ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	3 270101001
Discharger	Carmel Area Wastewater District
Name of Facility	Carmel Area Wastewater District Wastewater Treatment Plant
Facility Address	26900 State Route One
	Carmel, California 93922
	Monterey County
Administrative Office	3945 Rio Road
	Carmel, California 93922
	Monterey County
Facility Contact, Title and Phone	Barbara Buikema, General Manager (831) 624 – 1248
Authorized Person to Sign and Submit Reports	Barbara Buikema, General Manager (831) 624 – 1248
Mailing Address	P.O. Box 221428, Carmel, California 93922
Billing Address	P.O. Box 221428, Carmel, California 93922
Type of Facility	POTW
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A
Pretreatment Program	No
Recycling Requirements	Producer, WDRs Order No. 93-72 and 94-04
Facility Permitted Flow	3.0 million gallons per day (MGD)
Facility Design Flow	3.0 MGD
Watershed	Carmel River Hydrologic Unit (307.00)
Receiving Waters	Pacific Ocean (Carmel Bay)
Receiving Water Type	Ocean Water

A. The Carmel Area Wastewater District (hereinafter, Discharger) is the owner and operator of a wastewater treatment plant (hereinafter, Facility), which treats domestic and commercial wastewaters collected from the service areas of the Carmel Area Wastewater

District and the Pebble Beach Community Services District. The wastewater treatment facility is located at 26900 State Route One, Carmel, and the Discharger's administrative office is located at 3945 Rio Road, Carmel, Monterey County.

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 (via Carmel Bay), a water of the United States, and is currently regulated by Order No. R3-2008-0007, which was adopted on March 20, 2008, and expired on April 30, 2013. The terms and conditions of the current Order are automatically continued and remain in effect until new Waste Discharge Requirements and a National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order.

C. The Discharger filed a Report of Waste Discharge and submitted an application for reissuance of its Waste Discharge Requirements (WDRs) and NPDES permit on October 25, 2012. Supplemental information was requested on January 23, 2013, and received on February 4, 2013. The application was deemed complete on February 5, 2013.

II. FACILITY DESCRIPTION

A. Wastewater and Biosolids Treatment

The Discharger owns and operates a municipal wastewater treatment facility which treats wastewater originating in service areas of the Carmel Area Wastewater District, servicing approximately 11,000, and the Pebble Beach Community Services District, servicing approximately 4,500. The Carmel Area Wastewater District collection system is composed of approximately 83 miles of gravity sewers ranging in size from 6-inches to 27-inches in diameter together with nearly 5 miles of force mains and seven pump stations. The Pebble Beach Community Services District owns and maintains 74 miles of sewer collection and interceptor lines and eight lift stations. The collection systems of Carmel and Pebble Beach are regulated by the State Water Board Order No. 2006-003-DWQ, the Statewide General WDRs for Sanitary Sewer Systems.

Treatment components include influent flow monitoring, bar screens, barminutors, an aerated grit tank, primary settling basins, four secondary aeration basins, and secondary clarifiers. Secondary treated wastewater is chlorinated and dechlorinated and is either diverted to tertiary treatment or is metered prior to discharge.

Waste activated sludge is thickened by dissolved air floatation and blended with primary solids before anaerobic digestion. Digested sludge is dewatered by belt filter press and hauled offsite for disposal at the Monterey Regional Waste Management District Landfill.

The tertiary treatment system provides reclaimed wastewater for irrigation of seven local golf courses, one equestrian center, one private school, and some smaller landscaped areas. Tertiary treatment was upgraded to microfiltration and reverse osmosis (MF/RO) in the fall of 2008. Recycled water production and use is regulated by Water Reclamation Requirements Order Nos. 93-72 and 94-04, respectively.

Treated secondary effluent is filtered using a submerged microfiltration system which produces filtrate under vacuum conditions by a filtration pump. The system contains three cells with a total filtrate capacity of 1.9 MGD. The microfiltration system serves as a pretreatment to reverse osmosis; a portion of the microfiltration flow is not treated by reverse osmosis but instead blended with reverse osmosis permeate. Reverse osmosis treatment consists of three independent, 2-stage reverse osmosis treatment trains. Each treatment train has a dedicated high pressure feed pump.

Finished water is then conveyed to the Tertiary Facility for chlorination. The Tertiary Facilities include a flow equalization basin, four chlorine contact basins, a Lamella Thickener, and a reclamation wet well and conveyance pumps. The reclamation pumps convey the water to a storage facility at the Pebble Beach reservoir for the recycled water users.

Reverse osmosis reject water is chlorinated and dechlorinated before it is sent to the effluent station for ocean discharge. MR/RO waste is equalized and pumped from the MF/RO system to the Tertiary Facilities and eventually returned to the plant headworks.

Discharges to Carmel Bay consist of dechlorinated secondary treated wastewater, RO concentrate, or combinations thereof depending on seasonal demand for recycled water. Treated wastewater is discharged to Carmel Bay, an Area of Special Biological Significance, within the Monterey Bay National Marine Sanctuary pursuant to State Water Board Resolution No. 84-78, which grants an exception to the prohibition established by the California Ocean Plan regarding discharges to Areas of Special Biological Significance.

B. Discharge Points and Receiving Waters

The point of discharge from the wastewater treatment facility, Discharge Point 001, is through an outfall and diffuser system that terminates in the Pacific Ocean (Carmel Bay) at 36 º, 32 ', 00 " N. latitude and 121 º, 55 ', 43 " W longitude. Carmel Bay is within the Monterey Bay National Marine Sanctuary and has been designated by the State Water Board[1] as an Area of Special Biological Significance (ASBS). Discharge to the ASBS, also referred to as the Carmel Bay State Water Quality Protection Area, is permitted pursuant to State Water Board Resolution No. 84-78, which includes the following conditions regarding the discharge.

1. Monitoring for effects of the discharge, including growth measurements of mussels, shall continue each year. A Comprehensive Study, evaluating effects of the discharge on the ASBS and examining whether changes are occurring as the result of the discharge, shall be repeated one time every ten years. More intensive monitoring shall be undertaken if changes to the ASBS, attributable to the discharge, are observed.

2. The Central Coast Water Board shall include limitations on discharge rate/flow in permits issued to the Discharger to prevent alteration of natural water quality conditions in Carmel Bay.

[1] California Ocean Plan (2012), Appendix V

Discharges through Discharge Point 001 consist of dechlorinated secondary treated wastewater and RO concentrate as described above. The outfall/diffuser system consists of a 24-inch diameter concrete outfall pipe with 10 port openings extending approximately 650 feet from shore. The minimum initial dilution provided by the outfall/diffuser system is 121:1 (parts seawater: parts effluent), a figure that has been used by Central Coast Water Board staff to determine the need for water quality-based effluent limitations, and, if necessary, to calculate those limitations. This Order retains the dilution ratio of 121:1 from the previous permit. At its discretion, the Discharger can apply to the Central Coast Water Board for approval of a different dilution ratio that is protective of water quality in all discharge scenarios.

C. Summary of Existing Requirements and Effluent Characterization

Effluent limitations contained in the previous Order for discharges from Discharge Point 001 and representative monitoring data for Monitoring Location EFF-001, for the last five years of the permit term (i.e., 2008 through 2012) are presented in the following tables.

Table F-2. Historic Effluent Limitations and Monitoring Data, Conventional Pollutants, Discharge Point 001

Parameter	Units	Effluent Limitations				Monitoring Data (5/08 – 12/12)
		Average Monthly	Average Weekly	Daily Maximum	Instantaneous Maximum	Maximum Reported Value
BOD_5	mg/L	30	45	90	--	161.9
	lbs/day	750	1,130	2,250	--	--
TSS	mg/L	30	45	90	--	186
	lbs/day	750	1,130	2,250	--	--
BOD_5, and TSS	%	Removal by treatment shall not be less than 85 percent				--
Settleable Solids	mL/L/hr	1.0	1.5	--	3.0	0.6
Turbidity	NTU	75	100	--	225	101.2
Oil & Grease	mg/L	25	40	75	--	12
	lbs/day	630	1,000	1,880	--	--
pH	pH Units	6.0 – 9.0				8.3
Total coliform bacteria	MPN/100 mL	230	--	--	10,000	727

Table F-3. Historic Effluent Limitations, Toxic Pollutants, Discharge Point 001

Parameter	Units	Effluent Limitations				Monitoring Data (3/09 – 9/12)
		6-Month Median	Daily Maximum	Instantaneous Maximum	30-Day Average	Maximum Reported Value
Arsenic	µg/L	610	3,540	9,400	--	2.5
	lbs/day	15	89	240	--	--
Cadmium	µg/L	120	490	1,220	--	< 0.25
	lbs/day	3.1	12	31	--	--
Chromium (Hexavalent)	µg/L	240	980	2,440	--	< 0.2
	lbs/day	6.1	24	61	--	--
Copper	µg/L	120	1,220	3,420	--	82

Parameter	Units	Effluent Limitations				Monitoring Data (3/09 – 9/12)
		6-Month Median	Daily Maximum	Instantaneous Maximum	30-Day Average	Maximum Reported Value
	lbs/day	3.1	31	86	--	--
Lead	µg/L	240	980	2,440	--	0.72
	lbs/day	6.1	24	61	--	--
Mercury	µg/L	4.82	19.46	48.74	--	< 0.025
	lbs/day	0.12	0.49	1.2	--	--
Nickel	µg/L	610	2,440	6,100	--	11
	lbs/day	15	61	150	--	--
Selenium	µg/L	1,830	7,320	18,300	--	3.1
	lbs/day	46	180	460	--	--
Silver	µg/L	70	330	840	--	< 0.19
	lbs/day	1.7	8.1	21	--	--
Zinc	µg/L	1,470	8,790	23,430	--	525
	lbs/day	37	220	590	--	--
Cyanide	µg/L	120	490	1,220	--	17
	lbs/day	3.1	12	31	--	--
Total Residual Chlorine	µg/L	240	980	7,320	--	0.74
	lbs/day	6.1	24	180	--	--
Ammonia (as N)	µg/L	73,200	292,800	732,000	--	163,000
	lbs/day	1,800	7,300	18,000	--	--
Acute Toxicity	TUa	--	3.9	--	--	2.2
Chronic Toxicity	TUc	--	122	--	--	25.0
Phenolic Compounds (non-chlorinated)	µg/L	3,660	14,640	36,600	--	< 1
	lbs/day	92	370	920	--	--
Chlorinated Phenolics	µg/L	120	490	1,220	--	< 1
	lbs/day	3.1	12	31	--	--
Endosulfan	µg/L	1.10	2.20	3.29	--	< 0.01
	lbs/day	0.027	0.055	0.082	--	--
Endrin	µg/L	0.24	0.49	0.73	--	< 0.01
	lbs/day	0.0061	0.012	0.018	--	--
HCH	µg/L	0.49	0.98	1.46	--	< 1
	lbs/day	0.012	0.024	0.037	--	--
Radioactivity	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations. Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.					227.3
Acrolein	µg/L	--	--	--	26,840	< 5
	lbs/day	--	--	--	670	--
Antimony	µg/L	--	--	--	150,000	1.2
	lbs/day	--	--	--	3,700	--
Bis(2-Chloroethoxy)Methane	µg/L	--	--	--	540	< 1
	lbs/day	--	--	--	13	--

Parameter	Units	Effluent Limitations				Monitoring Data (3/09 – 9/12)
		6-Month Median	Daily Maximum	Instantaneous Maximum	30-Day Average	Maximum Reported Value
Bis(2-Chloroisopropyl)Ether	µg/L	--	--	--	150,000	< 1
	lbs/day	--	--	--	3,700	--
Chlorobenzene	µg/L	--	--	--	69,540	< 0.5
	lbs/day	--	--	--	1,700	--
Chromium (III)	µg/L	--	--	--	23,180,000	1.5
	lbs/day	--	--	--	580,000	--
Di-n-Butyl Phthalate	µg/L	--	--	--	430,000	< 1
	lbs/day	--	--	--	11,000	--
Dichlorobenzenes	µg/L	--	--	--	620,000	< 0.5
	lbs/day	--	--	--	16,000	--
Diethyl Phthalate	µg/L	--	--	--	4,030,000	< 1
	lbs/day	--	--	--	100,000	--
Dimethyl Phthalate	µg/L	--	--	--	100,040,000	< 1
	lbs/day	--	--	--	2,500,000	--
4,6-Dinitro-2-methylphenol	µg/L	--	--	--	26,840	< 5
	lbs/day	--	--	--	670	--
2,4-Dinitrophenol	µg/L	--	--	--	490	< 5
	lbs/day	--	--	--	12	--
Ethylbenzene	µg/L	--	--	--	500,000	< 0.5
	lbs/day	--	--	--	13,000	--
Fluoranthene	µg/L	--	--	--	1,830	< 1
	lbs/day	--	--	--	46	--
Hexachlorocyclopentadiene	µg/L	--	--	--	7,080	< 5
	lbs/day	--	--	--	180	--
Nitrobenzene	µg/L	--	--	--	500	< 1
	lbs/day	--	--	--	15	--
Thallium	µg/L	--	--	--	240	< 0.5
	lbs/day	--	--	--	6.1	--
Toluene	µg/L	--	--	--	10,370,000	2.7
	lbs/day	--	--	--	260,000	--
Tributylin	µg/L	--	--	--	0.17	< 0.06
	lbs/day	--	--	--	0.0043	--
1,1,1-Trichloroethane	µg/L	--	--	--	65,880,000	< 0.5
	lbs/day	--	--	--	1,600,000	--
Acrylonitrile	µg/L	--	--	--	12.20	< 2
	lbs/day	--	--	--	0.31	--
Aldrin	µg/L	--	--	--	0.00268	< 0.005
	lbs/day	--	--	--	0.000067	--
Benzene	µg/L	--	--	--	720	< 0.5
	lbs/day	--	--	--	18	--
Benzidine	µg/L	--	--	--	0.00842	< 5

Parameter	Units	Effluent Limitations				Monitoring Data (3/09 – 9/12)
		6-Month Median	Daily Maximum	Instantaneous Maximum	30-Day Average	Maximum Reported Value
	lbs/day	--	--	--	0.00021	--
Beryllium	µg/L	--	--	--	4.03	< 0.5
	lbs/day	--	--	--	0.10	--
Bis(2-chloroethyl) ether	µg/L	--	--	--	5.49	< 1
	lbs/day	--	--	--	0.14	--
Bis(2-ethylhexyl) phthalate	µg/L	--	--	--	430	< 2
	lbs/day	--	--	--	11	--
Carbon Tetrachloride	µg/L	--	--	--	110	0.76
	lbs/day	--	--	--	2.7	--
Chlordane	µg/L	--	--	--	0.00281	< 0.05
	lbs/day	--	--	--	0.000070	--
Chlorodibromomethane	µg/L	--	--	--	1,050	6.3
	lbs/day	--	--	--	26	--
Chloroform	µg/L	--	--	--	15,900	48
	lbs/day	--	--	--	400	--
DDT	µg/L	--	--	--	0.02074	< 0.01
	lbs/day	--	--	--	0.00052	--
1,4-Dichlorobenzene	µg/L	--	--	--	2,200	< 0.5
	lbs/day	--	--	--	55	--
3,3-Dichlorobenzidine	µg/L	--	--	--	0.99	< 2
	lbs/day	--	--	--	0.025	--
1,2-Dichloroethane	µg/L	--	--	--	3,400	< 0.5
	lbs/day	--	--	--	85	--
1,1-Dichloroethylene	µg/L	--	--	--	110	< 0.5
	lbs/day	--	--	--	2.7	--
Dichlorobromomethane	µg/L	--	--	--	760	16
	lbs/day	--	--	--	19	--
Dichloromethane	µg/L	--	--	--	54,900	< 0.75
	lbs/day	--	--	--	1,400	--
1,3-Dichloropropene	µg/L	--	--	--	1,090	< 0.75
	lbs/day	--	--	--	27	--
Dieldrin	µg/L	--	--	--	0.00488	< 0.01
	lbs/day	--	--	--	0.00012	--
2,4-Dinitrotoluene	µg/L	--	--	--	320	< 1.0
	lbs/day	--	--	--	7.9	--
1,2-Diphenylhydrazine	µg/L	--	--	--	19.52	< 1.0
	lbs/day	--	--	--	0.49	--
Halomethanes	µg/L	--	--	--	15,860	0.63
	lbs/day	--	--	--	400	--
Heptachlor	µg/L	--	--	--	0.006	< 0.01
	lbs/day	--	--	--	0.00015	--

Parameter	Units	Effluent Limitations				Monitoring Data (3/09 – 9/12)
		6-Month Median	Daily Maximum	Instantaneous Maximum	30-Day Average	Maximum Reported Value
Heptachlor Epoxide	µg/L	--	--	--	0.002	< 0.01
	lbs/day	--	--	--	0.000061	--
Hexachlorobenzene	µg/L	--	--	--	0.02562	< 0.5
	lbs/day	--	--	--	0.00064	--
Hexachlorobutadiene	µg/L	--	--	--	1,710	< 1
	lbs/day	--	--	--	43	--
Hexachloroethane	µg/L	--	--	--	310	< 1
	lbs/day	--	--	--	7.6	--
Isophorone	µg/L	--	--	--	89,060	< 1
	lbs/day	--	--	--	2,228	--
N-nitrosodimethylamine	µg/L	--	--	--	890	< 5
	lbs/day	--	--	--	22	--
N-nitrosdi-N-propylamine	µg/L	--	--	--	46	< 1
	lbs/day	--	--	--	1.2	--
N-nitrosodiphenylamine	µg/L	--	--	--	310	< 1
	lbs/day	--	--	--	7.6	--
PAHs	µg/L	--	--	--	1.07	0.32
	lbs/day	--	--	--	0.027	--
PCBs	µg/L	--	--	--	0.00232	< 0.5
	lbs/day	--	--	--	0.000058	--
TCDD Equivalents	µg/L	--	--	--	0.00000048	< 0.0000001
	lbs/day	--	--	--	0.000000012	--
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	280	< 0.5
	lbs/day	--	--	--	7.0	--
Tetrachloroethylene	µg/L	--	--	--	244	< 0.5
	lbs/day	--	--	--	6.1	--
Toxaphene	µg/L	--	--	--	0.02562	< 0.5
	lbs/day	--	--	--	0.00064	--
Trichloroethylene	µg/L	--	--	--	3,290	< 0.5
	lbs/day	--	--	--	82	--
1,1,2-Trichloroethane	µg/L	--	--	--	1,147	< 0.5
	lbs/day	--	--	--	29	--
2,4,6-Trichlorophenol	µg/L	--	--	--	35.38	< 1
	lbs/day	--	--	--	0.89	--
Vinyl Chloride	µg/L	--	--	--	4,390	< 0.5
	lbs/day	--	--	--	110	--

Source: Carmel Area Wastewater District, permit renewal application, October 25, 2012 and DMR data May 2008 through December 2012. .

D. Compliance Summary

The Discharger experienced seven incidents of noncompliance during the 2008 through 2012 period. A description of the discharge violations is included in the table below:

Table F-4. Compliance Summary, 2008 through 2012

Date	Parameter	Permit Limit	Reported Value	Corrective Action
12/9/2010	Total Residual Chlorine	7.32 mg/L Instantaneous Maximum	9.92 mg/L	Violation occurred during final stages of project to replace sodium bisulfite storage tank. Discharger subsequently cleared the crystallized sodium bisulfite blockage.
1/19/2010	Total Residual Chlorine	7.32 mg/L Instantaneous Maximum	8.6 mg/L	CAWD has secured the MF/RO system and re-activated the original SBS injection system which is capable of dechlorinating ocean discharge flows in excess of 10 mgd until the SED and EPS SBS pumps can be protected by an uninterrupted power supply.
10/9/2009	Total Suspended Solids	45 mg/L 7-day Average	55 mg/L	The Discharger continued to test and upgrade the tertiary reject thickening system as needed to minimize bypass flows to the front end of the WWTP and monitor/remove solids buildup within the chlorination/dechlorination tanks.
5/2/2009	Total Suspended Solids	45 mg/L 7-day Average	47.1 mg/L	
5/1/2009	Biochemical Oxygen Demand	45 mg/L 7-day Average	68 mg/L	
5/1/1009	Total Suspended Solids	45 mg/L 7-day Average	47.1 mg/L	
5/1/2009	Total Suspended Solids	90 mg/L Instantaneous Maximum	186 mg/L	

E. Planned Changes

An update of the Carmel Area Wastewater District's Long Term Capital Plan for the next 15 years was identified and completed in March 2013. In June 2013 the District signed a contract with Kennedy/Jenks Consulting Engineers to begin the first of three Five Year Plans. The schedule is to go out to bid in 2014 and begin construction in 2015. The following projects are planned:

- New portable backup RAS pumping system
- Thickener replacement
- Digester Firm Capacity Improvements – a new digester
- #1 Water Improvements – a new #1 water pump station
- #3 Water Improvements – a new #3 water hydropneumatic tank, strainer, and control system
- Dewatering Improvements – install new screw press and backup system
- Standby power reliability improvements
- Standby Blower replacement
- Hypochlorite and SBS system improvements
- Stormwater pumps station to control on-site stormwater

- Septage Receiving Station
- Miscellaneous Yard piping rehabilitation and replacement

The Discharger had been evaluating seasonal RO reject disposal alternatives to augment the Carmel River Lagoon habitat in lieu of discharging through the ocean outfall. The grant issued by Fish and Wildlife ceased under a Stop Work Order issued by the Department on May 2, 2013. The initial results indicated that additional treatment would be necessary beyond the MFRO process and that the cost of such treatment may be prohibitive for a relatively small amount of water.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

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

B. California Environmental Quality Act (CEQA)

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

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

1. **Water Quality Control Plans.** The Central Coast Water Board adopted the *Water Quality Control Plan for the Central Coastal Basin* (the Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for receiving waters within the Region. To address ocean waters, the Basin Plan incorporates by reference the *Water Quality Control Plan for Ocean Waters of California* (the Ocean Plan), which was adopted in 1972 and amended in 1978, 1983, 1988, 1990, 1997, 2000, 2005 and 2012. The most recent amendment to the Ocean Plan was adopted by the State Water Resources Control Board (the State Water Board) on October 16, 2012, and became effective on August 19, 2013.

   The Basin Plan implements State Water Board Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). Because of very high levels of total dissolved solids (TDS) in the Pacific Ocean, including Carmel Bay, the receiving waters for discharges from the Carmel Area Wastewater District's Treatment Facility meet an exception to Resolution No. 88-63,

which precludes waters with TDS levels greater than 3,000 mg/L from the MUN designation. Beneficial uses established by the Basin Plan for the Pacific Ocean at Carmel Bay are as follows:

Table F-5. Basin Plan Beneficial Uses for the Pacific Ocean

Discharge Point	Receiving Water	Beneficial Use(s)
001	Pacific Ocean (Carmel Bay)	• Water Contact and Non-Contact Recreation • Industrial Service Supply • Marine Habitat • Shellfish Harvesting • Commercial and Sport Fishing • Rare, Threatened, or Endangered Species

To protect the beneficial uses, the Basin Plan establishes water quality objectives and implementation programs. This Order's requirements implement the Basin Plan.

2. **Thermal Plan.** The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains the following temperature objective for existing discharges to enclosed bays and coastal waters of California.

   Elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses.

   The Ocean Plan defines elevated temperature wastes as:

   Liquid, solid, or gaseous material discharged at a temperature higher than the natural temperature of receiving water.

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 latest amendment on October 16, 2012, and was approved by the Office of Administrative Law on July 3, 2013, and subsequently the USEPA. The Ocean Plan is applicable, in its entirety, to point source discharges to the Pacific Ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized in Table F-6, below.

Table F-6. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Use(s)
001	Pacific Ocean (Carmel Bay)	• Industrial Water Supply • Water Contact and Non-Contact Recreation, including Aesthetic Enjoyment • Navigation • Commercial and Sport Fishing • Mariculture • Preservation and Enhancement of Designated Areas of Special Biological Significance (ASBS) • Rare and Endangered Species • Marine Habitat • Fish Migration Fish Spawning and Shellfish Harvesting

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

Carmel Bay is within the Monterey Bay National Marine Sanctuary and has been designated by the State Water Board[2] as an Area of Special Biological Significance (ASBS). Discharge to the ASBS, also referred to as the Carmel Bay State Water Quality Protection Area, is permitted pursuant to State Water Board Resolution No. 84-78.

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

6. **Anti-Backsliding Requirements.** Sections 402 (o)(2) and 303 (d)(4) of the CWA and federal regulations at 40 C.F.R. 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.

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

[2] California Ocean Plan (2012), Appendix V

uses of waters of the state, including protecting rare and endangered species. The discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

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

CWA section 303 (d) requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303 (d) listed water bodies and pollutants, the Central Coast Water Board must develop and implement TMDLs (Total Maximum Daily Loads) that will specify WLAs (Waste Load Allocations) for point sources and Load Allocations for non-point sources.

Carmel Bay is not identified as impaired on the State's 2008-2010 303 (d) list of impaired water bodies, which was approved by USEPA on November 12, 2011.

E. Other Plans, Policies and Regulations

1. **Discharges of Storm Water.** For the control of storm water discharged from the site of the wastewater treatment and disposal facilities, the Order requires, if applicable, the Discharger to seek authorization to discharge under and meet the requirements of the State Water Resources Control Board's Water Quality Order 97-03-DWQ, NPDES General Permit No. CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities*.

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

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. NPDES regulations establish two principal bases for effluent limitations. At 40 C.F.R. 122.44 (a) permits are required to include applicable technology-based limitations and standards; and at 40 C.F.R. 122.44 (d) permits are required to 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. When numeric water quality objectives have not been established, but a discharge has the

reasonable potential to cause or contribute to an excursion above a narrative criterion, WQBELs may be established using one or more of three methods described at 40 C.F.R. 122.44 (d) - 1) WQBELs may be established using a calculated water quality criterion derived from a proposed State criterion or an explicit State policy or regulation interpreting its narrative criterion; 2) WQBELs may be established on a case-by-case basis using U.S. EPA criteria guidance published under CWA Section 304 (a); or 3) WQBELs may be established using an indicator parameter for the pollutant of concern.

A. Discharge Prohibitions

1. Discharge Prohibition II. A (No discharge to Carmel Bay at a location other than as described by the Order). The Order authorizes a single, specific point of discharge to Carmel Bay; and this prohibition reflects CWA section 402's prohibition against discharges of pollutants except in compliance with the Act's permit requirements, effluent limitations, and other enumerated provisions. This prohibition is also retained from the previous permit.

2. Discharge Prohibition II. B (The overflow or bypass of wastewater from the Discharger's collection, treatment, or disposal facilities and the subsequent discharge of untreated or partially treated wastewater, except as provided for in Attachment D, Standard Provision I.A.7 (Bypass), is prohibited). The discharge of untreated or partially treated wastewater from the Discharger's collection, treatment, or disposal facilities represents an unauthorized bypass pursuant to 40 C.F.R. 122.41 (m) or an unauthorized discharge, which poses a threat to human health and/or aquatic life, and therefore, is explicitly prohibited by the Order.

3. Discharge Prohibition II. C (Discharges in a manner, except as described by the Order are prohibited). Because limitations and conditions of the Order have been prepared based on specific information provided by the Discharger and specific wastes described by the Discharger, the limitations and conditions of the Order do not adequately address waste streams not contemplated during drafting of the Order. To prevent the discharge of such waste streams that may be inadequately regulated, the Order prohibits the discharge of any waste that was not described by to the Central Coast Water Board during the process of permit reissuance.

4. Discharge Prohibition II. D (Discharges of radiological, chemical, or biological warfare agent or high level radioactive waste to the Ocean is prohibited). This prohibition restates a discharge prohibition established in section III. H of the Ocean Plan.

5. Discharge Prohibition II. E (Alteration of naturally occurring conditions in the Carmel Bay State Water Quality Protection Area, an Area of Special Biological Significance, is prohibited). This prohibition is retained from the previous permit and, as stated in State Board Resolution No. 84-78, reflects State policy regarding discharges to Areas of Special Biological Significance.

6. Discharge Prohibition II. F (Federal law prohibits the discharge of sludge by pipeline the Ocean. The discharge of municipal or industrial waste sludge directly to the Ocean or into a waste stream that discharges to the Ocean is prohibited. The

discharge of sludge digester supernatant, without further treatment, directly to the Ocean or to a waste stream that discharges to the Ocean, is prohibited.) This prohibition reflects the prohibition in Chapter III. H of the Ocean Plan.

B. Technology-Based Effluent Limitations

1. Scope and Authority

NPDES regulations at 40 C.F.R. 122.44 (a) require that permits include applicable technology-based limitations and standards. Where the USEPA has not yet developed technology based standards for a particular industry or a particular pollutant, CWA Section 402 (a) (1) and USEPA regulations at 40 C.F.R. 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis. When BPJ is used, the permit writer must consider specific factors outlined at 40 C.F.R. 125.3.

This Order includes limitations based on the minimum level of effluent quality attainable by secondary treatment, as established at 40 C.F.R. 133. The Secondary Treatment Regulation includes the following limitations applicable to all publicly owned treatment works (POTWs).

Table F-7. Secondary Treatment Requirements

Parameter	Effluent Limitation		
	30-Day Average	7-Day Average	Percent Removal [1]
BOD_5 [2]	30 mg/L	45 mg/L	85
TSS	30 mg/L	45 mg/L	85
pH	6.0 – 9.0		---

[1] 30-day average
[2] At the option of the permitting authority, effluent limitations for $CBOD_5$ may be substituted for those limitations specified for BOD_5.

In addition, the State Water Board, in Table 2 of the Ocean Plan, has established technology-based requirements, applicable to all POTWs, for oil and grease, suspended and settleable solids, turbidity, and pH.

2. Applicable Technology-Based Effluent Limitations

The following table summarizes technology-based effluent limitations established by the Order.

Table F-8. Summary of Technology-Based Effluent Limitations

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Maximum
BOD_5 [1]	mg/L	30	45	90	--
	lbs/day	750	1,130	2,250	--
TSS [1]	mg/L	30	45	90	--
	lbs/day	750	1,130	2,250	--
Oil & Grease	mg/L	25	40	75	--
	lbs/day	630	1,000	1,880	--

Settleable Solids	mL/L/hr	1.0	1.5	--	3.0
Turbidity	NTUs	75	100	--	225
pH	pH units	6.0 – 9.0 at all times			

[1] 30-day average percent removal shall not be less than 85%.

All technology-based limitations are retained from the previous permit and are required by NPDES regulations at 40 C.F.R. 133 and/or Table 2 of the Basin Plan. Mass-based limitations for BOD_5, TSS, and oil and grease are based on a discharge rate of 3.0 MGD, the design treatment capacity of the Carmel Area Wastewater District Wastewater Treatment Facility.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

NPDES regulations at 40 C.F.R. 122.44 (d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards, including numeric and narrative objectives within a standard.

The process for determining "reasonable potential" and calculating WQBELs, when necessary, is intended to protect the designated uses of receiving waters as specified in the Basin and Ocean Plans, and achieve applicable water quality objectives and criteria that are contained in the Basin Plan and in other applicable State and federal rules, plans, and policies, including applicable water quality criteria from the Ocean Plan.

Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established in accordance with the requirements of 40 C.F.R. 122.44 (d) (1) (vi), 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.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

Beneficial uses for ocean waters of the Central Coast Region are established by the Basin Plan and Ocean Plan and are described in section III.C.1 and III.C.3, respectively, of the Fact Sheet.

Water quality criteria applicable to ocean waters of the Region are established by the Ocean Plan, which includes water quality objectives for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity. The water quality objectives from the Ocean Plan are incorporated as receiving water limitations into this Order. In addition, Table 1 of the Ocean Plan contains numeric water quality objectives for 83 toxic pollutants for the protection of marine aquatic life and human health. Pursuant to NPDES regulations at 40 C.F.R.

122.44(d)(1), and in accordance with procedures established by the Ocean Plan (2005), the Central Coast Water Board has performed a reasonable potential analysis (RPA) to determine the need for effluent limitations for the Table 1 toxic pollutants.

3. Determining the Need for WQBELs

Procedures for performing an RPA for ocean dischargers are described in Section III.C and Appendix VI of the Ocean Plan. The procedure is a statistical method that projects an effluent data set while taking into account the averaging period of WQOs, the long term variability of pollutants in the effluent, limitations associated with sparse data sets, and uncertainty associated with censored data sets. The procedure assumes a lognormal distribution of the effluent data set, and compares the 95th percentile concentration at 95 percent confidence of each Table 1 pollutant, accounting for dilution, to the applicable water quality criterion. The RPA results in one of three following endpoints.

Endpoint 1 – There is "reasonable potential." An effluent limitation must be developed for the pollutant. Effluent monitoring for the pollutant, consistent with the monitoring frequency in Appendix III (Ocean Plan), is required.

Endpoint 2 - There is no "reasonable potential." An effluent limitation is not required for the pollutant. Appendix III (Ocean Plan) effluent monitoring is not required for the pollutant; the Regional Board, however, may require occasional monitoring for the pollutant or for whole effluent toxicity as appropriate.

Endpoint 3 - The RPA is inconclusive. Monitoring for the pollutant or whole effluent toxicity testing, consistent with the monitoring frequency in Appendix III (Ocean Plan), is required. An existing effluent limitation for the pollutant shall remain in the permit, otherwise the permit shall include a reopener clause to allow for subsequent modification of the permit to include an effluent limitation if the monitoring establishes that the discharge causes, has the reasonable potential to cause, or contribute to an excursion above a Table 1 water quality objective.

The State Water Board has developed a reasonable potential calculator (RPcalc 2.0), which is available at:

http://www.swrcb.ca.gov/water_issues/programs/ocean/docs/trirev/stakeholder050505/rpcalc20_setup.exe

RPcalc 2.0 was used in the development of this Order and considers several pathways in the determination of reasonable potential.

a. First Path

If available information about the receiving water or the discharge supports a finding of reasonable potential without analysis of effluent data, the Central Coast Water Board may decide that WQBELs are necessary after a review of such information. Such information may include: the facility or discharge type, solids loading, lack of dilution, history of compliance problems, potential toxic effects, fish tissue data, §303(d) status of the receiving water, or the presence of threatened or endangered species or their critical habitat, or other information.

b. Second Path

If any pollutant concentration, adjusted to account for dilution, is greater than the most stringent applicable water quality objective, there is reasonable potential for that pollutant.

c. Third Path

If the effluent data contains 3 or more detected and quantified values (i.e., values that are at or above the minimum level (ML)), and all values in the data set are at or above the ML, a parametric RPA is conducted to project the range of possible effluent values. The 95th percentile concentration is determined at 95 percent confidence for each pollutant, and compared to the most stringent applicable water quality objective to determine reasonable potential. A parametric analysis assumes that the range of possible effluent values is distributed lognormally. If the 95th percentile value is greater than the most stringent applicable water quality objective, there is reasonable potential for that pollutant.

d. Fourth Path

If the effluent data contains 3 or more detected and quantified values (i.e., values that are at or above the ML), but at least one value in the data set is less than the ML, a parametric RPA is conducted according to the following steps.

(1) If the number of censored values (those expressed as a “less than” value) account for less than 80 percent of the total number of effluent values, calculate the M_L (the mean of the natural log of transformed data) and S_L (the standard deviation of the natural log of transformed data) and conduct a parametric RPA, as described above for the Third Path.

(2) If the number of censored values account for 80 percent or more of the total number of effluent values, conduct a non-parametric RPA, as described below for the Fifth Path. (A non-parametric analysis becomes necessary when the effluent data is limited, and no assumptions can be made regarding its possible distribution.)

e. Fifth Path

A non-parametric RPA is conducted when the effluent data set contains less than 3 detected and quantified values, or when the effluent data set contains 3 or more detected and quantified values but the number of censored values accounts for 80 percent or more of the total number of effluent values. A non-parametric analysis is conducted by ordering the data, comparing each result to the applicable water quality objective, and accounting for ties. The sample number is reduced by one for each tie, when the dilution-adjusted method detection limit (MDL) is greater than the water quality objective. If the adjusted sample number, after accounting for ties, is greater than 15, the pollutant has no reasonable potential to exceed the water quality objective. If the sample number is 15 or less, the RPA is inconclusive, monitoring is required, and any existing effluent limits in the expiring permit are retained.

An RPA was conducted using effluent data reported from monitoring events from September 2008 to September 2012 for most inorganic Ocean Plan pollutants and from March 2009 to September 2012 for most organic Ocean Plan pollutants. The effluent data was obtained from eSMR data posted to CIWQS and from DMR data posted to ICIS. The following tables present results of the RPA, performed in accordance with procedures described by the Ocean Plan for the Carmel Area Wastewater District. The maximum effluent concentration adjusted for complete mixing, the applicable WQO, and the RPA endpoint for each Table 1 pollutant is identified. As shown in the following tables, the RPA commonly lead to Endpoint 3, meaning that the RPA is inconclusive, when a majority of the effluent data is reported as ND (not detected). In these circumstances, the Central Coast Water Board concludes that additional monitoring will be required for those pollutants during the term of the reissued permit and existing effluent limits will be retained.

Table F-9. RPA Results for Discharges to Carmel Bay

Table 1 Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	RPA Result, Comment
Objectives for Protection of Marine Aquatic Life					
Ammonia (as N)	600	46	2	163,000	**Endpoint 1 – Effluent limitation is necessary.**
Arsenic	8	8	1	3.0	**Endpoint 2 – Effluent limitation not required.**
Cadmium	1	9	9	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chlorinated Phenolics	1	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chromium (VI)	2	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Copper	3	17	0	2.7	**Endpoint 2 – Effluent limitation not required.**

Table 1 Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	RPA Result, Comment
Cyanide	1	8	0	0.14	**Endpoint 2 – Effluent limitation not required.**
Endosulfan (total)	0.009	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Endrin	0.002	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
HCH	0.004	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Lead	2	9	7	0.006	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Mercury	0.04	9	9	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Nickel	5	9	0	0.09	**Endpoint 2 – Effluent limitation not required.**
Non-chlorinated Phenolics	30	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Selenium	15	9	0	0.025	**Endpoint 2 – Effluent limitation not required.**
Silver	0.7	9	9	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Total Residual Chlorine	2	68	42	6.1	**Endpoint 1 – Effluent limitation is necessary.**
Zinc	20	17	0	12.2	**Endpoint 2 – Effluent limitation not required.**
Objectives for Protection of Human Health - Noncarcinogens					
1,1,1-Trichloroethane	540000	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
2,4-Dinitrophenol	4.0	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
2-Methyl-4,6-Dinitrophenol	220	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Acrolein	220	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Antimony	1200	8	4	0.0098	**Endpoint 2 – Effluent limitation not required.**
Bis(2-Chloroethoxy)Methane	4.4	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Bis(2-Chloroisopropyl)Ether	1200	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chlorobenzene	570	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chromium (III)	190000	8	2	0.012	**Endpoint 2 – Effluent limitation not required.**

Table 1 Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	RPA Result, Comment
Dichlorobenzenes	5100	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Diethyl Phthalate	33000	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Dimethyl Phthalate	820000	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Di-n-Butyl Phthalate	3500	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Ethylbenzene	4100	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Fluoranthene	15	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Hexachlorocyclo-pentadiene	58	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Nitrobenzene	4.9	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Thallium	2	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Toluene	85000	8	3	0.022	**Endpoint 2 – Effluent limitation not required.**
Tributylin	0.0014	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Objectives for Protection of Human Health - Carcinogens					
1,1,2,2-Tetrachloroethane	2.3	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,1,2-Trichloroethane	9.4	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,1-Dichloroethylene	0.9	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,2-Dichloroethane	28	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,2-Diphenylhydrazine	0.16	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,3-Dichloropropylene	8.9	3	3	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,4-Dichlorobenzene	18	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
TCDD Equivalents	3.9×10^{-9}	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.

Table 1 Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	RPA Result, Comment
2,4,6-Trichlorophenol	0.29	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
2,4-Dinitrotoluene	2.6	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
3,3'-Dichlorobenzidine	0.0081	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Acrylonitrile	0.10	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Aldrin	2.2×10^{-5}	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Benzene	5.9	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Benzidine	6.9×10^{-5}	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Beryllium	0.033	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Bis(2-Chloroethyl)Ether	0.045	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Bis(2-Ethylhexyl)Phthalate	3.5	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Carbon Tetrachloride	0.90	8	6	0.0062	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chlordane	2.3×10^{-5}	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chlorodibromomethane	8.6	8	2	0.052	**Endpoint 2 – Effluent limitation not required.**
Chloroform	130	8	0	0.39	**Endpoint 2 – Effluent limitation not required.**
DDT (total)	0.00017	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Dichlorobromomethane	6.2	8	0	0.13	**Endpoint 2 – Effluent limitation not required.**
Dieldrin	0.00004	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Halomethanes	130	8	6	0.0052	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Heptachlor	0.00005	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Heptachlor Epoxide	0.00002	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.

Table 1 Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	RPA Result, Comment
Hexachlorobenzene	0.00021	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Hexachlorobutadiene	14	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Hexachloroethane	2.5	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Isophorone	730	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Methylene Chloride	450	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
N-Nitrosodimethylamine	7.3	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
N-Nitrosodi-n-Propylamine	0.38	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
N-Nitrosodiphenylamine	2.5	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
PAHs (total)	0.0088	8	7	0.0026	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
PCBs	1.9×10^{-5}	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Tetrachloroethylene	2.0	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Toxaphene	0.00021	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Trichloroethylene	27	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Vinyl Chloride	36	8	8	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.

NA indicates that effluent data is not available.
ND indicates that the pollutant was not detected.
Minimum probable initial dilution for this Discharger is 121:1.
Effluent data used for this RPA were collected from September 2008 to September 2012 for most inorganic Ocean Plan pollutants and from March 2009 to September 2012 for most organic Ocean Plan pollutants.
All units are ug/L.

4. WQBEL Calculations

Based on results of the RPA, performed in accordance with methods of the Ocean Plan for discharges to the Pacific Ocean, the Central Coast Water Board is establishing WQBELs for ammonia and total residual chlorine based on a conclusion of Endpoint 1. An Endpoint 2 was concluded for arsenic, copper, cyanide, nickel, selenium, zinc, antimony, chromium (III), toluene, chlorodibromomethane,

chloroform, and dichlorobromomethane. Effluent limits are not required for pollutants resulting in an Endpoint 2. All other Ocean Plan Table 1 pollutants resulted in an Endpoint 3; therefore, the limits for these pollutants are retained in this Order. The Central Coast Water Board is also establishing WQBELs for whole effluent, acute and chronic toxicity, which are also pollutants or pollutant parameters identified by Table 1 of the Ocean Plan.

As described by Section III. C of the Ocean Plan, effluent limits for Table 1 pollutants are calculated according to the following equation.

$$Ce = Co + Dm (Co – Cs)$$

Where …

Ce = the effluent limitation (µg/L)

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

Cs = background seawater concentration (µg/L)

Dm = minimum probable initial dilution expressed as parts seawater per part wastewater (here, Dm = 114)

For the Carmel Area Wastewater District, the Dm of 121 is unchanged from Order R3-2008-0007. Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge. As site-specific water quality data is not available, in accordance with Table 1 implementing procedures, Cs equals zero for all pollutants, except the following.

Table F-10. Background Concentrations (Cs) - Ocean Plan (Table 3)

Pollutant	Background Seawater Concentration
Arsenic	3 µg/L
Copper	2 µg/L
Mercury	0.0005 µg/L
Silver	0.16 µg/L
Zinc	8 µg/L

For all other Table 1 parameters, Cs=0

Applicable water quality objectives from Table 1 of the Ocean Plan are as follows.

Table F-11. Water Quality Objectives (Co)–Ocean Plan (Table 1)
Objectives for Protection of Marine Aquatic Life

Pollutant	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Arsenic	µg/L	8	32	80
Cadmium	µg/L	1	4	10
Chromium (VI)	µg/L	2	8	20
Copper	µg/L	3	12	30
Lead	µg/L	2	8	20

Pollutant	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Mercury	µg/L	0.04	0.16	0.4
Nickel	µg/L	5	20	50
Selenium	µg/L	15	60	150
Silver	µg/L	0.7	2.8	7
Zinc	µg/L	20	80	200
Cyanide	µg/L	1	4	10
Total Chlorine Residual	µg/L	2	8	60
Ammonia		600	2,400	6,000
Acute Toxicity	TUa	-------	0.3	-------
Chronic Toxicity	TUc	-------	1	-------
Non-chlorinated Phenolics	µg/L	30	120	300
Chlorinated Phenolics	µg/L	1	4	10
Endosulfan (total)	µg/L	0.009	0.018	0.027
Endrin	µg/L	0.002	0.004	0.006
HCH	µg/L	0.004	0.008	0.012
Radioactivity		-------	-------	-------

Table F-12. Water Quality Objectives (Co)–Ocean Plan (Table 1) Objectives for Protection of Human Health – (Non-Carcinogens)

Pollutant	Units	30-day Average
Acrolein	µg/L	220
Antimony	µg/L	1,200
Bis(2-Chloroethoxy)Methane	µg/L	4.4
Bis(2-Chloroisopropyl)Ether	µg/L	1,200
Chlorobenzene	µg/L	570
Chromium (III)	µg/L	190,000
Di-n-Butyl Phthalate	µg/L	3,500
Dichlorobenzenes	µg/L	5,100
Diethyl Phthalate	µg/L	33,000
Dimethyl Phthalate	µg/L	820,000
2-Methyl-4,6-Dinitrophenol	µg/L	220
2,4-Dinitrophenol	µg/L	4
Ethylbenzene	µg/L	4,100
Fluoranthene	µg/L	15
Hexachlorocyclopentadiene	µg/L	58
Nitrobenzene	µg/L	4.9
Thallium	µg/L	2
Toluene	µg/L	85,000
Tributyltin	µg/L	0.0014
1,1,1-Trichloroethane	µg/L	540,000

Table F-13. Water Quality Objectives (Co)–Ocean Plan (Table 1) Objectives for Protection of Human Health – (Carcinogens)

Pollutant	Units	30-day Average

Pollutant	Units	30-day Average
Acrylonitrile	µg/L	0.1
Aldrin	µg/L	0.000022
Benzene	µg/L	5.9
Benzidine	µg/L	0.000069
Beryllium	µg/L	0.033
Bis(2-Chloroethyl)Ether	µg/L	0.045
Bis(2-Ethylhexyl)Phthalate	µg/L	3.5
Carbon Tetrachloride	µg/L	0.9
Chlordane	µg/L	0.000023
Chlorodibromomethane	µg/L	8.6
Chloroform	µg/L	130
DDT (total)	µg/L	0.00017
1,4 Dichlorobenzene	µg/L	18
3,3'-Dichlorobenzidine	µg/L	0.0081
1,2-Dichloroethane	µg/L	28
1,1-Dichloroethylene	µg/L	0.9
Dichlorobromomethane	µg/L	6.2
Methylene Chloride	µg/L	450
1,3-Dichloropropylene	µg/L	8.9
Dieldrin	µg/L	0.00004
2,4-Dinitrotoluene	µg/L	2.6
1,2-Diphenylhydrazine	µg/L	0.16
Halomethanes	µg/L	130
Heptachlor	µg/L	0.00005
Heptachlor Epoxide	µg/L	0.00002
Hexachlorobenzene	µg/L	0.00021
Hexachlorobutadiene	µg/L	14
Hexachloroethane	µg/L	2.5
Isophorone	µg/L	730
N-Nitrosodimethylamine	µg/L	7.3
N-Nitrosodi-n-Propylamine	µg/L	0.38
N-Nitrosodiphenylamine	µg/L	2.5
PAHs (total)	µg/L	0.0088
PCBs	µg/L	0.000019
TCDD Equivalents	µg/L	0.0000000039
1,1,2,2-Tetrachloroethane	µg/L	2.3
Tetrachloroethylene	µg/L	2
Toxaphene	µg/L	0.00021
Trichloroethylene	µg/L	27
1,1,2-Trichloroethane	µg/L	9.4
2,4,6-Trichlorophenol	µg/L	0.29
Vinyl Chloride	µg/L	36

Effluent limits are calculated using the equation Ce = Co + Dm (Co – Cs) as outlined above. As an example, effluent limitations are calculated as follows for total residual chlorine, chronic toxicity, and acute toxicity.

Total Residual Chlorine

Ce = 2 + 121 (2 – 0) = 244 µg/L (6-Month Median)

Ce = 8 + 121 (8 – 0) = 976 µg/L (Daily Maximum)

Ce = 60 + 121 (60 – 0) = 7,320 (Instantaneous Maximum)

Chronic Toxicity

Ce = 1 + 121 (1 - 0) = 122 TUc (Daily Maximum)

Acute Toxicity

To determine an effluent limitation for acute toxicity, the Ocean Plan allows a mixing zone that is ten percent of the distance from the edge of the outfall structure to the edge of the chronic mixing zone (the zone of initial dilution); and therefore, the effluent limitation for acute toxicity is determined by the following equation:

Ce = Co + (0.1) Dm (Co)

Where Co equals 0.3 and Dm equals 121, the effluent limitation for acute toxicity is 3.9 TUa.

Mass Based Effluent Limitations

Implementing provisions at Section III. C of the Ocean Plan require that, in addition to concentration-based limits, effluent limitations for Table 1 pollutants be expressed in terms of mass. Therefore, the Order includes mass-based limits based on a flow rate of 3.0 MGD.

Significant Figures

For consistency purposes, all limits calculated are expressed with two significant digits.

Table F-14. Effluent Limitations for the Protection of Marine Aquatic Life

Pollutant	Unit	6-Month Median	Daily Maximum	Instantaneous Maximum
Cadmium	µg/L	120	490	1200
	lbs/day[1]	3.1	12	31
Chromium (Hexavalent) [2]	µg/L	240	980	2400
	lbs/day[1]	6.1	24	61
Lead	µg/L	240	980	2400
	lbs/day[1]	6.1	24	61
Mercury	µg/L	4.8	19	49
	lbs/day[1]	0.12	0.49	1.2
Silver	µg/L	66	320	830
	lbs/day[1]	1.7	8.1	21

Pollutant	Unit	6-Month Median	Daily Maximum	Instantaneous Maximum
Total Residual Chlorine [4]	µg/L	240	980	7300
	lbs/day[1]	6.1	24	180
Ammonia (as N)	µg/L	73000	290000	730000
	lbs/day[1]	1800	7300	18000
Acute Toxicity [5]	TUa	---	3.9	---
Chronic Toxicity [5]	TUc	---	120	---
Phenolic Compounds (non-chlorinated)	µg/L	3700	15000	37000
	lbs/day[1]	92	370	920
Chlorinated Phenolics	µg/L	120	490	1200
	lbs/day[1]	3.1	12	31
Endosulfan	µg/L	1.1	2.2	3.3
	lbs/day[1]	0.027	0.05	0.082
Endrin	µg/L	0.24	0.49	0.73
	lbs/day[1]	0.0061	0.012	0.018
HCH	µg/L	0.49	0.98	1.5
	lbs/day[1]	0.012	0.024	0.037
Radioactivity	--	Not to exceed limits specified in California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5, Section 64443		

[1] Mass limitations are based on 3.0 MGD maximum effluent flow.

[2] The Discharger may at their option meet this objective as a total chromium objective.

[3] If a discharger can demonstrate to the satisfaction of the Regional Board (subject to EPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 C.F.R. PART 136, as revised May 14, 1999.

[4] Water quality objectives for total chlorine residual applying to intermittent discharges not exceeding two hours shall be determined using the following equation:

$\log_y = -0.43(\log_x) + 1.8$ where: y = the water quality objective (in µg/L) to apply when chlorine is being discharged; and

x = the duration of uninterrupted chlorine discharge in minutes.

The applicable effluent limitation must then be determined using Equation No. 1 from the Ocean Plan.

[5] See Attachment A for applicable definitions.

Table F-15. Effluent Limitations for the Protection of Human Health (Non-Carcinogens)

Pollutant	Unit	30-day Average
Acrolein	µg/L	27,000
	lbs/day[1]	670
Bis(2-Chloroethoxy)Methane	µg/L	540
	lbs/day[1]	13
Bis(2-Chloroisopropyl)Ether	µg/L	150,000
	lbs/day[1]	3,700

Pollutant	Unit	30-day Average
Chlorobenzene	µg/L	70,000
	lbs/day[1]	1700
Di-n-Butyl Phthalate	µg/L	430,000
	lbs/day[1]	11,000
Dichlorobenzenes	µg/L	620,000
	lbs/day[1]	16,000
Diethyl Phthalate	µg/L	4,000,000
	lbs/day[1]	100,000
Dimethyl Phthalate	µg/L	100,000,000
	lbs/day[1]	2,500,000
2-Methyl-4,6-Dinitrophenol	µg/L	27,000
	lbs/day[1]	670
2,4-Dinitrophenol	µg/L	490
	lbs/day[1]	12
Ethylbenzene	µg/L	500,000
	lbs/day[1]	13,000
Fluoranthene	µg/L	1,800
	lbs/day[1]	46
Hexachlorocyclopentadiene	µg/L	7,100
	lbs/day[1]	180
Nitrobenzene	µg/L	600
	lbs/day[1]	15.00
Thallium	µg/L	240
	lbs/day[1]	6.1
Tributylin	µg/L	0.17
	lbs/day[1]	0.0043
1,1,1-Trichloroethane	µg/L	66,000,000
	lbs/day[1]	1,600,000

[1] Mass limitations are based on 3.0 MGD maximum effluent flow.

Table F-16. Effluent Limitations for the Protection of Human Health (Carcinogens)

Pollutant	Unit	30-day Average
Acrylonitrile	µg/L	12
	lbs/day[1]	0.31
Aldrin	µg/L	0.0027
	lbs/day[1]	0.000067
Benzene	µg/L	720
	lbs/day[1]	18
Benzidine	µg/L	0.0084
	lbs/day[1]	0.00021

Pollutant	Unit	30-day Average
Beryllium	µg/L	4.0
	lbs/day[1]	0.10
Bis(2-Chloroethyl)Ether	µg/L	5.5
	lbs/day[1]	0.14
Bis(2-Ethylhexyl)Phthalate	µg/L	430
	lbs/day[1]	11
Carbon Tetrachloride	µg/L	110
	lbs/day[1]	2.7
Chlordane	µg/L	0.0028
	lbs/day[1]	0.000070
DDT (total)	µg/L	0.021
	lbs/day[1]	0.00052
1,4 Dichlorobenzene	µg/L	2,200
	lbs/day[1]	55
3,3'-Dichlorobenzidine	µg/L	0.099
	lbs/day[1]	0.0025
1,2-Dichloroethane	µg/L	3,400
	lbs/day[1]	85
1,1-Dichloroethylene	µg/L	110
	lbs/day[1]	2.7
Dichloromethane (Methylene Chloride)	µg/L	55,000
	lbs/day[1]	1,400
1,3-Dichloropropene	µg/L	1100
	lbs/day[1]	27
Dieldrin	µg/L	0.0049
	lbs/day[1]	0.00012
2,4-Dinitrotoluene	µg/L	320
	lbs/day[1]	7.9
1,2-Diphenylhydrazine	µg/L	20
	lbs/day[1]	0.49
Halomethanes	µg/L	16000
	lbs/day[1]	400
Heptachlor	µg/L	0.0061
	lbs/day[1]	0.00015
Heptachlor Epoxide	µg/L	0.0024
	lbs/day[1]	0.000061
Hexachlorobenzene	µg/L	0.026
	lbs/day[1]	0.00064
Hexachlorobutadiene	µg/L	1,700
	lbs/day[1]	43

Pollutant	Unit	30-day Average
Hexachloroethane	µg/L	310
	lbs/day[1]	7.6
Isophorone	µg/L	89,000
	lbs/day[1]	2,200
N-Nitrosodimethylamine	µg/L	890
	lbs/day[1]	22
N-Nitrosodi-n-Propylamine	µg/L	46
	lbs/day[1]	1.2
N-Nitrosodiphenylamine	µg/L	310
	lbs/day[1]	7.6
PAHs (total)	µg/L	1.1
	lbs/day[1]	0.027
PCBs	µg/L	0.0023
	lbs/day[1]	0.000058
TCDD Equivalents	µg/L	4.8E-07
	lbs/day[1]	1.2E-08
1,1,2,2-Tetrachloroethane	µg/L	280
	lbs/day[1]	7.00
Tetrachloroethylene	µg/L	240
	lbs/day[1]	6.1
Toxaphene	µg/L	0.026
	lbs/day[1]	0.00064
Trichloroethylene	µg/L	3300
	lbs/day[1]	82
1,1,2-Trichloroethane	µg/L	1,100
	lbs/day[1]	29
2,4,6-Trichlorophenol	µg/L	35
	lbs/day[1]	0.89
Vinyl Chloride	µg/L	4,400
	lbs/day[1]	110

[1] Mass limitations are based on 3.0 MGD maximum effluent flow.

5. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) limitations protect receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative "no toxics in toxic amounts" criterion while implementing numeric criteria for toxicity. There are two types of WET tests - acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

Central Coast Water Board staff has retained acute and chronic toxicity limitations from the previous permit. Further, the effluent limitations have been calculated based on a minimum probable initial dilution of 121 to 1.

The Discharger must also maintain a Toxicity Reduction Evaluation (TRE) Workplan, which describes steps that the Discharger intends to follow in the event that acute and/or chronic toxicity limitations are exceeded. When monitoring measures WET in the effluent above the limitations established by the Order, the Discharger must resample, if the discharge is continuing, and retest. The Executive Officer will then determine whether to initiate enforcement action, whether to require the Discharger to implement a Toxicity Reduction Evaluation, or to implement other measures.

6. Fecal Coliform and Enterococcus

Fecal coliform and enterococcus effluent limits have been established based on the 2012 Ocean Plan. The limits are based on a dilution ratio of 121:1, and apply at a measurable location before disposal to the ocean outfall.

D. Final Effluent Limitations

Final, technology-based and water quality-based effluent limitations established by the Order are discussed in the preceding sections of the Fact Sheet.

1. Satisfaction of Anti-Backsliding Requirements

The Order retains effluent limitations established by the previous permit for BOD_5, TSS, oil and grease, settleable solids, turbidity, pH, and total coliform.

The Order also retains most of the effluent limitations from the previous permit for the Ocean Plan Table 1 toxic pollutants. The Ocean Plan was amended in 2005 to include a procedure for determining “reasonable potential” by characterization of effluent monitoring data. A reasonable potential analysis, using the updated Ocean Plan procedure, resulted in a finding of Endpoint 3 for all Table 1 pollutants except arsenic, copper, nickel, selenium, zinc, cyanide, antimony, chromium (III), toluene, chlorodibromomethane, chloroform, and dichlorobromomethane, which had an Endpoint 2 and thus do not require an effluent limitation.

Consequently, the Order does not contain effluent limitations or prohibitions that are less stringent than the previous permit and is consistent with the anti-backsliding requirements.

2. Satisfaction of Antidegradation Policy

The Order does not authorize increases in discharge rates or pollutant loadings, and its limitations and conditions otherwise assure maintenance of the existing quality of receiving waters. Therefore, provisions of the Order are consistent with applicable anti-degradation policy expressed by NPDES regulations at 40 C.F.R. 131.12 and by State Water Board Resolution 68-16.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD_5; TSS; settleable solids; turbidity; oil and grease; and pH. Restrictions on these pollutants are discussed in section IV. B of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. These limitations are not more stringent than required by the CWA.

Final, technology and water quality-based effluent limitations are summarized in sections IV. B and C of this Fact Sheet.

E. Interim Effluent Limitations

The Order does not establish interim effluent limitations and schedules for compliance with final limitations. Interim limitations are authorized only in certain circumstances, when immediate compliance with newly established final water quality based limitations is not feasible.

F. Land Discharge Specifications – Not Applicable

G. Recycling Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

Receiving water quality is a result of many factors, some unrelated to the discharge. This Order considers these factors and is designed to minimize the influence of the discharge on the receiving water. Receiving water limitations within the proposed Order include the receiving water limitations of the previous Order.

B. Groundwater

Groundwater limitations established by the Order include general objectives for ground water established by the Basin Plan for the Central Coast Region.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 C.F.R. section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 also authorize the Central Coast Water Board to require technical and monitoring reports. Rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program (MRP), which is presented as Attachment E of this Order, is presented below.

A. Influent Monitoring

In addition to influent flow monitoring, influent monitoring for BOD_5 and TSS is required to determine compliance with the Order's 85 percent removal requirement for those pollutants.

B. Effluent Monitoring

Effluent monitoring requirements of the previous permit for Discharge Point 001 (the Ocean outfall) are retained in this Order, with the following exceptions/changes:

- Monitoring for Copper and Zinc was reduced from quarterly to semiannually, and monitoring for these parameters will be conducted with the other Ocean Plan Table 1 pollutants on a semiannual basis. The Discharger's historical compliance with the effluent limitations and the removal of the effluent limits warrant decreased monitoring.

- This Order establishes monitoring for fecal coliform and enterococcus bacteria to determine compliance with new effluent limitations.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) limitations protect receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. Acute toxicity testing measures mortality in 100 percent effluent over a short test period and chronic toxicity testing is conducted over a longer period of time and may measure mortality, reproduction, and/or growth. This Order retains acute and chronic WET limitations and monitoring requirements from the previous permit for Discharge Point 001.

D. Receiving Water Monitoring

1. Shoreline Bacteria Monitoring

Requirements to conduct shoreline bacteria monitoring, when elevated levels of bacteria are measured in discharges to Carmel Bay, are retained from the previous permit.

2. Groundwater

Groundwater monitoring requirements are not established by the Order.

E. Other Monitoring Requirements

1. Central Coast Long-Term Environmental Assessment Network (CCLEAN)

Requirements to participate in the CCLEAN Regional Monitoring Program are retained from the previous permit.

2. Biosolids/Sludge Monitoring.

Biosolids monitoring requirements are retained from the previous Order.

3. Outfall Inspection.

The Order retains the requirement of the previous permit to conduct annual visual inspections of the outfall and diffuser system and to conduct a dye study to visually inspect the entire outfall structure to determine whether there are leaks, potential leaks, or malfunctions. The Order includes a requirement to notify the MBNMS in advance of these studies.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D to the Order.

40 C.F.R. 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. 40 C.F.R. section 123.25 (a) (12) allows the State to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R.123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. section 122.41 (j) (5) and (k) (2), because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387 (e).

B. Special Provisions

1. Reopener Provisions

The Order may be modified in accordance with the requirements set forth at 40 C.F.R. sections 122 and 124, to include appropriate conditions or limits based on newly available information, or to implement any, new State water quality objectives that are approved by the U.S. EPA. As effluent is further characterized through additional monitoring, and if a need for additional effluent limitations becomes apparent after additional effluent characterization, the Order will be reopened to incorporate such limitations.

2. Special Studies and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

The requirement to maintain a Toxicity Reduction Work Plan is retained from Order R3-2008-0007. When toxicity monitoring measures acute or chronic toxicity in the effluent above the limitation established by the Order, the Discharger is required to resample and retest, if the discharge is continuing.

When all monitoring results are available, the Executive Officer can determine whether to initiate enforcement action, whether to require the Discharger to implement toxicity reduction evaluation (TRE) requirements, or whether other measures are warranted.

b. Water-Contact Monitoring (Bacterial Characteristics)

The requirement for repeat water-contact bacteriological monitoring was retained from Order R3-2008-0007 in accordance with Ocean Plan section III.D.1.b, for exceedance of a single sample maximum (SSM) bacteria standard contained within section IV.A.1 of the Order. This requirement is also footnoted in Table E-7 of section VIII.A of the Monitoring and Reporting Program (Attachment E).

c. Area of Special Biological Significance (ASBS) Discharge Evaluation

Paragraph 2 of State Water Resources Control Board Resolution No. 84-78 requires yearly monitoring and a comprehensive study every ten years to evaluate the effects of the discharge on the Carmel Bay ASBS. The CCLEAN monitoring requirements satisfy the yearly ASBS monitoring requirements. A comprehensive study workplan and subsequent report were submitted in October 2012 and June 2013, respectively. The March 2013 report shows no measurable effect of the discharge on the ASBS and more intensive or frequent monitoring is therefore not required per Resolution No. 84-78. This special provision acts as a place holder for the next ten year comprehensive study workplan and report due September 2022 and March 2023, respectively.

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program

The 2012 California Ocean Plan establishes guidelines for the Pollutant Minimization Program (PMP). At the time of the proposed adoption of this Order no known evidence was available that would require the Discharger to immediately develop and conduct a PMP. The Central Coast Water Board will notify the Discharger in writing if such a program becomes necessary.

4. Construction, Operation, and Maintenance Specifications – Not Applicable

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Biosolids Management

Provisions regarding sludge handling and disposal ensure that such activity will comply with all applicable regulations.

40 C.F.R. 503 sets forth USEPA's final rule for the use and disposal of biosolids, or sewage sludge, and governs the final use or disposal of biosolids. The intent of this federal program is to ensure that sewage sludge is used or disposed of in a way that protects both human health and the environment.

USEPA's regulations require that producers of sewage sludge meet certain reporting, handling, and disposal requirements. As the USEPA has not delegated the authority to implement the sludge program to the State of California, the enforcement of sludge requirements that apply to the Discharger remains under USEPA's jurisdiction at this time. USEPA, not the Central Coast Water Board, will oversee compliance with 40 C.F.R. 503.

40 C.F.R. 503.4 (Relationship to other regulations) states that the disposal of sewage sludge in a municipal solid waste landfill unit, as defined in 40 C.F.R. 258.2, that complies with the requirements in 40 C.F.R. 258 constitutes compliance with section 405 (d) of the CWA. Any person who prepares sewage sludge that is disposed in a municipal solid waste landfill unit must ensure that the sewage sludge meets the applicable requirements of 40 C.F.R. 503.

b. Pretreatment

Pretreatment requirements for POTWs are contained within 40 C.F.R. Part 403. Per 40 C.F.R. Part 403.8, any POTW (or combination of POTWs operated by the same authority) with a total design flow greater than 5 million gallons per day (MGD) and receiving from industrial users pollutants which pass through or interfere with the operation of the POTW or are otherwise subject to pretreatment standards will be required to establish a POTW pretreatment program unless the NPDES State exercises its option to assume local responsibilities as provided for in § 403.10(e). The Executive Officer may require that a POTW with a design flow of 5 mgd or less develop a POTW pretreatment program if he or she finds that the nature or volume of the industrial influent, treatment process upsets, violations of POTW effluent limitations, contamination of municipal sludge, or other circumstances warrant in order to prevent interference with the POTW or pass through as defined in 40 C.F.R. Part 403.3.

The Order does not contain pretreatment requirements as the Facility does not meet any of the above criteria.

6. Other Special Provisions

a. Discharges of Storm Water

The Order does not address discharges of storm water from the treatment and disposal site, except to require coverage by and compliance with applicable provisions of General Permit CAS000001 - *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities*.

b. Sanitary Sewer System Requirements

The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order 2006-0003-DWQ (General Order) on May 2, 2006. The Monitoring and Reporting Requirements for the General Order were amended by Water Quality Order WQ 2008-0002-EXEC on February 20, 2008. The General Order's Monitoring and Reporting Program was modified by WQ 2013-0058-EXEC on August 6, 2013. The General Order requires public

agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. Inasmuch that the Discharger's collection system is part of the system that is subject to this Order, certain standard provisions are applicable as specified in Provisions, section VI.C.5. For instance, the 24-hour reporting requirements in this Order are not included in the General Order. The Discharger must comply with both the General Order and this Order. The Discharger and public agencies that are discharging wastewater into the facility were required to obtain enrollment for regulation under the General Order by December 1, 2006.

7. Compliance Schedules

The Order does not establish interim effluent limitations and schedules of compliance with final limitations.

VIII. PUBLIC PARTICIPATION

The Central Coast Water Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Carmel Area Wastewater District Wastewater Treatment Facility. As a step in the WDR adoption process, Central Coast Water Board staff has developed tentative WDRs. The Central Coast Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Central Coast Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit written comments and recommendations. Notification was provided through publication in the local newspaper, the Monterey Herald, posting at the Facility and Discharger offices, and/or publication on the Discharger's and Water Board's website.

B. Written Comments

Staff received two written comments solely from the Monterey Bay National Marine Sanctuary on March 3, 2014. Those comments are summarized, along with staff's response to the comments, as follows:

1. The MBNMS requested improvements to the map on page B-1.

Staff Response: Improvements were made to the map on page B-1.

2. The MBNMS requested that CAWD immediately notify the MBNMS office in the event spills enter ocean waters.

Staff Response: A requirement for CAWD to notify the MBNMS office in the event spills enter ocean waters is included on page E-17.

C. Public Hearing

The Central Coast 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: **May 22 or 23, 2014**
Time: **8:30 a.m.**
Location: **Central Coast Water Board**
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

Interested persons are invited to attend. At the public hearing, the Central Coast Water Board may place this permit on the consent calendar, if there is no objection by the Discharger or the public.

Please be aware that dates and venues may change. Our Web address is http://www.waterboards.ca.gov/centralcoast/ where you can access the current agenda for changes in dates and locations.

D. Reconsideration of Waste Discharge Requirements

Any person affected by the action of the Central Coast Water Board to adopt this Order may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050. Information for filing a petition will be provided upon request to the State Water Board. Any person affected by this Order may also request the Central Coast Water Board to reconsider the Order. To be timely, such request must be made within 30 days of the date of this Order. Note that even if reconsideration by the Central Coast Water Board is sought, filing a petition with the State Water Board within the time is necessary to preserve the petitioner's legal rights. If the Discharger chooses to request reconsideration of this Order or file a petition with the State Water Board, the Discharger must comply with the Order while the request for reconsideration and/or petition is being considered. The petition must be submitted within 30 days of the Central Coast Water Board's action to the following address:

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

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:00 a.m. and 5:00 p.m., Monday through Friday. Copying of documents may be arranged through the Central Coast Water Board by calling (805) 549-3147.

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 Central Coast 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 Peter von Langen at (805) 549-3688 or pvonlangen@waterboards.ca.gov.