21
Turbidity	NTU	3.9	4.2	4.2	4.8	3.6	4.2	4.5	4.6	3.1	3.4	3.4	2.9
Marine Aquatic Life													
Arsenic (As)	ug/L		1			1.1			<1			1.1	
Cadmium (Cd)	ug/L		<0.5			<0.5			<0.5			<0.5	
Chromium Total (Cr)	ug/L		<5						<1				
Copper (Cu)	ug/L		19			14			16			14	
Lead (Pb)	ug/L		<5			<5			<5			<5	
Mercury (Hg)	ug/L		<0.2			<0.2			<0.2			<0.2	
Nickel (Ni)	ug/L		<5			6			<5			6	
Selenium (Se)	ug/L		4.6			1.2			2.2			1.2	
Silver (Ag)	ug/L		<0.5			0.97			0.35			0.97	
Zinc (Zn)	ug/L		32			15			20			15	
Cyanide	ug/L		<5						<5				
Residual Chlorine	mg/L	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13
Ammonia-N	mg/L	23.6	20	22.3	27.1	23.9	22.2	24.5	23.7	23.1	24	25	21
Acute Toxicity	TUa												
Chronic Toxicity (Survival)	TUc	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86
Chronic Toxicity (Growth)	TUc	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86
Non-Chlorinated Phenolic Compouds	ug/L		<0.02			<0.02			<0.02			<0.02	
Chlorinated Phenolic Compouds	ug/L		<0.6			<0.1			<0.3			<0.1	
Endosulfan	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Endrin	ug/L		<0.001			<0.001			<0.001			<0.001	
HCH	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Radioactivity - Alpha	pCi/L		7.2						7.8				
Radioactivity - Beta	pCi/L		25						21.7				
Human Health - Noncarcinogens													
Acrolein	ug/L		<4						<4				
Antimony	ug/L		<2			<2			<2			<2	
Bis (2-Chloroethoxy) methane	ug/L		<0.05			<0.05			<0.05			<0.05	
Bis (2-Chloroisopropyl) ether	ug/L		<0.05			<0.05			<0.05			<0.05	
Chlorobenzene	ug/L		<0.36						<2				
Chromium III (Cr)	ug/L		<5			2.2			<5			2.2	
Di-n-Butyl Phthalate	ug/L		0.113			0.19			0.113			0.129	
Dichlorobenzene	ug/L		<0.03			<0.03			<0.03			<0.03	

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2010	Feb-2010	Mar-2010	Apr-2010	May-2010	Jun-2010	Jul-2010	Aug-2010	Sep-2010	Oct-2010	Nov-2010	Dec-2010
Diethyl phthalate	ug/L		<0.1			<0.1			<0.11			<0.1	
Dimethyl phthalate	ug/L		<0.05			0.061			<0.055			0.0647	
4,6-dinitro-2-methylphenol	ug/L		<0.1			<0.1			<0.11			<0.1	
2,4-dinitrophenol	ug/L		<0.1			0.142			0.125			<0.1	
Ethylbenzene	ug/L		<0.25						<2				
Fluoranthene	ug/L		0.013			0.032			0.0187			0.0036	
Hexachlorocyclopentadiene	ug/L		<0.05			<0.05			<0.05			<0.001	
Nitrobenzene	ug/L		<0.05			<0.05			<0.05			<0.05	
Thallium	ug/L		<2			<2			<2			<2	
Toluene	ug/L		<0.36						<2				
Tributyltin	ug/L		<0.001						<0.002				
1,1,1-trichloroethane	ug/L		<0.3						<2				
Human Health - Carcinogens													
Acrylonitrile	ug/L		<1.2						<2				
Aldrin	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Benzene	ug/L		<0.28						<2				
Benzidine	ug/L		<0.05			<0.05			<0.05			<0.05	
Berylium (Be)	ug/L		<0.5			<0.5			<0.5			<0.5	
Bis (2-Chloroethyl) ether	ug/L		<0.05			<0.05			<0.05			<0.05	
Bis(2-ethylhexyl)-phthalate	ug/L		86.081			9.8			8.4			42.4	
Carbon tetrachloride	ug/L		<0.28						<5				
Chlordane	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chlorodibromomethane	ug/L		0.61						<2				
Chloroform	ug/L		1.2						<2				
DDT	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,4-Dichlorobenzene	ug/L		0.026			<0.01			0.024			0.0178	
3,3'-Dichlorobenzidine	ug/L		<0.05			<0.05			<0.05			<0.05	
1,2-dichloroethane	ug/L		<0.28						<2				
1,1-dichloroethylene	ug/L		<0.42						<5				
Dichlorobromomethane	ug/L		<0.3						<2				
Dichloromethane	ug/L		<0.95						<5				
1,3-dichloropropene	ug/L		<0.22						<2				
Dieldrin	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2,4-Dinitrotoluene	ug/L		<0.05			<0.05			<0.05			<0.05	
1,2-Diphenylhydrazine	ug/L		<0.05			<0.05			<0.05			<0.05	
Halomethanes	ug/L		<2						<0.05				
Heptachlor	ug/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Heptachlor epoxide	ug/L		<0.001			<0.001			<0.001			<0.001	
Hexachlorobenzene	ug/L		<0.001			<0.001			<0.001			0.001	
Hexachlorobutadiene	ug/L		<0.05			<0.05			<0.05			<0.05	
Hexachloroethane	ug/L		<0.05			<0.05			<0.05			<0.05	
Isophorone	ug/L		<0.05			<0.05			0.102			<0.05	
N-Nitrosodimethylamine	ug/L		<0.05			<0.05			<0.05			<0.05	
N-Nitrosodi-N-propylamine	ug/L		<0.05			<0.05			<0.05			<0.05	
N-Nitrosodiphenylamine	ug/L		<0.05			<0.05			<0.05			<0.05	
PAH	ug/L		<0.05			<0.1			<0.05			<0.05	
PCBs	ug/L	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)

Attacnment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2010	Feb-2010	Mar-2010	Apr-2010	May-2010	Jun-2010	Jul-2010	Aug-2010	Sep-2010	Oct-2010	Nov-2010	Dec-2010
TCDD	pg/L		<9.4			<11			<11			<10	
1,1,2,2-tetrachloroethane	ug/L		<0.3						<2				
Tetrachloroethylene	ug/L		<0.32						<2				
Toxaphene	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trichloroethylene	ug/L		<0.26						<2				
1,1,2-trichloroethane	ug/L		<0.3						<2				
2,4,6-Trichlorophenol	ug/L		0.352			0.061			0.222			0.0637	
Vinyl chloride	ug/L		<0.4						<5				

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2011	Feb-2011	Mar-2011	Apr-2011	May-2011	Jun-2011	Jul-2011	Aug-2011	Sep-2011	Oct-2011	Nov-2011	Dec-2011
Conventional/NonConventional (3a)	mg/L												
BOD	mg/L	18.8	19.8	18.5	17.4	18.7	15.8	15.2	15.4	18.7	13.9	15.9	17.0
Total Suspended Solids	mg/L	6	6	6	6	7	7	6	6	5	5	7	5
Oil & Grease	mg/L	5.4	5.5	6.8	6	< 5	5	< 5	< 5	< 5	< 5	< 5	5
Settleable Solids	ml/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total Coliform	MPN/100mL	33,581	67,143	90,774	78,067	106,678	115,500	115,000	88,323	112,400	93,961	106,067	124,162
Fecal Coliform	MPN/100mL	2,258	1,560	40,000	9,480	97,440	56,000	42,400	44,000	52,760	25,880	83,940	45,000
Enterococcus	MPN/100mL	1,440	4,858	6,760	5,260	10,520	6,680	6,540	7,300	8,000	3,238	10,600	8,480
Nitrate-N	mg/L	0.67	1.1	<0.5	0.9	0.7	0.57	<0.5	1.8	0.63	0.7	3.4	0.63
Nitrite-N	mg/L	1.10	1.90	0.89	1.10	1.00	0.26	0.35	0.94	0.46	0.58	0.40	1.00
Organic-N	mg/L	0.6	0.8	<0.5	1.3	0.9	0.7	3.5	1.4	2.1	3	1.8	0.6
pH		7.3	7.3	7.2	7.2	7.2	7.3	7.3	7.2	7.2	7.3	7.3	7.3
Temp	0C	21	21	22	23	23	24	25	25	25	24	23	21
Turbidity	NTU	3.1	3.8	3.6	3.7	4	4.5	3.7	3.6	3.3	3	3.6	3.1
Marine Aquatic Life													
Arsenic (As)	ug/L		<1.0			<1.0			<1.0			1.1	
Cadmium (Cd)	ug/L		<0.5			<0.5			<0.5			<0.5	
Chromium Total (Cr)	ug/L		<1			<1			<1				
Copper (Cu)	ug/L		16			24			17			23	
Lead (Pb)	ug/L		<5			<5			<5			<5	
Mercury (Hg)	ug/L		<0.2			<0.2			<0.2			<0.2	
Nickel (Ni)	ug/L		<5			6			<5			7	
Selenium (Se)	ug/L		3.1			4			4.6			2.3	
Silver (Ag)	ug/L		<0.5			0.6			<0.5			<0.5	
Zinc (Zn)	ug/L		28			18			25			17	
Cyanide	ug/L					<5						<5	
Residual Chlorine	mg/L	0.023	0.017	0.017	0.017	0.016	0.011	0.007	0.012	0.014	0.023	0.035	0.027
Ammonia-N	mg/L	23.9	25	24.7	23.3	24.4	22.8	24.7	26.7	28.2	29.7	31.6	28.5
Acute Toxicity	TUa												
Chronic Toxicity (Survival)	TUc	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86		17.86	17.86
Chronic Toxicity (Growth)	TUc	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86
Non-Chlorinated Phenolic Compouds	ug/L		<10			<20			<10			<20	
Chlorinated Phenolic Compouds	ug/L		<20			<20			<20			<20	
Endosulfan	ug/L	<0.005	<0.01	<0.003	<0.003	<0.01	<0.003	<0.003	<0.0029	<0.0029	<0.003	<0.01	<0.003
Endrin	ug/L		<0.005			<0.005			<0.002			<0.005	
HCH	ug/L	<0.005	<0.01	<0.003	<0.003	<0.01	<0.003	<0.003	<0.0039	<0.003	<0.004	<0.01	<0.004
Radioactivity - Alpha	pCi/L		3.1						8.4				
Radioactivity - Beta	pCi/L		12.2						9.6				
Human Health - Noncarcinogens													
Acrolein	ug/L		<4						<4				
Antimony	ug/L		<2			<2			<2			<2	
Bis (2-Chloroethoxy) methane	ug/L		<10			<10			<2.9			<10	
Bis (2-Chloroisopropyl) ether	ug/L		<10			<10			<2.4			<10	
Chlorobenzene	ug/L		<2						<0.36				
Chromium III (Cr)	ug/L		6			7			<5			<5	
Di-n-Butyl Phthalate	ug/L		<20			<20			<2.9			<20	
Dichlorobenzene	ug/L		<10			<10			<3			<10	

Attacnment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2011	Feb-2011	Mar-2011	Apr-2011	May-2011	Jun-2011	Jul-2011	Aug-2011	Sep-2011	Oct-2011	Nov-2011	Dec-2011
Diethyl phthalate	ug/L		<10			<10			<3.4			<10	
Dimethyl phthalate	ug/L		<10			<10			<2.4			<10	
4,6-dinitro-2-methyiphenol	ug/L		<20			<20			<3.8			<20	
2,4-dinitrophenol	ug/L		<20			<20			<7.7			<10	
Ethylbenzene	ug/L		<2						<0.25				
Fluoranthene	ug/L		<10			<10			<2.9			<10	
Hexachlorocyclopentadiene	ug/L		<10			<10			<4.8			<10	
Nitrobenzene	ug/L		<20			<20			<2.9			<20	
Thallium	ug/L		<2			<2			<2			<2	
Toluene	ug/L		<2						<0.36				
Tributyltin	ug/L		<0.002						<0.002				
1,1,1-trichloroethane	ug/L		<2						<0.3				
Human Health - Carcinogens													
Acrylonitrile	ug/L		<2						<1.2				
Aldrin	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzene	ug/L		<2						<0.28				
Benzidine	ug/L		<20			<20			<9.6			<20	
Berylium (Be)	ug/L		<0.5			<0.5			<0.5			<0.5	
Bis (2-Chloroethyl) ether	ug/L		<10			<10			<2.9			<10	
Bis(2-ethylhexyl)-phthalate	ug/L		<5			16			<5			13	
Carbon tetrachloride	ug/L		<5						<0.28				
Chlordane	ug/L	<0.1	<0.08	<0.1	<0.2	<0.1	<0.1	<0.1	<0.08	<0.1	<0.1	<0.1	<0.1
Chlorodibromomethane	ug/L		<2						<0.4				
Chloroform	ug/L		<2						0.86				
DDT	ug/L	<0.1	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	0.0086	<0.1	<0.1	<0.1	<0.1
1,4-Dichlorobenzene	ug/L		<2			<10			<2.4			<10	
3,3'-Dichlorobenzidine	ug/L		<20			<20			<7.2			<20	
1,2-dichloroethane	ug/L		<2						<0.28				
1,1-dichloroethylene	ug/L		<2						<0.42				
Dichlorobromomethane	ug/L		<2						<0.3				
Dichloromethane	ug/L		<5						<0.95				
1,3-dichloropropene	ug/L		<2						<0.32				
Dieldrin	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,4-Dinitrotoluene	ug/L		<10			<10			<3.4			<10	
1,2-Diphenylhydrazine	ug/L		<20			<20			<2.4			<20	
Halomethanes	ug/L		<5						<1				
Heptachlor	ug/L	<0.005	<0.01	<0.003	<0.003	<0.01	<0.003	<0.003	<0.0029	<0.0029	<0.003	<0.01	<0.003
Heptachlor epoxide	ug/L		<0.005			<0.005			<0.0025			<0.005	
Hexachlorobenzene	ug/L		<10			<10			<2.9			<10	
Hexachlorobutadiene	ug/L		<10			<10			<3.8			<10	
Hexachloroethane	ug/L		<10			<10			<3.4			<10	
Isophorone	ug/L		<10			<10			<2.9			<10	
N-Nitrosodimethylamine	ug/L		<20			<20			<2.4			<20	
N-Nitrosodi-N-propylamine	ug/L		<10			<10			<3.4			<10	
N-Nitrosodiphenylamine	ug/L		<10			<10			<1.9			<10	
PAH	ug/L		<20			<20			<20			<20	
PCBs	ug/L	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.25	<0.5	<0.5	<0.5	<0.5

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2011	Feb-2011	Mar-2011	Apr-2011	May-2011	Jun-2011	Jul-2011	Aug-2011	Sep-2011	Oct-2011	Nov-2011	Dec-2011
TCDD	pg/L		<9.8			<9.6			<9.8			<10	
1,1,2,2-tetrachloroethane	ug/L		<2						<0.3				
Tetrachloroethylene	ug/L		<2						<0.36				
Toxaphene	ug/L	<0.5	<0.25	<0.5	<0.5	<0.5	<0.05	<0.05	<0.25	<0.05	<0.05	<0.5	<0.05
Trichloroethylene	ug/L		<5						<0.26				
1,1,2-trichloroethane	ug/L		<2						<0.3				
2,4,6-Trichlorophenol	ug/L		<20			<20			<4.3			<20	
Vinyl chloride	ug/L		<1						<0.4				

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2012	Feb-2012	Mar-2012	Apr-2012	May-2012	Jun-2012	Jul-2012	Aug-2012	Sep-2012	Oct-2012	Nov-2012	Dec-2012
Conventional/NonConventional (3a)	mg/L												
BOD	mg/L	18.5	16.0	13.3	17.2	16.4	16.7	16.2	16.8	14.8	16.0	19.2	16
Total Suspended Solids	mg/L	6	5	5	8	9	11	7	7	6	6	7	6
Oil & Grease	mg/L	< 5	< 5	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	<5
Settleable Solids	ml/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	<0.1
Total Coliform	MPN/100mL	136,420	57,690	66,774	125,600	> 160,000	87,760	99,510	100,258	97,594	93,484	115,167	65752
Fecal Coliform	MPN/100mL	86,400	11,360	5,320	118,800	98,000	43,200	49,460	22,600	21,180	76,950	9,640	4566
Enterococcus	MPN/100mL	7,480	5,680	7,620	> 16,000	9,280	3,974	8,000	8,860	1,320	8,620	4,760	2180
Nitrate-N	mg/L	0.6	1.4	0.6	2.4	<0.50	<0.50	<0.50	<0.50	0.59	<0.50	<0.50	<0.5
Nitrite-N	mg/L	2.4	0.83	1.5	1.9	0.49	0.38	0.38	0.57	0.62	0.66	0.88	0.96
Organic-N	mg/L	<0.5	<0.5	<0.5	2.1	2.2	1.8	1.1	0.5	<0.5	<0.5	1.4	1.7
pH		7.3	7.3	7.4	7.4	7.4	7.5	7.4	7.3	7.3	7.3	7.3	7.1
Temp	0C	22	22	22	22	24	24	25	26	26	26	24	24
Turbidity	NTU	3.5	3	3	4.1	5	7.6	4.7	4.6	3.8	3.9	4	3.6
Marine Aquatic Life													
Arsenic (As)	ug/L		0.6			0.7			0.81			1.0	
Cadmium (Cd)	ug/L		<0.5			<0.5			<0.5			<0.5	
Chromium Total (Cr)	ug/L		<1						<1				
Copper (Cu)	ug/L		20			16			17			16	
Lead (Pb)	ug/L		<5			<5			<5			<5	
Mercury (Hg)	ug/L		<0.2			<0.2			<0.2			<0.2	
Nickel (Ni)	ug/L		<5			<5			<5			<5	
Selenium (Se)	ug/L		1.0			2.0			1.6			1.2	
Silver (Ag)	ug/L		0.48			<0.2			0.43			<0.5	
Zinc (Zn)	ug/L		22			17			13			22	
Cyanide	ug/L					<5						<5	
Residual Chlorine	mg/L	0.02	0.01	0.01	0.02	0.02	0.07	0.02	0.02	0.02	0.01	0.02	0.02
Ammonia-N	mg/L	30	30.3	23.9	26.6	25.5	27.7	30.3	29.2	25	26.6	31.7	31.3
Acute Toxicity	TUa												
Chronic Toxicity (Survival)	TUc	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86
Chronic Toxicity (Growth)	TUc	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86	17.86
Non-Chlorinated Phenolic Compouds	ug/L		<5			<40			<20			<20	
Chlorinated Phenolic Compouds	ug/L		<5			<40			<20			<20	
Endosulfan	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	ug/L		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
HCH	ug/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02
Radioactivity - Alpha	pCi/L		3.91						7.81				
Radioactivity - Beta	pCi/L		21.8						13.8				
Human Health - Noncarcinogens													
Acrolein	ug/L		<5						<5				
Antimony	ug/L		<2			<2			<2			<2	
Bis (2-Chloroethoxy) methane	ug/L		<0.5			<20			<10			<10	
Bis (2-Chloroisopropyl) ether	ug/L		<0.5			<20			<10			<10	
Chlorobenzene	ug/L		<0.5						<0.5				
Chromium III (Cr)	ug/L		<5			<5			<5			<5	
Di-n-Butyl Phthalate	ug/L		<2			<40			<20			<20	
Dichlorobenzene	ug/L		<0.5			<20			<10			<10	

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2012	Feb-2012	Mar-2012	Apr-2012	May-2012	Jun-2012	Jul-2012	Aug-2012	Sep-2012	Oct-2012	Nov-2012	Dec-2012
Diethyl phthalate	ug/L		<1			<20			<10			<10	
Dimethyl phthalate	ug/L		<0.5			<20			<10			<10	
4,6-dinitro-2-methylphenol	ug/L		<5			<40			<20			<20	
2,4-dinitrophenol	ug/L		<5			<40			<20			<20	
Ethylbenzene	ug/L		<0.5						<0.5				
Fluoranthene	ug/L		<0.5			<20			<10			<10	
Hexachlorocyclopentadiene	ug/L		<5			<20			<10			<10	
Nitrobenzene	ug/L		<1			<40			<20			<20	
Thallium	ug/L		<2			<2			<2			<2	
Toluene	ug/L		<0.5						<0.5				
Tributyltin	ug/L		<0.002						<0.002				
1,1,1-trichloroethane	ug/L		<0.5						<0.5				
Human Health - Carcinogens													
Acrylonitrile	ug/L		<2						<2				
Aldrin	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzene	ug/L		<2						<2				
Benzidine	ug/L		<5			<40			<20			<20	
Beryllium (Be)	ug/L		<0.5			<0.5			<0.5			<0.5	
Bis (2-Chloroethyl) ether	ug/L		<0.5			<20			<10			<10	
Bis(2-ethylhexyl)-phthalate	ug/L		<5			<200			<50			<50	
Carbon tetrachloride	ug/L		<0.5						<0.5				
Chlordane	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorodibromomethane	ug/L		<0.5						<0.5				
Chloroform	ug/L		1.0						0.58				
DDT	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,4-Dichlorobenzene	ug/L		<0.5			<20			<10			<10	
3,3'-Dichlorobenzidine	ug/L		<5			<40			<20			<20	
1,2-dichloroethane	ug/L		<0.5						<0.5				
1,1-dichloroethylene	ug/L		<0.5						<0.5				
Dichlorobromomethane	ug/L		<0.5						<0.5				
Dichloromethane	ug/L		<1						<0.5				
1,3-dichloropropene	ug/L		<0.5						<0.5				
Dieldrin	ug/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
2,4-Dinitrotoluene	ug/L		<5						<10				
1,2-Diphenylhydrazine	ug/L		<1			<40			<20			<20	
Halomethanes	ug/L		<0.5						<0.5				
Heptachlor	ug/L		<0.01			<0.01			<0.01			<0.01	
Heptachlor epoxide	ug/L		<0.005			<0.005			<0.005			<0.005	
Hexachlorobenzene	ug/L		<1			<20			<10			<10	
Hexachlorobutadiene	ug/L		<2			<20			<10			<10	
Hexachloroethane	ug/L		<3			<20			<10			<10	
Isophorone	ug/L		<1			<20			<10			<10	
N-Nitrosodimethylamine	ug/L		<2			<40			<20			<20	
N-Nitrosodi-N-propylamine	ug/L		<2			<20			<10			<10	
N-Nitrosodiphenylamine	ug/L		<1			<20			<10			<10	
PAH	ug/L		<20			<20			<20			<20	
PCBs	ug/L	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)	NODI(B)

Attacnment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Jan-2012	Feb-2012	Mar-2012	Apr-2012	May-2012	Jun-2012	Jul-2012	Aug-2012	Sep-2012	Oct-2012	Nov-2012	Dec-2012
TCDD	pg/L		<10			<10			<10			<11	
1,1,2,2-tetrachloroethane	ug/L		<0.5						<0.5				
Tetrachloroethylene	ug/L		<0.5						<0.5				
Toxaphene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	ug/L		<0.5						<0.5				
1,1,2-trichloroethane	ug/L		<0.5						<0.5				
2,4,6-Trichlorophenol	ug/L		<1			<40			<20			<20	
Vinyl chloride	ug/L		<0.5						<0.5				

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	RP to Exceed WQO	% of Data Detected < 20%	ML	Procedure 2: If % of Data Detected < 20%, then PG=ML * 5	MEC	Co=UCB95/95	Dm	Co	Cs	PG UCB95/95	Is MEC<PG UCB95/95?
Conventional/NonConventional (3a)	mg/L											
BOD	mg/L					23.137931						
Total Suspended Solids	mg/L					12						
Oil & Grease	mg/L					6.8						
Settleable Solids	ml/L					0						
Total Coliform	MPN/100mL					136420						
Fecal Coliform	MPN/100mL					118800						
Enterococcus	MPN/100mL					12400						
Nitrate-N	mg/L					3.4						
Nitrite-N	mg/L					2.4						
Organic-N	mg/L					5.1						
pH						7.5						
Temp	0C					26						
Turbidity	NTU					7.6						
Marine Aquatic Life												
Arsenic (As)	ug/L	No	No	2		2	3	98	3	3	3	Yes
Cadmium (Cd)	ug/L	No	Yes	0.2	1	0.8				0	0	
Chromium Total (Cr)	ug/L	No	No	5		8	0.12	98	0.12	0	11.88	Yes
Copper (Cu)	ug/L	No	No	0.5		30	2.29	98	2.29	2	30.71	Yes
Lead (Pb)	ug/L	No	Yes	0.5	2.5	<2		98				
Mercury (Hg)	ug/L	No	Yes	0.5	2.5	0		98		0.0005		
Nickel (Ni)	ug/L	No	No	1		8	0.087	98	0.087	0	8.613	Yes
Selenium (Se)	ug/L	No	No	2		4.7	0.082	98	0.082	0	8.118	Yes
Silver (Ag)	ug/L	No	No	0.2		2.3	0.178	98	0.178	0.16	1.942	No
Zinc (Zn)	ug/L	No	No	1		36	8.34	98	8.34	8	41.66	Yes
Cyanide	ug/L	inconclusive	Yes	5	25	0						
Residual Chlorine	mg/L	No	No			0.13	1.13	98	1.13	0	111.87	Yes
Ammonia-N	mg/L	No	No			31.7	317.6	98	317.6	0	31442.4	Yes
Acute Toxicity	TUa	NA				0						
Chronic Toxicity (Survival)	TUc	No	No			17.86	0.284	98	0.284	0	28.116	No
Chronic Toxicity (Growth)	TUc	No	No			17.86	0.18	98	0.18	0	17.82	No
Non-Chlorinated Phenolic Compouds	ug/L	No	Yes	1	5	0		98		0		
Chlorinated Phenolic Compouds	ug/L	No	Yes			0		98		0		
Endosulfan	ug/L	No	Yes	0.01	0.05							
Endrin	ug/L	No	Yes	0.01	0.05							
HCH	ug/L	No	Yes	0.02	0.1							
Radioactivity - Alpha	pCi/L	No	No			16.8	0.549	98	0.549	0	54.351	Yes
Radioactivity - Beta	pCi/L	No	No			46.5	1.024	98	1.024	0	101.376	Yes
Human Health - Noncarcinogens												
Acrolein	ug/L	No	Yes	2	10							
Antimony	ug/L	No	Yes	0.5	2.5							
Bis (2-Chloroethoxy) methane	ug/L	No	Yes	5	25							
Bis (2-Chloroisopropyl) ether	ug/L	No	Yes	2	10							
Chlorobenzene	ug/L	No	Yes	0.5	2.5							
Chromium III (Cr)	ug/L	No										
Di-n-Butyl Phthalate	ug/L	No	No	10		0.19	0.0023	98	0.0023	0	0.2277	Yes
Dichlorobenzene	ug/L	No	Yes	0.5	2.5							

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	RP to Exceed WQO	% of Data Detected < 20%	ML	Procedure 2: If % of Data Detected < 20%, then PG=ML * 5	MEC	Co=UCB95/95	Dm	Co	Cs	PG UCB95/95	Is MEC<PG UCB95/95?
Diethyl phthalate	ug/L	No	Yes	2	10			98		0		
Dimethyl phthalate	ug/L	No	Yes	2	10	0.0647						
4,6-dinitro-2-methylphenol	ug/L	No	Yes	5	25							
2,4-dinitrophenol	ug/L	No	Yes	5	25	0.142						
Ethylbenzene	ug/L	inconclusive	Yes	0.5	2.5							
Fluoranthene	ug/L	No	No	0.05		0.039	0.0006	98	0.0006	0	0.0594	Yes
Hexachlorocyclopentadiene	ug/L	No	Yes	5	25							
Nitrobenzene	ug/L	No	Yes	1	5							
Thallium	ug/L	No	Yes	1	5							
Toluene	ug/L	inconclusive	Yes	0.5	2.5							
Tributyltin	ug/L	inconclusive	Yes			0						
1,1,1-trichloroethane	ug/L	inconclusive	Yes	0.5	2.5							
Human Health - Carcinogens												
Acrylonitrile	ug/L	inconclusive	Yes	2	10							
Aldrin	ug/L	No	Yes	0.005	0.025							
Benzene	ug/L	inconclusive	Yes	0.5	2.5							
Benzidine	ug/L	inconclusive	Yes	5	25							
Berylium (Be)	ug/L	No	Yes	0.5	2.5							
Bis (2-Chloroethyl) ether	ug/L	inconclusive	Yes	1	5							
Bis(2-ethylhexyl)-phthalate	ug/L	No	No	5		86.081	1.07	98	1.07	0	105.93	Yes
Carbon tetrachloride	ug/L	inconclusive	Yes	0.5	2.5							
Chlordane	ug/L	No	Yes	0.1	0.5							
Chlorodibromomethane	ug/L	inconclusive	Yes	0.5	2.5	0.61						
Chloroform	ug/L	No	No	0.5		1.2	0.0201	98	0.0201	0	1.9899	Yes
DDT	ug/L	No	Yes	0.05	0.25							
1,4-Dichlorobenzene	ug/L	No	No	0.5		0.041	0.0005	98	0.0005	0	0.0495	Yes
3,3'-Dichlorobenzidine	ug/L	inconclusive	Yes	5	25							
1,2-dichloroethane	ug/L	inconclusive	Yes	0.5	2.5							
1,1-dichloroethylene	ug/L	inconclusive	Yes	0.5	2.5							
Dichlorobromomethane	ug/L	inconclusive	Yes	0.5	2.5							
Dichloromethane	ug/L	inconclusive	Yes	0.5	2.5							
1,3-dichloropropene	ug/L	inconclusive	Yes	0.5	2.5							
Dieldrin	ug/L	No	Yes	0.01	0.05							
2,4-Dinitrotoluene	ug/L	No	Yes	5	25							
1,2-Diphenylhydrazine	ug/L	inconclusive	Yes	1	5							
Halomethanes	ug/L	inconclusive	Yes									
Heptachlor	ug/L	No	Yes	0.01	0.05							
Heptachlor epoxide	ug/L	inconclusive	Yes	0.01	0.05							
Hexachlorobenzene	ug/L	inconclusive	Yes	1	5							
Hexachlorobutadiene	ug/L	No	Yes	1	5							
Hexachloroethane	ug/L	No	Yes	1	5							
Isophorone	ug/L	No	Yes	1	5							
N-Nitrosodimethylamine	ug/L	No	Yes	5	25							
N-Nitrosodi-N-propylamine	ug/L	No	Yes	5	25							
N-Nitrosodiphenylamine	ug/L	No	Yes	1	5							
PAH	ug/L	inconclusive	Yes									
PCBs	ug/L	inconclusive	Yes									

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	RP to Exceed WQO	% of Data Detected < 20%	ML	Procedure 2: If % of Data Detected < 20%, then PG=ML * 5	MEC	Co=UCB95/95	Dm	Co	Cs	PG UCB95/95	Is MEC<PG UCB95/95?
TCDD	pg/L	Yes				0.0000016	0.000000017	98	1.7E-08	0	0.000001683	
1,1,2,2-tetrachloroethane	ug/L	inconclusive	Yes	0.5	2.5							
Tetrachloroethylene	ug/L	inconclusive	Yes	0.5	2.5							
Toxaphene	ug/L	No	Yes	0.5	2.5							
Trichloroethylene	ug/L	inconclusive	Yes	0.5	2.5							
1,1,2-trichloroethane	ug/L	inconclusive	Yes	0.5	2.5							
2,4,6-Trichlorophenol	ug/L	No	No			0.352	0.0038	98	0.0038	0	0.3762	Yes
Vinyl chloride	ug/L	inconclusive	Yes	0.5	2.5							

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Procedure 1: If MEC<PG UCB95/95, then select MEC as PG	Procedure 1: If MEC>PG UCB95/95, then select PG	Final PG	Previous PG	Comment
Conventional/NonConventional (3a)	mg/L					
BOD	mg/L					
Total Suspended Solids	mg/L					
Oil & Grease	mg/L					
Settleable Solids	ml/L					
Total Coliform	MPN/100mL					
Fecal Coliform	MPN/100mL					
Enterococcus	MPN/100mL					
Nitrate-N	mg/L					
Nitrite-N	mg/L					
Organic-N	mg/L					
pH						
Temp	0C					
Turbidity	NTU					
Marine Aquatic Life						
Arsenic (As)	ug/L	2		2	7.4	more stringent
Cadmium (Cd)	ug/L			1	1	no change
Chromium Total (Cr)	ug/L	8		8	8	no change
Copper (Cu)	ug/L	30		30	32	more stringent
Lead (Pb)	ug/L			23	23	no change, all data ND. Carryover PG
Mercury (Hg)	ug/L			0.3	0.3	no change, all data ND. Carryover PG
Nickel (Ni)	ug/L	8		8	19	more stringent
Selenium (Se)	ug/L	4.7		4.7	4.9	more stringent
Silver (Ag)	ug/L		1.9	1.9	1	less stringent, more detected data available
Zinc (Zn)	ug/L	36		36	38	more stringent
Cyanide	ug/L			25	25	no change, carryover
Residual Chlorine	mg/L	0.13		0.13	0.1	set to MEC
Ammonia-N	mg/L	32		32	26	set to MEC
Acute Toxicity	TUa					
Chronic Toxicity (Survival)	TUc	28.116				
Chronic Toxicity (Growth)	TUc		18	18	18	no change
Non-Chlorinated Phenolic Compouds	ug/L			5	5	no change, carryover
Chlorinated Phenolic Compouds	ug/L		0.416	0.42	0.42	no change, carryover
Endosulfan	ug/L			0.05	0.05	no change
Endrin	ug/L			0.05	0.05	no change
HCH	ug/L			0.1	0.1	no change
Radioactivity - Alpha	pCi/L	16.8		15	15	limit carryover
Radioactivity - Beta	pCi/L	46.5		50	50	limit carryover
Human Health - Noncarcinogens						
Acrolein	ug/L			10	10	no change
Antimony	ug/L			2.5	2.5	no change
Bis (2-Chloroethoxy) methane	ug/L			25	25	no change
Bis (2-Chloroisopropyl) ether	ug/L			10	10	no change
Chlorobenzene	ug/L			2.5	2.5	no change
Chromium III (Cr)	ug/L			8	8	carryover
Di-n-Butyl Phthalate	ug/L	0.19		0.19	0.33	more stringent, new information
Dichlorobenzene	ug/L			2.5	2.5	no change

Attachment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Procedure 1: If MEC<PG UCB95/95, then select MEC as PG	Procedure 1: If MEC>PG UCB95/95, then select PG	Final PG	Previous PG	Comment
Diethyl phthalate	ug/L			10	0.25	less stringent, all NDs
Dimethyl phthalate	ug/L			10	10	no change
4,6-dinitro-2-methylphenol	ug/L			25	25	no change
2,4-dinitrophenol	ug/L			25	25	no change
Ethylbenzene	ug/L			2.5	2.5	no change
Fluoranthene	ug/L	0.039		0.039	0.25	more stringent, new information
Hexachlorocyclopentadiene	ug/L			25	25	no change
Nitrobenzene	ug/L			5	5	no change
Thallium	ug/L			5	5	no change
Toluene	ug/L			2.5	0.6	less stringent, all NDs
Tributyltin	ug/L			0.0263	0.0263	no change, carryover
1,1,1-trichloroethane	ug/L			2.5	2.5	no change
Human Health - Carcinogens						
Acrylonitrile	ug/L			10	10	no change
Aldrin	ug/L			0.025	0.025	no change
Benzene	ug/L			2.5	2.5	no change
Benzidine	ug/L			0.0068	0.0068	Limits will be carried over, inconclusive RP
Berylium (Be)	ug/L			2.5	2.5	no change
Bis (2-Chloroethyl) ether	ug/L			5	5	no change
Bis(2-ethylhexyl)-phthalate	ug/L	86		50	2	Revert to previous PG per Discharger's request
Carbon tetrachloride	ug/L			2.5	2.5	no change
Chlordane	ug/L			0.5	0.5	no change
Chlorodibromomethane	ug/L			0.61	1.3	more stringent, new information, set to MEC
Chloroform	ug/L	1.2		1.2	1.4	more stringent, new information
DDT	ug/L			0.25	0.25	no change
1,4-Dichlorobenzene	ug/L	0.041		0.041	3	more stringent, new information
3,3'-Dichlorobenzidine	ug/L			25	25	no change
1,2-dichloroethane	ug/L			2.5	2.5	no change
1,1-dichloroethylene	ug/L			2.5	2.5	no change
Dichlorobromomethane	ug/L			2.5	2.5	no change
Dichloromethane	ug/L			2.5	2.5	no change
1,3-dichloropropene	ug/L			2.5	2.5	no change
Dieldrin	ug/L			0.05	0.05	no change
2,4-Dinitrotoluene	ug/L			25	25	no change
1,2-Diphenylhydrazine	ug/L			5	5	no change
Halomethanes	ug/L			4.4	4.4	no change, carryover previous PG
Heptachlor	ug/L			0.05	0.05	no change
Heptachlor epoxide	ug/L			0.002	0.002	carryover effluent limits
Hexachlorobenzene	ug/L			5	5	no change
Hexachlorobutadiene	ug/L			5	5	no change
Hexachloroethane	ug/L			5	5	no change
Isophorone	ug/L			5	5	no change
N-Nitrosodimethylamine	ug/L			25	25	no change
N-Nitrosodi-N-propylamine	ug/L			25	25	no change
N-Nitrosodiphenylamine	ug/L			5	5	no change
PAH	ug/L			0.1	0.1	no change, carryover previous PG
PCBs	ug/L			0.0019	0.0019	carryover effluent limits

Attacnment K
Derivations of Reasonable Potential Analyses and Performance Goals
Oxnard Wastewater Treatment Plant
(CA0054097, CI-2022)

Constituents	units	Procedure 1: If MEC<PG UCB95/95, then select MEC as PG	Procedure 1: If MEC>PG UCB95/95, then select PG	Final PG	Previous PG	Comment
TCDD	pg/L			0.00000039	0.00000039	carryover effluent limits
1,1,2,2-tetrachloroethane	ug/L			2.5	2.5	no change
Tetrachloroethylene	ug/L			2.5	2.5	no change
Toxaphene	ug/L			2.5	2.5	no change
Trichloroethylene	ug/L			2.5	2.5	no change
1,1,2-trichloroethane	ug/L			2.5	2.5	no change
2,4,6-Trichlorophenol	ug/L	0.35		0.35	50	more stringent, new information
Vinyl chloride	ug/L			2.5	2.5	no change

APPENDIX C – VENTURA AIR POLLUTION CONTROL DISTRICT PERMIT TO OPERATE

Ventura County
Air Pollution
Control District

669 County Square Drive
Ventura, California 93003

tel 805/645-1400
fax 805/645-1444
www.vcapcd.org

Michael Villegas
Air Pollution Control Officer

PERMIT TO OPERATE
Number 01137

Valid October 1, 2013 to September 30, 2014

This Permit Has Been Issued To The Following:

Company Name / Address:	Facility Name / Address:
City of Oxnard-Wastewater Division 6001 S. Perkins Rd. Oxnard, CA 93033	Oxnard Wastewater Treatment Plant 6001 South Perkins Road Oxnard, CA 93033

Permission Is Hereby Granted To Operate The Following:

2 - 500 BHP Caterpillar Effluent Pump Natural Gas Engines, Model G-398, Rich Burn (as defined in VCAPCD Rule 74.9), each equipped with NSCR 3-Way Catalytic Converter, Oxygen Sensor, and Air/Fuel Ratio Controller, for Rule 74.9 compliance, (Engines Nos. 1 & 3).

3 - 800 BHP Waukesha Electrical Generator Waste Gas Engines (as defined in VCAPCD Rule 74.9), Model P9390G, Rich Burn, equipped with Pre-Stratified Charge for Rule 74.9 compliance (Engines Nos. E7610.00, E7710.00 & E7810.00).

2 - 24000 Cubic Feet Per Hour Varec, Model 239, Waste Gas Burners (24 MMBTU/Hr on Natural Gas), 6" Feed Size, used for Digester Gas Incineration

1 - 48000 Cubic Feet Per Minute Air Capacity Odor Reduction Tower, B.F. Goodrich/Media Koro-Z, for odor reduction and H2S control

1 - Headworks Facilities controlled by a 25,000 SCFM US Filter LO/Pro Odor Control System consisting of a three-stage absorption system using Sodium Hydroxide and Sodium Hypochlorite for hydrogen sulfide removal; and equipped with a hydrogen sulfide analyzer.

1 - Odor Reduction Station (Solids Processing Building and Eastern Trunk Pump Station), Calvert FRP Fine Mist Tower, 10 Feet Diameter x 37 Feet High, 22,000 CFM Capacity, equipped with an Interscan Model LD-17 H2S Analyzer

Emergency Standby Diesel Engines For Electricity Generators

1 - 2250 BHP General Motors Emergency Standby Diesel Engine, Model 16-567-E4, Serial No. 66-HI-1082, no EPA Family Name, Model Year 1966

1 - 2250 BHP General Motors Emergency Standby Diesel Engine, Model 16-567-E-4, Serial No. 66-HI-1161, no EPA Family Name, Model Year 1966

1 - 2172 BHP Caterpillar Emergency Standby Diesel Engine, Model 3512B TA, Serial No. 1GZ02501, EPA Family Name 5CPXL58-6ERK, Model Year 2005

1 - 263 BHP Caterpillar Emergency Standby Diesel Engine, Model 3208, Serial No. 5YF00565, no EPA family Name, Model Year 1989

VCAPCD Permit To Operate Number 01137
Issued To Oxnard Wastewater Treatment Plant
Valid October 1, 2013 to September 30, 2014

1 - 636 BHP Caterpillar Emergency Standby Diesel Engine, Model C15, Serial No. FSE00892, EPA Family Name 7CPXL15.2ESK, ARB Executive Order U-R-001-0308
1 - 250 BHP Cummins Emergency Standby Diesel Engine, Model QSB7-G3, Serial No. 73123393, EPA Family Name ACEXL0409AAB, Tier 3, CARB Executive Order No. U-R-002-0516, Located at Advanced Water Purification Site at 5700 South Perkins Road in Oxnard

Emergency Standby Diesel Engine For Air Compressor

1 - 139 BHP (104 KW) John Deere Emergency Diesel Engine, Model 4045HF275C, Serial No. PE 4045H376314, EPA Family Name 5JDXL06.8078, Model Year 2005

This Permit Has Been Issued Subject To The Following Conditions:

1. Permitted Emissions

	Tons/Year	Pounds/Hour
Reactive Organics	10.18	8.36
Nitrogen Oxides	15.33	27.76
Particulate Matter	1.16	1.61
Sulfur Oxides	2.54	1.69
Carbon Monoxide	145.35	84.54
Chlorine	0.75	0.52
Hydrogen Sulfide	9.47	2.16

2. Annual fuel consumption in the Caterpillar internal combustion engines, the Waukesha internal combustion engines, and the Varec Waste Gas Burners shall not exceed the following:

   a) Total natural gas consumption in the two (2) 500 HP Caterpillar internal combustion engines (Engine Nos. 1 & 3) shall not exceed 5.0 million cubic feet per year.

   b) Total digester waste gas consumption in the three (3) 800 HP Waukesha internal combustion engines (Engine Nos. E7610.00, E7710.00, & E7810.00) shall not exceed 155.00 million cubic feet per year.

   c) Incineration of digester gas in the Varec Waste Gas Burners shall not exceed 146.0 million cubic feet per year.

   In order to comply with this condition, permittee shall maintain and operate meters to measure and record gas consumption. The meters shall be operated and calibrated according to manufacturer's specifications. The gas meter records shall be summed on a monthly basis. The monthly totals shall be summed for the previous twelve calendar (12) months. Gas consumption totals for any twelve (12) calendar month rolling period in excess of the above limits shall be considered a violation of this condition.

3. Prior to exceeding any of the above limits, permittee shall submit an application to the APCD to increase those limits. Any request

to increase fuel use in the two (2) 500 HP Caterpillar internal combustion engines (Engines Nos. 1 & 3) shall be subject to APCD Rule 26.

4. Permittee shall comply with APCD Rule 74.9, "Stationary Internal Combustion Engines". This includes, but is not limited to, the following permit conditions.

5. Pursuant to Rule 74.9.F, Reporting Requirements, within 45 days of the end date of each permit renewal period, the operator of a permitted engine subject to the provisions of the rule shall provide the District with the following information:

   a) Engine manufacturer, model number, operator identification number and location of each engine.

   b) A summary of maintenance reports during the renewal period, including quarterly screening data if applicable.

   For each engine exempt pursuant to Subsection D.2, total annual operating hours shall be reported annually. For each engine exempt pursuant to subsection D.3, total annual hours of maintenance operaton shall be reported annually. Reports shall be provided to the District after every calendar year by February 15.

6. Emissions of oxides of nitrogen (NOx) from each of the two (2) 500 HP Caterpillar internal combustion engines (Engines Nos. 1 & 3) shall not exceed 25 parts per million (ppmv) as corrected to 15% oxygen.

7. Emissions of oxides of nitrogen (NOx) from each of the three (3) 800 HP Waukesha internal combustion engines (Engines Nos. E7610.00, E7710.00, & E7810.00) shall not exceed 50 parts per million (ppmv) as corrected to 15% oxygen. This condition is applied for APCD Rule 74.9.B.1 compliance. As of January 1, 1997, the NOx limits are 25 parts per million (ppmv) as corrected to 15% oxygen for rich burn engines fired on natural gas and 50 parts per million (ppmv) as corrected to 15% oxygen for rich burn engines fired on waste gas. As detailed in VCAPCD Rule 74.9.I.11, waste gas is defined as fuel gas produced at either waste water/sewage treatment facilities or landfills containing no more than 25 percent by volume supplemental gas.

8. Emissions from each engine shall not exceed 4500 ppm carbon monoxide, as corrected to 15% oxygen, pursuant to APCD Rule 74.9.B.1.

9. Emissions from each engine shall not exceed 250 ppm reactive organic compounds, as corrected to 15% oxygen, pursuant to APCD Rule 74.9.B.1.

10. In order to comply with the engine emission Conditions, permittee shall perform a source test every 24 months as required by VCAPCD

Rule 74.9. In addition, the NSCR system on the Caterpillar engines shall be maintained and operated with a minimum temperature rise across the catalyst of 15 degrees Fahrenheit.

11. Hydrogen Sulfide emissions from the Odor Reduction Tower shall not exceed 5 ppm by volume.

12. Hydrogen Sulfide emissions from the Odor Reduction Station shall not exceed 4 ppm by volume at the Solids Processing Building.

13. Hydrogen sulfide emissions from the 25,000 CFM US Filter LO/PRO Odor Control System three-stage absorption system controlling the Headworks Facilities shall not exceed 3 ppm by volume. The chlorine concentration at the outlet of the 25,000 CFM US Filter LO/PRO Odor Control System three-stage absorption system controlling the Headworks Facilities shall not exceed 0.1 ppm by volume. This condition is applied pursuant to Rule 51, "Nuisance"; and Rule 54, "Sulfur Compounds".

    In order to comply with this condition, permittee shall maintain the control system parameters (i.e., pH of scrubbing solution, ORP of the scrubbing solution, pressure drop across the control system, and space velocity through the control system) at values that ensure that the above hydrogen sulfide and chlorine concentrations are not exceeded.

    Permittee, upon request of the District, shall conduct testing to ascertain the hydrogen sulfide and chlorine emissions from the 25,000 CFM US Filter LO/PRO Odor Control System three-stage absorption system controlling the Headworks Facilities, using APCD approved methods.

14. Permittee shall install and maintain a continuous hydrogen sulfide analyzer at the outlet of the 25,000 SCFM US Filter LO/PRO Odor Control System three-stage absorption system controlling the Headworks Facilities to monitor the hydrogen sulfide concentration in ppm by volume at the outlet of the 25,000 SCFM US Filter LO/PRO Odor Control System three-stage absorption system controlling the Headworks Facilities. The analyzer shall be installed, operated, and calibrated according to the manufacturer's specifications. This condition is applied to ensure compliance with Rule 51, "Nuisance"; and Rule 54, "Sulfur Compounds".

15. Permittee shall install and maintain pH and ORP (oxidation reduction potential) measuring and monitoring devices to measure and record the pH and ORP of the scrubbing solution in the 25,000 SCFM US Filter LO/PRO Odor Control System three-stage absorption system controlling the Headworks Facilities. Permittee shall also install and maintain pressure monitoring devices to monitor the pressure drop across the 25,000 SCFM US Filter LO/PRO Odor Control System three-stage absorption system controlling the Headworks. All devices shall be installed, operated, and calibrated according to the manufacturer's specifications. This condition is applied to

ensure compliance with the requirements of Rule 51, "Nuisance"; and Rule 54, "Sulfur Compounds".

16. The stack height of the 25,000 SCFM US Filter LO/PRO Odor Control System three-stage absorption system controlling the Headworks Facilities shall be no less than 9 meters (29.5 feet). The stack diameter of at the outlet of the 25,000 SCFM US Filter LO/PRO Odor Control System three-stage absorption system controlling the Headworks Facilities shall not exceed 0.9 meters (2.95 feet). The stack gas exit velocity from the 25,000 SCFM US Filter LO/PRO Odor Control System three-stage absorption system controlling the Headworks Facilities shall be no less than 18.5 meters per second (60.7 feet per second). This condition is applied pursuant to Rule 51, "Nuisance"; and pursuant to Rule 54, "Sulfur Compounds".

17. All operations shall comply with the requirements of Rule 51, "Nuisance".

18. All equipment shall be maintained and operated in a manner that ensures compliance with all applicable Rule and permit conditions.

19. Permittee shall maintain records showing, for the 25,000 SCFM US Filter LO/PRO Odor Control System three-stage absorption system controlling the Headworks Facilities, on a monthly basis, a log of operating time for the control system, and monitoring equipment; records of the readings from the monitoring equipment showing the pressure drop across the control system; records of the readings from the monitoring equipment showing the hydrogen sulfide concentrations, pH of the scrubbing solution in the control system, and ORP of the scrubbing solution in the control system; and a log for the control system and monitoring equipment detailing all routine and non-routine maintenance performed. All records shall be compiled into monthly reports and shall be made available to APCD personnel upon request. All records shall be retained for at least two years and shall be made available to APCD personnel upon request.

20. The Hydrogen Sulfide analyzer on the Odor Reduction Tower shall be maintained in good working order at all times. The Hydrogen Sulfide analyzers on the Odor Reduction Station shall be maintained in good working order at all times. Malfunctions are subject to APCD Rule 32 (Breakdowns), as are all other air pollution related breakdowns at the plant. Analyzer outputs shall be continuously recorded on strip charts, or shall be recorded using an electronic data acquisition/storage system. Records or strip charts shall be maintained on site for at least two years and shall be made available to APCD personnel upon request.

21. When sodium hypochlorite is used, chlorine emissions from the Odor Reduction Station (Solids Processing Building and Eastern Trunk Pump Station Odor Reduction Station) shall not exceed 2 ppm by volume. Scrubber drain pH shall be maintained between 8.0 and 9.0 to ensure compliance with this requirement. Operation of the

Solids Processing Building and Eastern Trunk Pump Station Odor Reduction Station using sodium hypochlorite shall be limited to 2562 hours per year. In order to demonstrate compliance with this condition, the permittee shall maintain records of the hours of operation when using sodium hypochlorite and upon the request of the District, shall measure the chlorine emissions from the Odor Reduction Station (Solids Processing Building and Eastern Trunk Pump Station Odor Reduction Station).

22. Under no circumstances shall raw digester gas be vented to the atmosphere without prior approval from the APCD. All digester gas produced at the plant shall be flared, or disposed of in an alternative manner approved by the APCD.

23. Hydrogen Sulfide content of produced digester gas shall not exceed 100 ppm.

24. Hydrogen Sulfide content and heat content of the produced digester gas (in grains/100 cu. ft.) shall be determined by analytical means every 6 months, by an independent laboratory or the laboratory at the City of Oxnard Wastewater Treatment Facility, with results kept on file for inspection by APCD personnel for at least 2 years.

25. Annual hours of operation for maintenance and testing of each emergency engine shall not exceed 20 hours per year, except for the 2172 BHP and 636 BHP Caterpillar Emergency Standby Diesel Engines, which shall not exceed 50 hours per year. This limit does not include emergency operation when electrical line service has failed. When not being operated for maintenance or testing, the emergency engine shall only be used during a failure or loss of all or part of normal electrical power service to the facility. This condition is applied pursuant to the California ARB Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines.

    In order to comply with this condition, the engine shall be equipped with a non-resettable hour meter and the permittee shall maintain a log that differentiates operation during maintenance and testing from emergency operation. These records shall be compiled into a monthly total. The monthly operating hour records shall be summed for the previous 12 months. Total operating hours for any of these 12 month periods, excluding emergency operation, in excess of the specified annual limit shall be considered a violation of this condition.

26. The emergency diesel engine(s) shall be operated in compliance with all applicable requirements of the California ARB Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines, Section 93115 through 93115.15, Title 17, California Code of Regulations. This includes, but is not limited to, the following permit conditions.

27. Pursuant to Section 93115.5(b) of the ATCM for Stationary Compression Ignition Engines, effective January 1, 2006, no owner

or operator of an in-use emergency standby stationary diesel-fueled engine shall add to the engine or any fuel tank directly attached to the engine any fuel unless the fuel is CARB diesel fuel or another fuel that meets the requirements of Section 93115.5(b) of the ATCM.

28. Pursuant to Rule 74.9.D.3, an emergency engine is exempt from Rule 74.9, "Stationary Internal Combustion Engines", provided that it is operated during either an emergency or maintenance operation. Maintenance operation is limited to 50 hours per calendar year and is defined as "the use of an emergency standby engine and fuel system during testing, repair, and routine maintenance to verify its readiness for emergency standby use".

29. Permittee shall maintain records for the Hydrogen Sulfide analyzers on the Odor Reduction Tower and the Odor Reduction Station. Permittee shall maintain records of the hours of operation of the Solids Processing Building and Eastern Trunk Pump Station Odor Reduction Station when using sodium hypochlorite. Such records shall include the date and time. These records shall be compiled on a monthly basis. The compiled records shall be maintained for at least two years and shall be made available to APCD personnel upon request.

30. Permittee shall maintain records as required by VCAPCD Rule 74.9.E, and the monthly fuel consumption and hours of operation (when applicable) of the internal combustion engines. Permittee shall also maintain records showing the amount of digester gas produced and the disposition of this gas (amount expended to engines; amount expended to flare). All records shall be compiled into monthly reports and shall be maintained for at least two years.

31. A log of engine operation for the emergency engine shall be maintained based on readings from a non-resettable hour meter. The log shall differentiate operation during maintenance and testing from operation during an emergency. The hours of operation shall be totaled on a monthly basis and shall be summed for the previous 12 months.

    This data shall be maintained for a minimum of three (3) years from the date of each entry and shall be made available to the APCD upon request.

32. On and after October 19, 2013, the two 500 BHP Caterpillar Effluent Pump Natural Gas Engines shall comply with 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAP). This includes, but is not limited to, the following requirements for non-emergency 4 stroke rich burn spark ignited engines rated at less than or equal to 500 BHP that commenced construction before June 12, 2006:

    Pursuant to 40 CFR Part 63.6603, Table 2d, the permittee shall

meet the following requirements:

a) Change oil and filter every 1,440 hours of operation, or annually, whichever comes first. Permittee shall have the option to utilize an oil analysis program as described in 40 CFR Part 63.6625(i) in order to extend the specified oil change requirement; and
b) Inspect spark plugs every 1,440 hours of operation, or annually, whichever comes first, and replace as necessary; and
c) Inspect all hoses and belts every 1,440 hours of operation, or annually, whichever comes first, and replace as necessary.

During periods of startup, the permittee shall minimize the RICE time spent at idle and minimize the RICE startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. The permittee shall operate and maintain the RICE and after-treatment control device (if any) according to the manufacturer's emission related instructions, or the permittee's own operation and maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

The permittee shall keep the records of RICE maintenance (oil, spark plugs, hoses and belts) required by the RICE operation and maintenance plan. The hours of operation records and maintenance records shall be maintained for 5 years following the date of each occurrence and shall be made available to the APCD upon request.

33. On and after October 19, 2013, the three 800 BHP Waukesha Electrical Generator Waste Gas Engines shall comply with 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAP). This includes, but is not limited to, the following requirements for non-emergency spark ignited engines fired on landfill gas or digester gas that commenced construction before June 12, 2006:

Pursuant to 40 CFR Part 63.6603, Table 2d, the permittee shall meet the following requirements:

a) Change oil and filter every 1,440 hours of operation, or annually, whichever comes first. Permittee shall have the option to utilize an oil analysis program as described in 40 CFR Part 63.6625(i) in order to extend the specified oil change requirement; and
b) Inspect spark plugs every 1,440 hours of operation, or annually, whichever comes first, and replace as necessary; and
c) Inspect all hoses and belts every 1,440 hours of operation, or annually, whichever comes first, and replace as necessary.

During periods of startup, the permittee shall minimize the RICE time spent at idle and minimize the RICE startup time at startup to

a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. The permittee shall operate and maintain the RICE and after-treatment control device (if any) according to the manufacturer's emission related instructions, or the permittee's own operation and maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

The permittee shall keep the records of RICE maintenance (oil, spark plugs, hoses and belts) required by the RICE operation and maintenance plan. The hours of operation records and maintenance records shall be maintained for 5 years following the date of each occurrence and shall be made available to the APCD upon request.

Note that for the purposes of the RICE NESHAP, the subject engine(s) shall combust no less than 10% landfill gas or digester gas of the gross heat input on an annual basis.

34. The following condition regarding the RICE NESHAP applies to the following "existing" emergency diesel engines:

a) Two 2250 BHP General Motors
b) 2172 BHP Caterpillar
c) 263 BHP Caterpillar
d) 139 BHP John Deere

On and after May 3, 2013, these engines shall comply with 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAP). This includes, but is not limited to, the following requirements for emergency compression ignition engines that commenced construction before June 12, 2006:

Pursuant to 40 CFR Part 63.6603, Table 2d, the permittee shall meet the following requirements:

a) Change oil and filter every 500 hours of operation, or annually, whichever comes first. Permittee shall have the option to utilize an oil analysis program as described in 40 CFR Part 63.6625(i) in order to extend the specified oil change requirement; and
b) Inspect air cleaner every 1,000 hours of operation, or annually, whichever comes first, and replace as necessary; and
c) Inspect all hoses and belts every 500 hours of operation, or annually, whichever comes first, and replace as necessary.

If an emergency RICE is operating during an emergency and it is not possible to perform the above maintenance, or if performing the maintenance would otherwise pose an unacceptable risk under federal, state, or local law, the maintenance can be delayed and should be performed as soon as practicable after the emergency has ended or the unacceptable risk has abated. All such maintenance

delays shall be reported to the APCD Compliance Division.

During periods of startup, the permittee shall minimize the RICE time spent at idle and minimize the RICE startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. The permittee shall operate and maintain the RICE and after-treatment control device (if any) according to the manufacturer's emission related instructions, or the permittee's own operation and maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

Pursuant to 40 CFR Parts 63.6640(f) and 63.6675, the RICE cannot be used for peak shaving, as part of a financial arrangement to supply power into the grid, or as a part of a demand response program, unless specifically allowed by this permit. There is no time limit on the use of emergency RICE in emergency situations.

Pursuant to 40 CFR Parts 63.6655 and 63.6660, the RICE shall be equipped and operated with a non-resettable hour meter. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation, including operation for maintenance and testing. In addition, the permittee shall keep the records of RICE maintenance (oil, air cleaner, hoses and belts) required by the RICE operation and maintenance plan. The hours of operation records and maintenance records shall be maintained for 5 years following the date of each occurrence and shall be made available to the APCD upon request.

35. The 636 BHP Caterpillar and the 250 BHP Cummins emergency diesel engines is exempt from 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAP) because they were constructed on or after June 12, 2006.

Within 30 days after receipt of this permit, the permittee may petition the Hearing Board to review any new or modified condition (Rule 22).

This permit, or a copy, shall be posted reasonably close to the subject equipment and shall be accessible to inspection personnel (Rule 19). This permit is not transferable from one location to another unless the equipment is specifically listed as being portable (Rule 20).

This Permit to Operate shall not be construed to allow any emission unit to operate in violation of any state or federal emission standard or any rule of the District.

Terri Thomas
Engineering Division

For:

Michael Villegas
Air Pollution Control Officer