



California Regional Water Quality Control Board

Central Coast Region



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Arnold Schwarzenegger
Governor

ORDER NO. R3-2008-0007

NPDES NO. CA0047996

WASTE DISCHARGE REQUIREMENTS FOR THE CARMEL AREA WASTEWATER DISTRICT AND THE PEBBLE BEACH COMMUNITY SERVICES DISTRICT

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

Table 1. Discharger Information

Discharger	Carmel Area Wastewater District Pebble Beach Community Services District
Name of Facility	Carmel Area Wastewater District, Wastewater Treatment Plant
Facility Address	26900 State Route One
	Carmel, CA
	Monterey County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

Discharges by the Carmel Area Wastewater District from the discharge points identified below are subject to waste discharge requirements as set forth in this Order.

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Secondary Treated Wastewater	36 ° , 32 ' , 00 " N	121 ° , 55 ' , 43 " W	Pacific Ocean

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	<Adoption Date>
This Order shall become effective on:	<Effective Date>
This Order shall expire on:	<Expiration Date>
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	<u>180 days prior to the Order expiration date</u>

IT IS HEREBY ORDERED, that Order No. R3-2002-026 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations

and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

Roger W. Briggs, Executive Officer

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I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	Carmel Area Wastewater District and the Pebble Beach Community Services District
Name of Facility	Carmel Area 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 Contacts, Title, and Phone	Mark Scheiter, Plant Superintendent, (831) 624-1249 (x 230)
	Ray von Dohren, General Manager, (831) 624-1248
Mailing Address	P.O. Box 221428, Carmel, California 93922
Type of Facility	Publicly Owned Treatment Works
Facility Design Flow	3.0 Million Gallons per Day (MGD)

II. FINDINGS

The California Water Resources Control Board, Central Coast Region (hereinafter the Regional Water Board), finds:

A. Background. The Carmel Area Wastewater District is currently discharging pursuant to Order No. R3-2002-026 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0047996. The Discharger submitted a Report of Waste Discharge, dated December 21, 2006, and applied for an NPDES permit renewal to discharge up to 3.0 MGD of treated wastewater from the Carmel Area Wastewater District's wastewater treatment plant. The application was deemed complete on January 12, 2007.

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. Facility Description. The Discharger owns and operates a municipal wastewater treatment facility located at 26900 State Route One in Carmel, treating wastewater originating in service areas of the Carmel Area Wastewater District and the Pebble Beach Community Services District.

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 flotation and blended with primary solids before anaerobic digestion. Digested sludge is dewatered by belt filter press and

hauled offsite for composting at McCarthy Farms in Lost Hills, Kern County. Sludge beds provide backup dewatering capability.

The facility's tertiary treatment system provides reclaimed wastewater for irrigation of seven local golf courses and some smaller landscaped areas. Tertiary treatment is currently accomplished by eight upflow, continuous backwash sand filters, which are being replaced by microfiltration and reverse osmosis (MF/RO). Tertiary treatment MF/RO upgrades are scheduled for completion in the spring of 2008. Recycled water production and use is regulated by Water Reclamation Requirements Order nos. 93-72 and 94-04, respectively.

The RO process, as contemplated by the Discharger, will treat secondary effluent to tertiary quality and produce a waste stream – RO reject or concentrate. The RO system will likely operate at 50 – 75 percent recovery (e.g., for every 100 gallons of secondary effluent that is treated by RO, 50 – 75 gallons of tertiary treated product water and 25 – 50 gallons of RO concentrate will be produced) and at a 95 percent rate of rejection (i.e., approximately 95 percent of all dissolved solids in secondary effluent will be concentrated in the RO concentrate stream). The net result will be concentration of dissolved solids by a factor of 2 to 4 in the RO concentrate.

Discharges to Carmel Bay will consist of dechlorinated secondary treated wastewater, RO concentrate, or combinations thereof depending on the seasonal demand for recycled water once the MF/RO facility is operational.

Treated wastewater is discharged to Carmel Bay [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.

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

- C. Legal Authorities.** This Order is issued pursuant to CWA section 402 and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as an 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 California Water Code (commencing with section 13260).
- D. 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 Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E are also incorporated into this Order.
- E. California Environmental Quality Act (CEQA).** Pursuant to Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of the CEQA, Public Resources Code sections 21100-21177.

F. Technology-Based Effluent Limitations. CWA Section 301 (b) and USEPA's NPDES regulations at 40 CFR 122.44 require that permits include, at a minimum, conditions meeting applicable technology-based requirements and any more stringent effluent limitations necessary to meet applicable water quality standards. Discharges authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards established at 40 CFR Part 133 and Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3. A detailed discussion of development of technology-based effluent limitations is included in the Fact Sheet (Attachment F).

G. Water Quality-Based Effluent Limitations. CWA Section 301 (b) and NPDES regulations at 40 CFR 122.44 (d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

NPDES regulations at 40 CFR 122.44 (d) (1) (i) mandate 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 is established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under 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 at 40 CFR 122.44 (d) (1) (vi).

H. Water Quality Control Plans. The Regional Water Board has adopted a *Water Quality Control Plan for the Central Coast Region* (the Basin Plan) that 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).

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 TDS levels of marine waters exceed 3000 mg/L, such waters are not considered suitable for municipal or domestic supply and therefore meet an exception to Resolution No. 88-63. Beneficial uses established by the Basin Plan for Carmel Bay are presented in Table 5, below.

Table 5. Basin Plan Beneficial Uses for the Pacific Ocean

Discharge Point	Receiving Water	Beneficial Use(s)
001	Pacific Ocean (Carmel Bay)	<ul style="list-style-type: none"> • Water Contact and Non-Contact Recreation • Commercial and Sport Fishing • Marine Habitat • Rare, Threatened, or Endangered Species • Wildlife Habitat

Requirements of this Order implement the Basin Plan.

I. California Ocean Plan

The State Water Board adopted the *Ocean Plan* in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, and 2005. The State Water Board adopted the latest amendment on April 21, 2005 and it became effective on February 14, 2006. The *Ocean Plan* is applicable, in its entirety, to point source discharges to the Ocean. The *Ocean Plan* identifies the following beneficial uses of ocean waters of the State.

Table 6. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001	Pacific Ocean (Carmel Bay)	<ul style="list-style-type: none"> • 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 beneficial uses the *Ocean Plan* establishes water quality objectives and programs of implementation to achieve and maintain those objectives. 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 Board¹ 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.

J. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes. [65 Fed. Reg. 24641 (April 27, 2000), codified at 40 CFR 131.21] 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.

K. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. As discussed in section IV. B of the Fact Sheet, the Order establishes technology-based effluent limitations for biochemical oxygen demand (BOD₅); total suspended solids (TSS); settleable solids; oil and grease, turbidity, and pH for Discharge Point 001. These technology-based limitations implement the minimum, applicable federal technology-based

¹ California Ocean Plan (2005), Appendix V
 Limitations and Discharge Requirements

requirements. The Order also contains effluent limitations in addition to the minimum, federal technology-based requirements, necessary to meet applicable water quality standards. These limitations are not more stringent than required by the CWA.

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. For Discharge Point 001, procedures for calculating individual WQBELs are based on the Ocean Plan, which was approved by USEPA on February 14, 2006. All beneficial uses and water quality objectives contained in 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 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.

- L. Antidegradation Policy.** NPDES regulations at 40 CFR 131.12 require that 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, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that the existing quality of waters 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. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.
- M. Anti-Backsliding Requirements.** CWA Sections 402 (o) (2) and 303 (d) (4) and NPDES regulations at 40 CFR 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. As discussed in the Fact Sheet, effluent limitations and other requirements established by this Order satisfy applicable anti-backsliding provisions of the CWA and NPDES regulations.
- N. Monitoring and Reporting.** NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. California Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (Attachment E) establishes monitoring and reporting requirements to implement federal and State requirements.
- O. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with NPDES regulations at 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Regional Water Board has also included in this Order

special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

- P. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections IV.B, IV.C, and V.B. of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.
- Q. Notification of Interested Parties.** The Regional Water Board has 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 their written comments and recommendations. Details of notification are provided in the Fact Sheet accompanying this Order.
- R. 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.

III. DISCHARGE PROHIBITIONS

- A.** Discharge to Carmel Bay at a location other than as described by this Order at 36° 32' 00" N. Latitude, 121° 55' 43" W. Longitude is prohibited.
- 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. G (Bypass), is prohibited.
- C.** Discharges of any waste or discharges in any manner other than as described by this Order, excluding storm water regulated by General Permit No. CAS000001 (*Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities*), are prohibited.
- D.** The discharge of any radiological, chemical, or biological warfare agent or high level radioactive waste to the Ocean is prohibited.
- E.** Discrete point source discharges of sewage in a manner that alters conditions from those occurring naturally in the area of the discharge to Carmel Bay, an Area of Special Biological Significance (ASBS), are prohibited.
- F.** Federal law prohibits the discharge of sludge by pipeline to 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.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

1. Final Effluent Limitations – Discharge Point 001

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

Table 6. Effluent Limitations for Conventional Pollutants

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
Biochemical Oxygen Demand (BOD ₅)	mg/L	30	45	90
	lbs/day	750	1,130	2,250
	kg/day	340	510	1,020
Total Suspended Solids (TSS)	mg/L	30	45	90
	lbs/day	750	1,130	2,250
	kg/day	340	510	1,020
Settleable Solids	mL/L/hr	1.0	1.5	3.0
Turbidity	NTUs	75	100	225
Oil & Grease	mg/L	25	40	75
	lbs/day	630	1,000	1,880
	kg/day	280	450	850
pH	pH units	6.0 – 9.0 at all times		

Note: mass limits based on 3.0 MGD maximum effluent flow (footnote [4] of Table 7 also applies)

- b. **Toxic Pollutants (Table B of the Ocean Plan):** The Discharger shall maintain compliance with the following effluent limitations for toxic pollutants at Discharge Point 001, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP.

Table 7. Effluent Limitations for Toxic Pollutants ^[4]

Effluent Limitations for the Protection of Marine Aquatic Life

Pollutant	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Arsenic	ug/L	610	3,540	9,400
	lbs/day	15	89	240
Cadmium	ug/L	120	490	1220
	lbs/day	3.1	12	31
Chromium ^[1] (Hexavalent)	ug/L	240	980	2,440
	lbs/day	6.1	24	61
Copper	ug/L	120	1,220	3,420
	lbs/day	3.1	31	86

Pollutant	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Lead	ug/L	240	980	2,440
	lbs/day	6.1	24	61
Mercury	ug/L	4.82	19.46	48.74
	lbs/day	0.12	0.49	1.2
Nickel	ug/L	610	2,440	6,100
	lbs/day	15	61	150
Selenium	ug/L	1,830	7,320	18,300
	lbs/day	46	180	460
Silver	ug/L	70	330	840
	lbs/day	1.7	8.1	21
Zinc	ug/L	1,470	8,790	23,430
	lbs/day	37	220	590
Cyanide ⁽²⁾	ug/L	120	490	1,220
	lbs/day	3.1	12	31
Total Residual Chlorine ⁽³⁾	ug/L	240	980	7,320
	lbs/day	6.1	24	180
Ammonia (as N)	ug/L	73,200	292,800	732,000
	lbs/day	1,800	7,300	18,000
Acute* Toxicity	TUa	-----	3.9	-----
Chronic* Toxicity	TUc	-----	122	-----
Phenolic Compounds (non-chlorinated)	ug/L	3,660	14,640	36,600
	lbs/day	92	370	920
Chlorinated Phenolics	ug/L	120	490	1,220
	lbs/day	3.1	12	31
Endosulfan	ug/L	1.10	2.20	3.29
	lbs/day	0.027	0.055	0.082
Endrin	ug/L	0.24	0.49	0.73
	lbs/day	0.0061	0.012	0.018
HCH*	ug/L	0.49	0.98	1.46
	lbs/day	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			

Effluent Limitations for the Protection of Human Health - (Non-Carcinogens)

Pollutant	Units	30-day Average
Acrolein	ug/L	26,840
	lbs/day	670
Antimony	ug/L	150,000
	lbs/day	3,700
Bis(2-Chloroethoxy)Methane	ug/L	540
	lbs/day	13

Pollutant	Units	30-day Average
Bis(2-Chloroisopropyl)Ether	ug/L	150,00
	lbs/day	3,700
Chlorobenzene	ug/L	69,540
	lbs/day	1,700
Chromium (III)	ug/L	23,180,000
	lbs/day	580,000
Di-n-Butyl Phthalate	ug/L	430,000
	lbs/day	11,000
Dichlorobenzenes*	ug/L	620,000
	lbs/day	16,000
Diethyl Phthalate	ug/L	4,030,000
	lbs/day	100,000
Dimethyl Phthalate	ug/L	100,040,000
	lbs/day	2,500,000
4,6-Dinitro-2-methylphenol	ug/L	26,840
	lbs/day	670
2,4-Dinitrophenol	ug/L	490
	lbs/day	12
Ethylbenzene	ug/L	500,000
	lbs/day	13,000
Fluoranthene	ug/L	1,830
	lbs/day	46
Hexachlorocyclopentadiene	ug/L	7,080
	lbs/day	180
Nitrobenzene	ug/L	500
	lbs/day	15
Thallium	ug/L	240
	lbs/day	6.1
Toluene	ug/L	10,370,000
	lbs/day	260,000
Tributyltin	ug/L	0.17
	lbs/day	0.0043
1,1,1-Trichloroethane	ug/L	65,880,000
	lbs/day	1,600,000

Effluent Limitations for the Protection of Human Health - (Carcinogens)

Pollutant	Units	30-day Average
Acrylonitrile	ug/L	12.20
	lbs/day	0.31
Aldrin	ug/L	0.00268
	lbs/day	0.000067
Benzene	ug/L	720

Pollutant	Units	30-day Average
	lbs/day	18
Benzidine	ug/L	0.00842
	lbs/day	0.00021
Beryllium	ug/L	4.03
	lbs/day	0.10
Bis(2-chloroethyl) ether	ug/L	5.49
	lbs/day	0.14
Bis(2-ethylhexyl) phthalate	ug/L	430
	lbs/day	11
Carbon Tetrachloride	ug/L	110
	lbs/day	2.7
Chlordane*	ug/L	0.00281
	lbs/day	0.000070
Chlorodibromomethane	ug/L	1,050
	lbs/day	26
Chloroform	ug/L	15,900
	lbs/day	400
DDT*	ug/L	0.02074
	lbs/day	0.00052
1,4-Dichlorobenzene	ug/L	2,200
	lbs/day	55
3,3-Dichlorobenzidine	ug/L	0.99
	lbs/day	0.025
1,2-Dichloroethane	ug/L	3,400
	lbs/day	85
1,1-Dichloroethylene	ug/L	110
	lbs/day	2.7
Dichlorobromomethane	ug/L	760
	lbs/day	19
Dichloromethane	ug/L	54,900
	lbs/day	1,400
1,3-Dichloropropene	ug/L	1,090
	lbs/day	27
Dieldrin	ug/L	0.00488
	lbs/day	0.00012
2,4-Dinitrotoluene	ug/L	320
	lbs/day	7.9
1,2-Diphenylhydrazine	ug/L	19.52
	lbs/day	0.49
Halomethanes*	ug/L	15,860
	lbs/day	400
Heptachlor	ug/L	0.006
	lbs/day	0.00015

Pollutant	Units	30-day Average
Heptachlor Epoxide	ug/L	0.002
	lbs/day	0.000061
Hexachlorobenzene	ug/L	0.02562
	lbs/day	0.00064
Hexachlorobutadiene	ug/L	1,710
	lbs/day	43
Hexachloroethane	ug/L	310
	lbs/day	7.6
Isophorone	ug/L	89,060
	lbs/day	2,228
N-nitrosodimethylamine	ug/L	890
	lbs/day	22
N-nitrosdi-N-propylamine	ug/L	46
	lbs/day	1.2
N-nitrosodiphenylamine	ug/L	310
	lbs/day	7.6
PAHs*	ug/L	1.07
	lbs/day	0.027
PCBs*	ug/L	0.00232
	lbs/day	0.000058
TCDD Equivalentents*	ug/L	0.00000048
	lbs/day	0.00000012
1,1,2,2-Tetrachloroethane	ug/L	280
	lbs/day	7.0
Tetrachloroethylene	ug/L	244
	lbs/day	6.1
Toxaphene	ug/L	0.02562
	lbs/day	0.00064
Trichloroethylene	ug/L	3,290
	lbs/day	82
1,1,2-Trichloroethane	ug/L	1,147
	lbs/day	29
2,4,6-Trichlorophenol	ug/L	35.38
	lbs/day	0.89
Vinyl Chloride	ug/L	4,390
	lbs/day	110

* See Attachment A for applicable definitions

[1] Dischargers may at their option meet this objective as a total chromium objective.

[2] 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 CFR PART 136, as revised May 14, 1999.

[3] Water quality objectives for total chlorine residual applying to intermittent discharges not exceeding two hours, shall be determined through the use of the following equation:

$$\log y = -0.43 (\log x) + 1.8$$

where: y = the water quality objective (in ug/l) to apply when chlorine is being discharged;
x = the duration of uninterrupted chlorine discharge in minutes.

[4] The mass-based (lbs/day) effluent limitations in this table are based on the average dry weather flow design capacity of 3.0 MGD for the treatment facility and are therefore only good up to this flow. For flows above 3.0 MGD, mass-based effluent limitations shall be calculated individually using the concentration-based effluent limitations and the observed flow at the time of sampling per the following equation:

$$\text{lbs/day} = 0.00834 \times C_e \times Q$$

where:

C_e = the effluent concentration limit in $\mu\text{g/L}$

Q = observed flow rate in MGD

- c. **Percent Removal:** The average monthly percent removal of BOD₅ and TSS shall not be less than 85 percent.
- d. **Coliform Bacteria:** The 30-day geometric mean of total coliform bacteria in effluent samples shall not exceed 230 per 100 mL; nor shall the number of coliform bacteria in any single sample exceed 10,000 per 100 mL.
- e. **Rate of Discharge:** The daily dry weather average flow shall not exceed a monthly average of 3.0 MGD.
- f. **Minimum Initial Dilution:** The minimum initial dilution of treated effluent at the point of discharge to Carmel Bay shall not be less than 121 to 1 (seawater to effluent) at any time.

2. Interim Effluent Limitations

This section of the standardized permit is not applicable to the Carmel Area Wastewater District.

B. Land Discharge Specifications

This section of the standardized permit is not applicable to the Carmel Area Wastewater District.

C. Reclamation Specifications

The Discharger shall comply with applicable State and local requirements regarding the production and use of reclaimed wastewater, including requirements established by the Department of Health Services at title 22, sections 60301 - 60357 of the California Code of Regulations, Water Recycling Criteria. Recycled water production and use is regulated by separate water reclamation requirements orders.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

The discharge shall not cause a violation of the following receiving water limitations, which are based on water quality objectives (Water-Contact Standards) contained in the Ocean Plan. Compliance with these limitations shall be determined from an area within the waste field where initial dilution is completed except where other sampling stations are defined below.

1. Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone designated for water contact recreation use by the Regional Water Board, the following bacteriological objectives shall be maintained throughout the water column.

30-Day Geometric Mean – The following standards are based on the geometric mean of the five most recent samples from each receiving water monitoring location.

- a. Total coliform density shall not exceed 1,000 per 100 mL;
- b. Fecal coliform density shall not exceed 200 per 100 mL; and
- c. Enterococcus density shall not exceed 35 per 100 mL.

Single Sample maximum²;

- a. Total coliform density shall not exceed 10,000 per 100 mL;
 - b. Fecal coliform density shall not exceed 400 per 100 mL; and
 - c. Enterococcus density shall not exceed 104 per 100 mL.
 - d. Total coliform density shall not exceed 1,000 per 100 mL when the fecal coliform to total coliform ratio exceeds 0.1
2. At all areas where shellfish may be harvested for human consumption, as determined by the Regional Water Board, the following bacteriological objectives shall be maintained throughout the water column:
 - a. The median total coliform concentration shall not exceed 70 MPN/100 mL, and not more than 10 percent of samples shall exceed 230 MPN/100 mL.
 3. Floating particulates and grease and oil shall not be visible.
 4. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.

² See paragraph VI.C.2.b. Water-Contact Monitoring (Bacterial Characteristics) and Table E-7 Triggered Shoreline Bacteria Monitoring Schedule of the Monitoring and Reporting Program for repeat sampling requirements for exceedence of single sample maximum bacterial surface water limitations.

5. Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.
6. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.
7. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally as a result of the discharge of oxygen demanding waste material.
8. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.
9. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.
10. The concentration of substances set forth in Chapter IV, Table B of the Ocean Plan in marine sediments shall not be increased to levels that would degrade indigenous biota.
11. The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.
12. Nutrient levels shall not cause objectionable aquatic growths or degrade indigenous biota.
13. Discharges shall not cause exceedances of water quality objectives for ocean waters of the State established in Table B of the Ocean Plan.
14. Marine communities, including vertebrate, invertebrate and plant species, shall not be degraded.
15. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.
16. The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.
17. Discharge of radioactive waste shall not degrade marine life.

B. Groundwater Limitations

Activities at the facility shall not cause exceedance/deviation from the following water quality objectives for groundwater established by the Basin Plan.

1. Ground water shall not contain taste or odor producing substances in concentrations that adversely affect beneficial uses.

2. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life; or result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

VI. PROVISIONS

D. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.
2. The Discharger shall comply with the following provisions:
 - a. 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 an inland watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Wat. Code § 1211.)

E. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order. All monitoring shall be conducted according to 40 CFR Part 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*.

C. Special Provisions

1. Reopener Provisions

- a. This permit may be reopened and modified in accordance with NPDES regulations at 40 CFR 122 and 124, as necessary, to include additional conditions or limitations based on newly available information or to implement any U.S. EPA approved, new, State water quality objective.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

If the discharge consistently exceeds an effluent limitation for toxicity specified by Section IV of this Order, the Discharger shall conduct a Toxicity Reduction Evaluation (TRE) in accordance with the Discharger's TRE Workplan.

A TRE is 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. The TRE shall include all reasonable steps to identify the source of toxicity. The Discharger shall take all reasonable steps to reduce toxicity to the required level once the source of toxicity is identified.

The Discharger shall maintain a Toxicity Reduction Evaluation (TRE) Workplan, which describes steps that the Discharger intends to follow in the event that a toxicity effluent limitation established by this Order is exceeded in the discharge. The workplan shall be prepared in accordance with current technical guidance and reference material, including EPA/600/2-88-070 (for industrial discharges) or EPA/600/2-88/062 (for municipal discharges), and shall include, at a minimum:

- a. Actions that will be taken to investigate/identify the causes/sources of toxicity,
- b. Actions that will be evaluated to mitigate the impact of the discharge, to correct the non-compliance, and/or to prevent the recurrence of acute or chronic toxicity (this list of action steps may be expanded, if a TRE is undertaken), and
- c. A schedule under which these actions will be implemented.

When monitoring measures toxicity in the effluent above a limitation established by this Order, the Discharger shall resample as soon as practicable, if the discharge is continuing, and retest for whole effluent toxicity. Results of an initial failed test and results of subsequent monitoring shall be reported to the Executive Officer (EO) as soon as possible following receipt of monitoring results. If subsequent monitoring indicates that the discharge consistently exceeds a toxicity effluent limitation, the Discharger, upon EO notification, shall conduct a TRE giving due consideration to guidance provided by the U.S. EPA's Toxicity Reduction Evaluation Procedures, Phases 1, 2, and 3 (EPA document nos. EPA 600/3-88/034, 600/3-88/035, and 600/3-88/036, respectively). A TRE, if necessary, shall be conducted in accordance with the following schedule.

Table 8. Toxicity Reduction Evaluation—Schedule

Action Step	When Required
Take all reasonable measures necessary to immediately reduce toxicity, where the source is known.	Within 24 hours of identification of noncompliance.
Initiate the TRE in accordance to the Workplan.	Within 7 days of notification by the EO
Conduct the TRE following the procedures in the Workplan.	Within the period specified in the Workplan (not to exceed one year, without an approved Workplan)
Submit the results of the TRE, including summary of findings, required corrective action, and all results and data.	Within 60 days of completion of the TRE
Implement corrective actions to meet Permit limits and conditions.	To be determined by the EO

The discharger shall take all reasonable steps to reduce toxicity once the source of toxicity is identified.

b. Water-Contact Monitoring (Bacterial Characteristics)

If a single sample exceeds any of the bacteriological single sample maximum (SSM) standards contained within section V.A.1 of this Order, repeat sampling at that location shall be conducted to determine the extent and persistence of the exceedance. The EO shall be notified within 24 hours of receiving analytical results and repeat sampling shall be conducted within 24 hours of receiving analytical results and continued per a sampling frequency as directed by the EO 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.

(This requirement is also footnoted in Table E-6 of section VIII.A of Monitoring and Reporting Program No. R3-2008-0007)

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 on September 22, 2002 and March 17, 2003, respectively. The March 17, 2003 report showed no measurable effect of the discharge on the ASBS and more intensive or frequent monitoring is therefore not required per Resolution No. 84-78. The next ten year comprehensive study cycle occurs during the next five year permit cycle. This special provision acts as a place holder for the next ten year comprehensive study workplan and report due September 2012 and March 2013, respectively.

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program

The 2005 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. The 2005 Ocean Plan PMP language is included herein to provide guidance in the event that a PMP must be developed and implemented by the Discharger.

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

Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The completion and implementation of a Pollution Prevention Plan, required in accordance with California Water Code Section 13263.3 (d), will fulfill the Pollution Minimization Program requirements.

Determining the Need for a Pollutant Minimization Program:

1. The Discharger must develop and conduct a Pollutant Minimization Program if all of the following conditions are true:
 - (a) The calculated effluent limitation is less than the reported Minimum Level.
 - (b) The concentration of the pollutant is reported as DNQ.
 - (c) There is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.

2. Alternatively, the Discharger must develop and conduct a Pollutant Minimization Program if all of the following conditions are true:
 - (a) The calculated effluent limitation is less than the Method Detection Limit (MDL).
 - (b) The concentration of the pollutant is reported as ND.
 - (c) There is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.

Special Provision for Evidence of Pollutant Presence

Regional Boards may include special provisions in the discharge requirements to require the gathering of evidence to determine whether the pollutant is present in the effluent at levels above the calculated effluent limitation. Examples of evidence may include:

1. Health advisories for fish consumption;
2. Presence of whole effluent toxicity;
3. Results of benthic or aquatic organism tissue sampling;
4. Sample results from analytical methods more sensitive than methods included in the permit (in accordance with the 2005 Ocean Plan, Chapter III, Section C.4.b, *Deviations from Minimum Levels in Appendix II*; or
5. The concentration of the pollutant is reported as DNQ and the effluent limitation is less than the MDL.

Elements of a Pollutant Minimization Program

The Central Coast Water Board may consider cost-effectiveness when establishing the requirements of a Pollutant Minimization Program. The program shall include actions and submittals acceptable to the Central Coast Water Board including, but not limited to, the following:

1. An annual review and semiannual monitoring of potential sources of the reportable pollutant, which may include fish tissue monitoring and other bio-uptake sampling;
2. Quarterly monitoring for the reportable pollutant in the influent to the wastewater treatment system;
3. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable pollutant in the effluent at or below the calculated effluent limitation;
4. Implementation of appropriate cost-effective control measures for the pollutant, consistent with the control strategy; and,
5. An annual status report that shall be sent to the Central Coast Water Board including:
 - (a) All Pollutant Minimization Program monitoring results for the previous year;
 - (b) A list of potential sources of the reportable pollutant;
 - (c) A summary of all action taken in accordance with the control strategy; and,
 - (d) A description of actions to be taken in the following year.

4. Construction, Operation and Maintenance Specifications

This section of the standardized permit template is not applicable.

5. Special Provisions for Municipal Facilities (POTWs Only)

- a. **Biosolids Management.** The handling, management, and disposal of sludge and solids derived from wastewater treatment must comply with applicable provisions of U.S. EPA regulations at 40 CFR 257, 258, 501, and 503, including all monitoring, record keeping, and reporting requirements.

Solids and sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination. Sites for solids and sludge treatment and storage shall have adequate facilities to divert surface water runoff from adjacent areas to protect the boundaries of such sites from erosion, and to prevent drainage from treatment and storage sites.

The treatment, storage, disposal, or reuse of sewage sludge and solids shall not cause waste material to be in a position where it is, or can be, conveyed from the treatment and storage sites and deposited into waters of the State. The

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

b. **Pretreatment** . Not applicable (see Fact Sheet).

6. Other Special Provisions

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

b. **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. If applicable, the Discharger shall seek coverage under the General Permit and comply with its requirements.

7. Compliance Schedules

This section of the standardized permit template is not applicable.

VII. COMPLIANCE DETERMINATION

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

A. General.

Compliance with effluent limitations for reportable 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 reportable pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (ML).

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 "Detected, but Not Quantified" (DNQ) or "Not Detected" (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.

ATTACHMENT A – DEFINITIONS

Acute Toxicity:

- a. Acute Toxicity (TUa)

Expressed in Toxic Units Acute (TUa)

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

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

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

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 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) are those sample results less than the reported Minimum Level, but greater than or equal to the laboratory's MDL.

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

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

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

Enclosed Bays are indentations along the coast 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 shall mean the sum of endosulfan-alpha and -beta and endosulfan sulfate.

Estuaries and Coastal Lagoons are waters at the mouths of streams that serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams that are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by Section 12220 of the California Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

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

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

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

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

For shallow water submerged discharges, surface discharges, and non-buoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional 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 is the culture of plants and animals in marine waters independent of any pollution source.

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

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

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

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

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

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

PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 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) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of 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 Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Reported Minimum Level is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in 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 is 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 are organisms identified by the California Department of Health Services as shellfish for public health purposes (i.e., mussels, clams and oysters).

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

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

State Water Quality Protection Areas (SWQPAs) are non-terrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE (ASBS) that were previously designated by the State Water Board in 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 shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.

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) is 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.

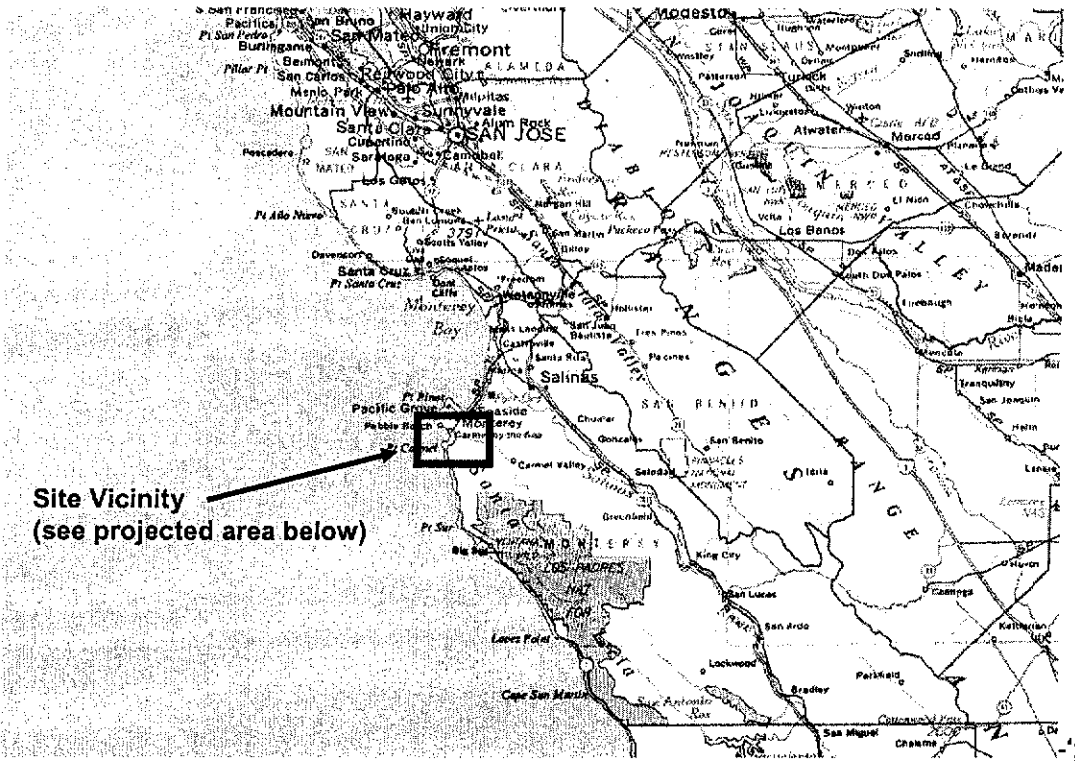
The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A TOXICITY IDENTIFICATION EVALUATION (TIE) may be required as part of the TRE, 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.

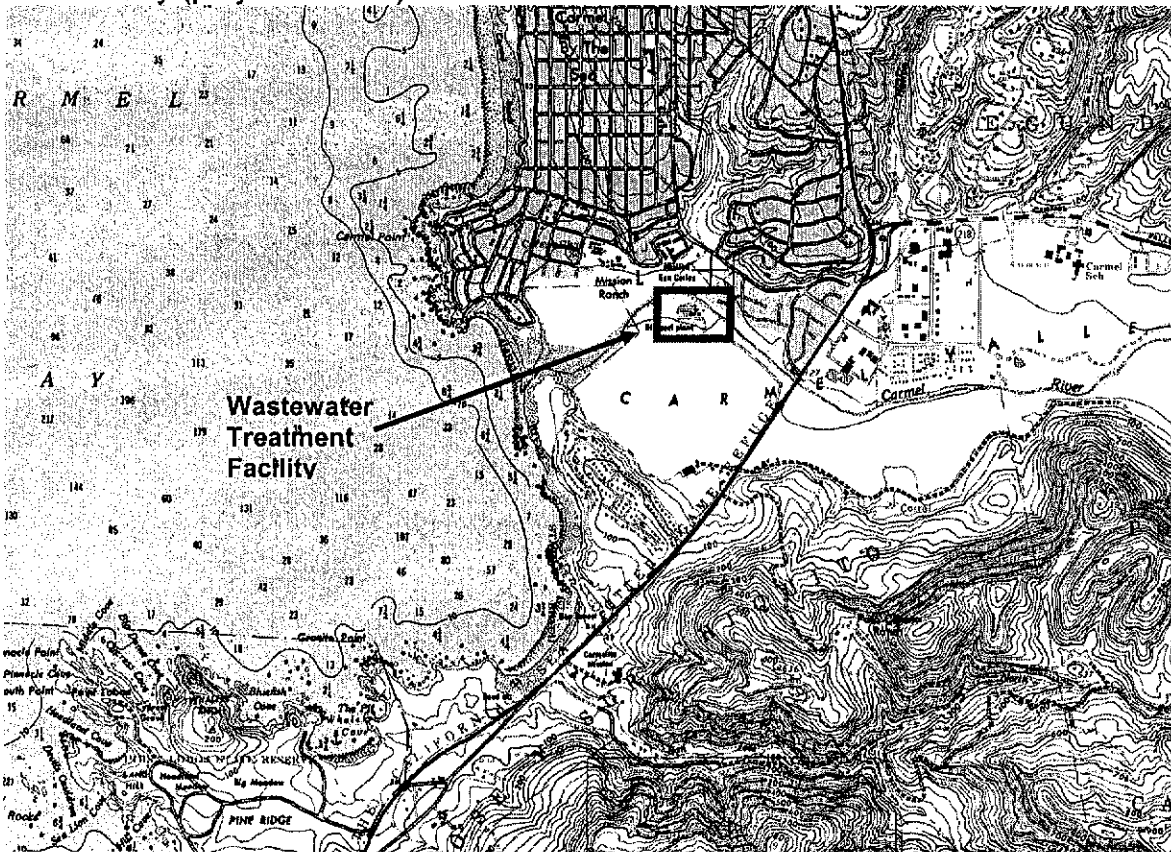
Water Reclamation: The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

ATTACHMENT B – SITE LOCATION & VICINITY MAP

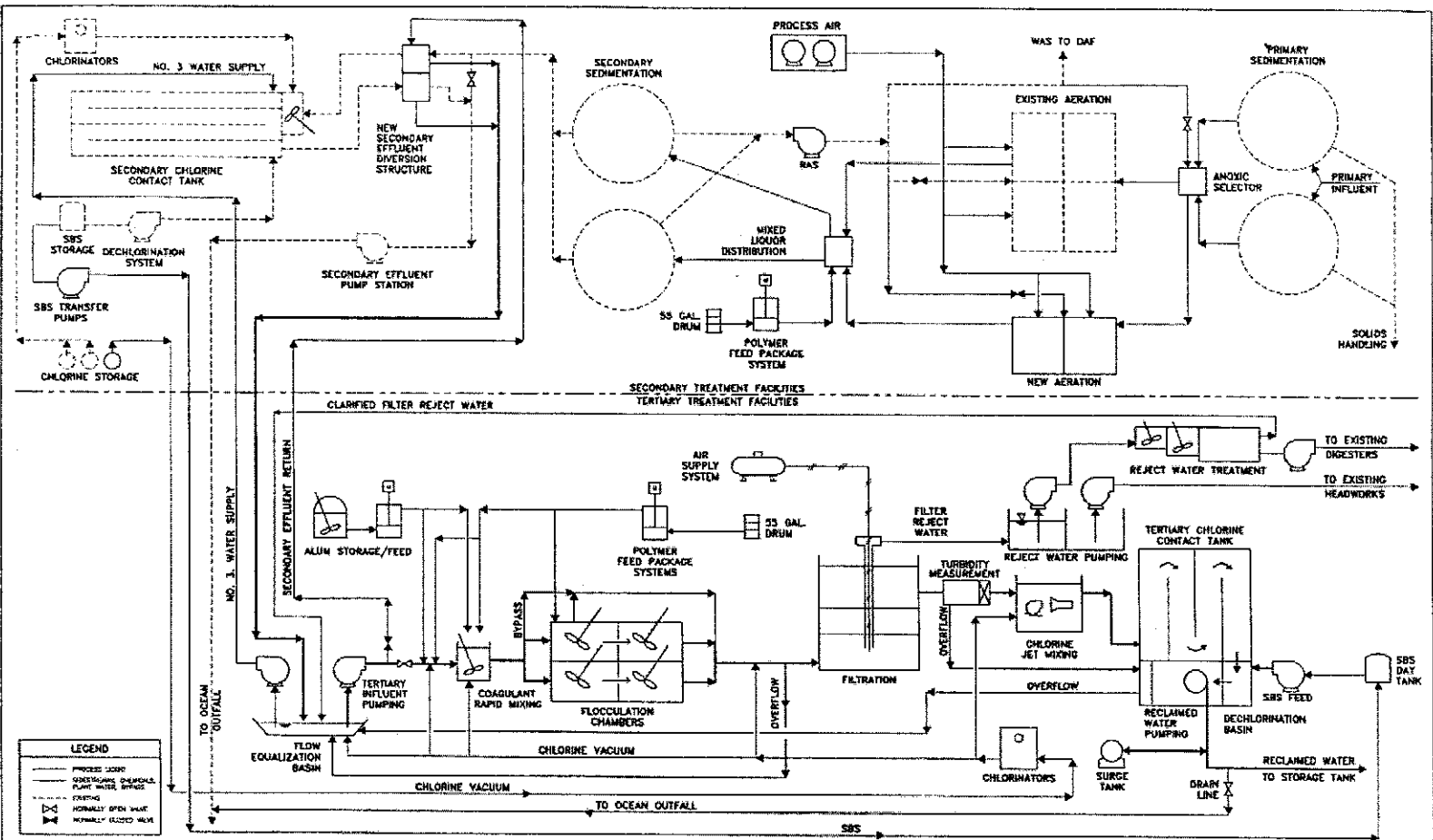
Site Location



Site Vicinity (projected area)



ATTACHMENT C - FLOW SCHEMATIC



LEGEND	
	PROCESS LINES
	EXISTING
	PROPOSED
	NORMALLY OPEN VALVE
	NORMALLY CLOSED VALVE

NO.	REV.	DATE	DESCRIPTION
1	0	10/22/06	ISSUED FOR PERMITS
2	1	11/21/06	REVISED FOR COMMENTS
3	2	12/15/06	REVISED FOR COMMENTS
4	3	01/10/07	REVISED FOR COMMENTS
5	4	02/01/07	REVISED FOR COMMENTS
6	5	03/01/07	REVISED FOR COMMENTS
7	6	04/01/07	REVISED FOR COMMENTS
8	7	05/01/07	REVISED FOR COMMENTS
9	8	06/01/07	REVISED FOR COMMENTS
10	9	07/01/07	REVISED FOR COMMENTS
11	10	08/01/07	REVISED FOR COMMENTS
12	11	09/01/07	REVISED FOR COMMENTS
13	12	10/01/07	REVISED FOR COMMENTS
14	13	11/01/07	REVISED FOR COMMENTS
15	14	12/01/07	REVISED FOR COMMENTS
16	15	01/01/08	REVISED FOR COMMENTS
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18	17	03/01/08	REVISED FOR COMMENTS
19	18	04/01/08	REVISED FOR COMMENTS
20	19	05/01/08	REVISED FOR COMMENTS
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27	26	12/01/08	REVISED FOR COMMENTS
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30	29	03/01/09	REVISED FOR COMMENTS
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94	93	07/01/14	REVISED FOR COMMENTS
95	94	08/01/14	REVISED FOR COMMENTS
96	95	09/01/14	REVISED FOR COMMENTS
97	96	10/01/14	REVISED FOR COMMENTS
98	97	11/01/14	REVISED FOR COMMENTS
99	98	12/01/14	REVISED FOR COMMENTS
100	99	01/01/15	REVISED FOR COMMENTS

ENGINEERING-SCIENCE
 800-875-8336
 10000 N. 10th Street, Suite 100, Scottsdale, AZ 85258
ES

CARMEL AREA
 WASTEWATER DISTRICT
 CAVD/PRCD WASTEWATER RECLAMATION PROJECT

CONTRACT 1 - TREATMENT PLANT	AS BUILT
PROCESS FLOW SCHEMATIC	G-4

ATTACHMENT D –STANDARD PROVISIONS

I. FEDERAL STANDARD PROVISIONS

A. Federal Standard Provisions – Permit Compliance

1. Duty to Comply

- a. 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 and is grounds for enforcement action, permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. [40 CFR §122.41(a)].
- b. 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 §122.41(a)(1)].

2. 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 §122.41(c)].

3. 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 §122.41(d)]

4. 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 §122.41(e)].

5. Property Rights

- a. This Order does not convey any property rights of any sort or any exclusive privileges [40 CFR § 122.41(g)].
- b. 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 §122.5(c)].

- 6. Inspection and Entry.** The Discharger shall allow the Central Coast 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 §122.41(i); Wat. Code, §13383]:
- a. 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 §122.41(i)(1)];
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [40 CFR §122.41(i)(2)];
 - c. 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 §122.41(i)(3)]; and
 - d. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location [40 CFR §122.41(i)(4)].

7. Bypass

- a. Definitions
 - i. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [40 CFR §122.41(m)(1)(i)].
 - ii. "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 §122.41(m)(1)(ii)].
- b. 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 Federal Standard Provisions – Permit Compliance I.A.7.c, I.A.7.d, and I.A.7.e below [40 CFR §122.41(m)(2)].
- c. Prohibition of bypass. Bypass is prohibited, and the Central Coast Water Board may take enforcement action against a Discharger for bypass, unless [40 CFR §122.41(m)(4)(i)]:
 - i. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [40 CFR §122.41(m)(4)(i)(A)];

- ii. There were no feasible alternatives to the bypass, such as 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 §122.41(m)(4)(i)(B)]; and
 - iii. The Discharger submitted notice to the Central Coast Water Board as required under Federal Standard Provisions – Permit Compliance I.A.7.e below [40 CFR §122.41(m)(4)(i)(C)].
- d. The Central Coast Water Board may approve an anticipated bypass, after considering its adverse effects, if the Central Coast Water Board determines that it will meet the three conditions listed in Federal Standard Provisions – Permit Compliance I.A.7.c above [40 CFR §122.41(m)(4)(ii)].
- e. Notice
- i. 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 §122.41(m)(3)(i)].
 - ii. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Federal Standard Provisions - Reporting I.E.5 below (24-hour notice) [40 CFR §122.41(m)(3)(ii)].
- 8. 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 §122.41(n)(1)].
- a. 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 Federal Standard Provisions – Permit Compliance I.A.8.b 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 §122.41(n)(2)].
 - b. 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 §122.41(n)(3)]:

- i. An upset occurred and that the Discharger can identify the cause(s) of the upset [40 CFR §122.41(n)(3)(i)];
 - ii. The permitted facility was, at the time, being properly operated [40 CFR §122.41(n)(3)(ii)];
 - iii. The Discharger submitted notice of the upset as required in Federal Standard Provisions – Reporting I.E.5.b.ii below (24-hour notice) [40 CFR §122.41(n)(3)(iii)]; and
 - iv. The Discharger complied with any remedial measures required under Federal Standard Provisions – Permit Compliance I.A.3 above [40 CFR §122.41(n)(3)(iv)].
- c. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [40 CFR §122.41(n)(4)].

B. Federal Standard Provisions – Permit Action

1. **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 §122.41(f)].
2. **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 §122.41(b)].
3. **Transfers.** This Order is not transferable to any person except after notice to the Central Coast Water Board. The Central Coast 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 Water Code [40 CFR §122.41(l)(3); §122.61].

C. Federal Standard Provisions – Monitoring

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 CFR §122.41(j)(1)].
2. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order [40 CFR §122.41(j)(4); §122.44(i)(1)(iv)].

D. Federal Standard Provisions – Records

1. **Records Retention.** 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 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 Central Coast Water Board Executive Officer at any time. (40 CFR §122.41(j)(2).)

2. Records of monitoring information shall include:

- a. The date, exact place, and time of sampling or measurements [40 CFR §122.41(j)(3)(i)];
- b. The individual(s) who performed the sampling or measurements [40 CFR §122.41(j)(3)(ii)];
- c. The date(s) analyses were performed [40 CFR §122.41(j)(3)(iii)];
- d. The individual(s) who performed the analyses [40 CFR §122.41(j)(3)(iv)];
- e. The analytical techniques or methods used [40 CFR §122.41(j)(3)(v)]; and
- f. The results of such analyses [40 CFR §122.41(j)(3)(vi)].

3. Claims of confidentiality for the following information will be denied [40 CFR §122.7(b)]:

- a. The name and address of any permit applicant or Discharger [40 CFR §122.7(b)(1)]; and
- b. Permit applications and attachments, permits and effluent data [40 CFR §122.7(b)(2)].

E. Federal Standard Provisions – Reporting

1. Duty to Provide Information. The Discharger shall furnish to the Central Coast Water Board, State Water Board, or USEPA within a reasonable time, any information which the Central Coast 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 Central Coast Water Board, State Water Board, or USEPA copies of records required to be kept by this Order [40 CFR §122.41(h); Water Code, §13267].

2. Signatory and Certification Requirements

- a. All applications, reports, or information submitted to the Central Coast Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Federal Standard Provisions – Reporting I.E.2.b, I.E.2.c, I.E.2.d and I.E.2.e below [40 CFR §122.41(k)].
- b. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [40 CFR §122.22(a)(1)].
- c. All reports required by this Order and other information requested by the Central Coast Water Board, State Water Board, or USEPA shall be signed by a person described in Federal Standard Provisions – Reporting I.E.2.b above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - i. The authorization is made in writing by a person described in Federal Standard Provisions – Reporting I.E.2.b above [40 CFR §122.22(b)(1)];
 - ii. 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 §122.22(b)(2)]; and

- iii. The written authorization is submitted to the Central Coast Water Board and State Water Board [40 CFR §122.22(b)(3)].
- d. If an authorization under Federal Standard Provisions – Reporting I.E.2.c 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 Central Coast 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 §122.22(c)].
- e. Any person signing a document under Federal Standard Provisions – Reporting I.E.2.b or I.E.2.c 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 §122.22(d)].

3. Monitoring Reports

- a. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order [40 CFR §122.41(l)(4)].
- b. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Central Coast Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices [40 CFR §122.41(l)(4)(i)].
- c. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in 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 Central Coast Water Board [40 CFR §122.41(l)(4)(ii)].
- d. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [40 CFR §122.41(l)(4)(iii)].

4. 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 §122.41(l)(5)].

5. Twenty-Four Hour Reporting

- a. 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 §122.41(l)(6)(i)].
- b. The following shall be included as information that must be reported within 24 hours under this paragraph [40 CFR §122.41(l)(6)(ii)]:
 - i. Any unanticipated bypass that exceeds any effluent limitation in this Order [40 CFR §122.41(l)(6)(ii)(A)].
 - ii. Any upset that exceeds any effluent limitation in this Order [40 CFR §122.41(l)(6)(ii)(B)].
- c. The Central Coast 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 §122.41(l)(6)(iii)].

6. Planned Changes. The Discharger shall give notice to the Central Coast 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 §122.41(l)(1)]:

- a. 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 §122.41(l)(1)(i)]; or
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order [40 CFR §122.41(l)(1)(ii)].
- c. 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 §122.41(l)(1)(iii)].

7. **Anticipated Noncompliance.** The Discharger shall give advance notice to the Central Coast 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 §122.41(l)(2)].
8. **Other Noncompliance.** The Discharger shall report all instances of noncompliance not reported under Federal Standard Provisions – Reporting I.E.3, I.E.4, and I.E.5 above at the time monitoring reports are submitted. The reports shall contain the information listed in Federal Standard Provisions – Reporting I.E.5 above. [40 CFR §122.41(l)(7)].
9. **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 Central Coast Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information [40 CFR §122.41(l)(8)].

F. Federal Standard Provisions – Enforcement

1. The Central Coast Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

G. Additional Federal Provisions – Notification Levels

1. **Non-Municipal Facilities.** Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Central Coast Water Board as soon as they know or have reason to believe [40 CFR §122.42(a)]:
 - a. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [40 CFR §122.42(a)(1)]:
 - i. 100 micrograms per liter ($\mu\text{g/L}$) [40 CFR §122.42(a)(1)(i)];
 - ii. 200 $\mu\text{g/L}$ for acrolein and acrylonitrile; 500 $\mu\text{g/L}$ for 2,4-dinitrophenol and 2-methyl-4, 6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony [40 CFR §122.42(a)(1)(ii)];
 - iii. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 CFR §122.42(a)(1)(iii)]; or

- iv. The level established by the Central Coast Water Board in accordance with 40 CFR Section 122.44(f) [40 CFR §122.42(a)(1)(iv)].
 - b. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [40 CFR §122.42(a)(2)]:
 - i. 500 micrograms per liter ($\mu\text{g/L}$) [40 CFR §122.42(a)(2)(i)];
 - ii. 1 milligram per liter (mg/L) for antimony [40 CFR §122.42(a)(2)(ii)];
 - iii. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 CFR §122.42(a)(2)(iii)]; or
 - iv. The level established by the Central Coast Water Board in accordance with 40 CFR Section 122.44(f) [40 CFR §122.42(a)(2)(iv)].
2. **Publicly-Owned Treatment Works (POTWs).** All POTWs shall provide adequate notice to the Central Coast Water Board of the following [40 CFR § 122.42(b)]:
- a. 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 § 122.42(b)(1)]; and
 - b. 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 § 122.42(b)(2)]
 - c. 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 § 122.42(b)(3)]

II. CENTRAL COAST REGION'S STANDARD PROVISIONS (JANUARY 1985)

A. Central Coast General Permit Conditions

1. Central Coast Standard Provisions – Prohibitions

- a. Introduction of "incompatible wastes" to the treatment system is prohibited.
- b. Discharge of high-level radiological waste and of radiological, chemical, and biological warfare agents is prohibited.
- c. Discharge of "toxic pollutants" in violation of effluent standards and prohibitions established under Section 307(a) of the Clean Water Act is prohibited.
- d. Discharge of sludge, sludge digester or thickener supernatant, and sludge drying bed leachate to drainageways, surface waters, or the ocean is prohibited.

- e. Introduction of pollutants into the collection, treatment, or disposal system by an "indirect discharger" that:
 - i. Inhibit or disrupt the treatment process, system operation, or the eventual use or disposal of sludge; or,
 - ii. Flow through the system to the receiving water untreated; and,
 - iii. Cause or "significantly contribute" to a violation of any requirement of this Order, is prohibited.
- f. Introduction of "pollutant free" wastewater to the collection, treatment, and disposal system in amounts that threaten compliance with this order is prohibited.

2. Central Coast Standard Provisions – Provisions

- a. Collection, treatment, and discharge of waste shall not create a nuisance or pollution, as defined by Section 13050 of the California Water Code.
- b. All facilities used for transport or treatment of wastes shall be adequately protected from inundation and washout as the result of a 100-year frequency flood.
- c. Operation of collection, treatment, and disposal systems shall be in a manner that precludes public contact with wastewater.
- d. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed in a manner approved by the Executive Officer.
- e. Publicly owned wastewater treatment plants shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Title 23 of the California Administrative Code.
- f. After notice and opportunity for a hearing, this order may be 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;
 - iii. a change in any condition or endangerment to human health or environment that requires a temporary or permanent reduction or elimination of the authorized discharge; and,
 - iv. a substantial change in character, location, or volume of the discharge.

- g. Provisions of this permit are severable. If any provision of the permit is found invalid, the remainder of the permit shall not be affected.
- h. After notice and opportunity for hearing, this order may be modified or revoked and reissued for cause, including:
 - i. Promulgation of a new or revised effluent standard or limitation;
 - ii. A material change in character, location, or volume of the discharge;
 - iii. Access to new information that affects the terms of the permit, including applicable schedules;
 - iv. Correction of technical mistakes or mistaken interpretations of law; and,
 - v. Other causes set forth under Sub-part D of 40 CFR Part 122.
- i. Safeguards shall be provided to assure maximal compliance with all terms and conditions of this permit. Safeguards shall include preventative and contingency plans and may also include alternative power sources, stand-by generators, retention capacity, operating procedures, or other precautions. Preventative and contingency plans for controlling and minimizing the affect of accidental discharges shall:
 - i. identify possible situations that could cause "upset", "overflow" or "bypass", or other noncompliance. (Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.)
 - ii. evaluate the effectiveness of present facilities and procedures and describe procedures and steps to minimize or correct any adverse environmental impact resulting from noncompliance with the permit.
- j. Physical Facilities shall be designed and constructed according to accepted engineering practice and shall be capable of full compliance with this order when properly operated and maintained. Proper operation and maintenance shall be described in an Operation and Maintenance Manual. Facilities shall be accessible during the wet-weather season.
- k. Production and use of reclaimed water is subject to the approval of the Board. Production and use of reclaimed water shall be in conformance with reclamation criteria established in Chapter 3, Title 22, of the California Administrative Code and Chapter 7, Division 7, of the California Water Code. An engineering report pursuant to section 60323, Title 22, of the California Administrative Code is required and a waiver or water reclamation requirements from the Board is required before reclaimed water is supplied for any use, or to any user, not specifically identified and approved either in this Order or another order issued by this Board.

B. Central Coast Standard Provisions – General Monitoring Requirements

1. If results of monitoring a pollutant appear to violate effluent limitations based on a weekly, monthly, 30-day, or six-month period, but compliance or non-compliance cannot be validated because sampling is too infrequent, the frequency of sampling shall be increased to validate the test within the next monitoring period. The increased frequency shall be maintained until the Executive Officer agrees the original monitoring frequency may be resumed.

For example, if copper is monitored annually and results exceed the six-month median numerical effluent limitation in the permit, monitoring of copper must be increased to a frequency of at least once every two months (Central Coast Standard Provisions – Definitions II.F.13.). If suspended solids are monitored weekly and results exceed the weekly average numerical limit in the permit, monitoring of suspended solids must be increased to at least four (4) samples every week (Central Coast Standard Provisions – Definitions II.F.14.).

2. Water quality analyses performed in order to monitor compliance with this permit shall be by a laboratory certified by the State Department of Health Services for the constituent(s) being analyzed. Bioassay(s) performed in order to monitor compliance with this permit shall be in accord with guidelines approved by the State Water Resources Control Board and the State Department of Fish and Game. If the laboratory used or proposed for use by the discharger is not certified by the California Department of Health Services or, where appropriate, the Department of Fish and Game due to restrictions in the State's laboratory certification program, the discharger shall be considered in compliance with this provision provided:
 - a. Data results remain consistent with results of samples analyzed by the Central Coast Water Board;
 - b. A quality assurance program is used at the laboratory, including a manual containing steps followed in this program that is available for inspections by the staff of the Central Coast Water Board; and,
 - c. Certification is pursued in good faith and obtained as soon as possible after the program is reinstated.

3. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Samples shall be taken during periods of peak loading conditions. Influent samples shall be samples collected from the combined flows of all incoming wastes, excluding recycled wastes. Effluent samples shall be samples collected downstream of the last treatment unit and tributary flow and upstream of any mixing with receiving waters.
4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

C. Central Coast Standard Provisions – General Reporting Requirements

1. Reports of marine monitoring surveys conducted to meet receiving water monitoring requirements of the Monitoring and Reporting Program shall include at least the following information:
 - a. A description of climatic and receiving water characteristics at the time of sampling (weather observations, floating debris, discoloration, wind speed and direction, swell or wave action, time of sampling, tide height, etc.).
 - b. A description of sampling stations, including differences unique to each station (e.g., station location, grain size, rocks, shell litter, calcareous worm tubes, evident life, etc.).
 - c. A description of the sampling procedures and preservation sequence used in the survey.
 - d. A description of the exact method used for laboratory analysis. In general, analysis shall be conducted according to (Central Coast Standard Provisions – Definitions II.B.1 above, and Federal Standard Provision – Monitoring I.C.1. However, variations in procedure are acceptable to accommodate the special requirements of sediment analysis. All such variations must be reported with the test results.
 - e. A brief discussion of the results of the survey. The discussion shall compare data from the control station with data from the outfall stations. All tabulations and computations shall be explained.
2. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule shall be submitted within 14 days following each scheduled date unless otherwise specified within the permit. If reporting noncompliance, the report shall include a description of the reason, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance. A second report shall be submitted within 14 days of full compliance.

3. The "Discharger" shall file a report of waste discharge or secure a waiver from the Executive Officer at least 180 days before making any material change or proposed change in the character, location, or plume of the discharge.
4. Within 120 days after the discharger discovers, or is notified by the Central Coast Water Board, that monthly average daily flow will or may reach design capacity of waste treatment and/or disposal facilities within four (4) years, the discharger shall file a written report with the Central Coast Water Board. The report shall include:
 - a. the best estimate of when the monthly average daily dry weather flow rate will equal or exceed design capacity; and,
 - b. 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.

In addition to complying with Federal Standard Provision – Reporting I.E.2, the required technical report shall be prepared with public participation and reviewed, approved and jointly submitted by all planning and building departments having jurisdiction in the area served by the waste collection, treatment, or disposal facilities.

5. All "Dischargers" shall submit reports to the:

California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

In addition, "Dischargers" with designated major discharges shall submit a copy of each document to:

Regional Administrator
US Environmental Protection Agency, Region 9
Attention: CWA Standards and Permits Office (WTR-5)
75 Hawthorne Street
San Francisco, California 94105

6. Transfer of control or ownership of a waste discharge facility must be preceded by a notice to the Central Coast Water Board at least 30 days in advance of the proposed transfer date. The notice must include a written agreement between the existing "Discharger" and proposed "Discharger" containing specific date for transfer of responsibility, coverage, and liability between them. Whether a permit may be transferred without modification or revocation and reissuance is at the discretion of the Board. If permit modification or revocation and reissuance is necessary, transfer may be delayed 180 days after the Central Coast Water Board's receipt of a complete permit application. Please also see Federal Standard Provision – Permit Action IB.3.

7. Except for data determined to be confidential under Section 308 of the Clean Water Act (excludes effluent data and permit applications), all reports prepared in accordance with this permit shall be available for public inspection at the office of the Central Coast Water Board or Regional Administrator of EPA. Please also see Federal Standard Provision – Records I.D.3.
8. By January 30th of each year, the discharger shall submit an annual report to the Central Coast Water Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. The discharger shall discuss the compliance record and corrective actions taken, or which may be needed, to bring the discharge into full compliance. The report shall address operator certification and provide a list of current operating personnel and their grade of certification. The report shall inform the Board of the date of the Facility's Operation and Maintenance Manual (including contingency plans as described Central Coast Standard Provision – Provision II.A.2.i), of the date the manual was last reviewed, and whether the manual is complete and valid for the current facility. The report shall restate, for the record, the laboratories used by the discharger to monitor compliance with effluent limits and provide a summary of performance relative to Section B above, General Monitoring Requirements.

If the facility treats industrial or domestic wastewater and there is no provision for periodic sludge monitoring in the Monitoring and Reporting Program, the report shall include a summary of sludge quantities, analyses of its chemical and moisture content, and its ultimate destination.

If applicable, the report shall also evaluate the effectiveness of the local source control or pretreatment program using the State Water Resources Control Board's "Guidelines for Determining the Effectiveness of Local Pretreatment Programs."

D. Central Coast Standard Provisions – General Pretreatment Provisions

1. Discharge of pollutants by "indirect dischargers" in specific industrial sub-categories (appendix C, 40 CFR Part 403), where categorical pretreatment standards have been established, or are to be established, (according to 40 CFR Chapter 1, Subchapter N), shall comply with the appropriate pretreatment standards:
 - a. By the date specified therein;
 - b. Within three (3) years of the effective date specified therein, but in no case later than July 1, 1984; or,
 - c. If a new indirect discharger, upon commencement of discharge.

E. Central Coast Standard Provisions – Enforcement

1. Any person failing to file a report of waste discharge or other report as required by this permit shall be subject to a civil penalty not to exceed \$5,000 per day.
2. Upon reduction, loss, or failure of the treatment facility, the "Discharger" shall, to the extent necessary to maintain compliance with this permit, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided.

F. Central Coast Standard Provisions – Definitions

(Not otherwise included in Attachment A to this Order)

1. A "composite sample" is a combination of no fewer than eight (8) individual samples obtained at equal time intervals (usually hourly) over the specified sampling (composite) period. The volume of each individual sample is proportional to the flow rate at the time of sampling. The period shall be specified in the Monitoring and Reporting Program ordered by the Executive Officer.
2. "Daily Maximum" limit means the maximum acceptable concentration or mass emission rate of a pollutant measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling. It is normally compared with results based on "composite samples" except for ammonia, total chlorine, phenolic compounds, and toxicity concentration. For all exceptions, comparisons will be made with results from a "grab sample".
3. "Discharger", as used herein, means, as appropriate: (1) the Discharger, (2) the local sewerage entity (when the collection system is not owned and operated by the Discharger), or (3) "indirect discharger" (where "Discharger" appears in the same paragraph as "indirect discharger", it refers to the discharger.)
4. "Duly Authorized Representative" is one where:
 - a. the authorization is made in writing by a person described in the signatory paragraph of Federal Standard Provision I.E.2;
 - b. the authorization specifies either an individual or the occupant of a position having either responsibility for the overall operation of the regulated facility, such as the plant manager, or overall responsibility for environmental matters of the company; and,
 - c. the written authorization was submitted to the Central Coast Water Board.

5. A "grab sample" is defined as any individual sample collected in less than 15 minutes. "Grab samples" shall be collected during peak loading conditions, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with the daily maximum limits identified in Central Coast Standard Provision – Provision II.F.2 and instantaneous maximum limits.
6. "Hazardous substance" means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act.
7. "Incompatible wastes" are:
 - a. Wastes which create a fire or explosion hazard in the treatment works;
 - b. Wastes which will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0 unless the works is specifically designed to accommodate such wastes;
 - c. Solid or viscous wastes in amounts which cause obstruction to flow in sewers, or which cause other interference with proper operation of treatment works;
 - d. Any waste, including oxygen demanding pollutants (BOD, etc), released in such volume or strength as to cause inhibition or disruption in the treatment works and subsequent treatment process upset and loss of treatment efficiency; and,
 - e. Heat in amounts that inhibit or disrupt biological activity in the treatment works or that raise influent temperatures above 40°C (104°F) unless the treatment works is designed to accommodate such heat.
8. "Indirect Discharger" means a non-domestic discharger introducing pollutants into a publicly owned treatment and disposal system.
9. "Log Mean" is the geometric mean. Used for determining compliance of fecal or total coliform populations, it is calculated with the following equation:

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

in which "n" is the number of days samples were analyzed during the period and any "C" is the concentration of bacteria (MPN/100 ml) found on each day of sampling. "n" should be five or more.

10. "Mass emission rate" is a daily rate defined by the following equations:

$$\text{mass emission rate (lbs/day)} = 8.34 \times Q \times C; \text{ and,}$$

$$\text{mass emission rate (kg/day)} = 3.79 \times Q \times C,$$

where "C" (in mg/l) is the measured daily constituent concentration or the average of measured daily constituent concentrations and "Q" (in MGD) is the measured daily flow rate or the average of measured daily flow rates over the period of interest.

11. The "Maximum Allowable Mass Emission Rate," whether for a month, week, day, or six-month period, is a daily rate determined with the formulas in paragraph F.10, above, using the effluent concentration limit specified in the permit for the period and the average of measured daily flows (up to the allowable flow) over the period.
12. "Maximum Allowable Six-Month Median Mass Emission Rate" is a daily rate determined with the formulas in Central Coast Standard Provision – Provision II.F.10, above, using the "six-month Median" effluent limit specified in the permit, and the average of measured daily flows (up to the allowable flow) over a 180-day period.
13. "Median" is the value below which half the samples (ranked progressively by increasing value) fall. It may be considered the middle value, or the average of two middle values.
14. "Monthly Average" (or "Weekly Average", as the case may be) is the arithmetic mean of daily concentrations or of daily mass emission rates over the specified 30-day (or 7-day) period

$$\text{Average} = (X_1 + X_2 + \dots + X_n) / n$$

in which "n" is the number of days samples were analyzed during the period and "X" is either the constituent concentration (mg/l) or mass emission rate (kg/day or lbs/day) for each sampled day. "n" should be four or greater.

15. "Municipality" means a city, town, borough, county, district, association, or other public body created by or under state law and having jurisdiction over disposal of sewage, industrial waste, or other waste.
16. "Overflow" means the intentional or unintentional diversion of flow from the collection and transport systems, including pumping facilities.
17. "Pollutant-free wastewater" means inflow and infiltration, storm waters, and cooling waters and condensates which are essentially free of pollutants.
18. "Primary Industry Category" means any industry category listed in 40 CFR Part 122, Appendix A.
19. "Removal Efficiency" is the ratio of pollutants removed by the treatment unit to pollutants entering the treatment unit. Removal efficiencies of a treatment plant shall be determined using "Monthly averages" of pollutant concentrations (C, in mg/l) of influent and effluent samples collected about the same time and the following equation (or its equivalent):

$$C_{\text{Effluent}} \text{ Removal Efficiency (\%)} = 100 \times (1 - C_{\text{effluent}} / C_{\text{influent}})$$

20. "Severe property damage" means substantial physical damage to property, damage to treatment facilities which causes them to become inoperable, or substantial and permanent loss to natural resources which can reasonably be expected to occur in

the absence of a "bypass". It does not mean economic loss caused by delays in production.

21. "Sludge" means the solids, residues, and precipitates separated from, or created in, wastewater by the unit processes of a treatment system.
22. To "significantly contribute" to a permit violation means an "indirect discharger" must:
 - a. Discharge a daily pollutant loading in excess of that allowed by contract with the "Discharger" or by Federal, State, or Local law;
 - b. Discharge wastewater which substantially differs in nature or constituents from its average discharge;
 - c. Discharge pollutants, either alone or in conjunction with discharges from other sources, which results in a permit violation or prevents sewage sludge use or disposal; or
 - d. Discharge pollutants, either alone or in conjunction with pollutants from other sources, that increase the magnitude or duration of permit violations.
23. "Toxic Pollutant" means any pollutant listed as toxic under Section 307 (a) (1) of the Clean Water Act or under 40 CFR Part 122, Appendix D. Violation of maximum daily discharge limitations are subject to 24-hour reporting (Federal Standard Provisions I.E.5.).
24. "Zone of Initial Dilution" means the region surrounding or adjacent to the end of an outfall pipe or diffuser ports whose boundaries are defined through calculation of a plume model verified by the State Water Resources Control Board.

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

- A.** Laboratories analyzing monitoring samples shall be certified by the Department of Health Services, in accordance with Water Code section 13176, and must include quality assurance/quality control data with their reports.
- B.** Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and approval of the Regional Board.
- C.** Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration, and operation of acceptable flow measurement devices can be obtained from the following references.
 - 1. A Guide to Methods and Standards for the Measurement of Water Flow, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)
 - 2. Water Measurement Manual, U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington D.C. 20402. Order by Catalog No. 172.19/2:W29/2, Stock No. S/N 24003-0027)
 - 3. Flow Measurement in Open Channels and Closed Conduits, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST)
 - 4. NPDES Compliance Sampling Manual, U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, CO 80225.)

- D. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this MRP.
- F. Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 CFR 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*. All analyses shall be conducted using the lowest practical quantitation limit achievable using the specified methodology. Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analyses for toxics listed in Table B of the California Ocean Plan (2005) shall adhere to guidance and requirements contained in that document.

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	INF-001	Influent wastewater, prior to treatment and following all significant inputs to the collection system of untreated wastewater and inflow and infiltration
001	EFF-001	Location where representative sample of effluent discharged to the Pacific Ocean can be collected, after treatment and chlorination/dechlorination and before contact with receiving water
001	K-4, K-5, K-6	County Surf Zone Stations K-4 (Mission Point), K-5 (North Shore Carmel River Mouth), and K-6 (Point at North End of Monastery Beach)

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF - 001

1. The Discharger shall monitor influent to the facility at Monitoring Location INF – 001 in accordance with the following schedule.

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Daily Flow	MGD	Metered	Daily
Instantaneous Max Flow	MGD	Metered	Daily

Parameter	Units	Sample Type	Minimum Sampling Frequency
Maximum Daily Flow	MGD	Metered	Monthly
Mean Daily Flow	MGD	Calculated	Monthly
Biochemical Oxygen Demand (BOD ₅)	mg/L	24 Hr Composite	1X / 13 Days
Total Suspended Solids (TSS)	mg/L	24 Hr Composite	1X / 13 Days

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF - 001

1. The Discharger shall monitor effluent at Monitoring Location EFF – 001 in accordance with the following schedule.

Table E-3. Effluent Monitoring at EFF - 001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total Flow	MGD	Metered	Daily
pH	pH units	Grab	5 days / week
Temperature	° F	Grab	5 days / week
BOD ₅	mg/L	24-hr composite	1X / 13 days
TSS	mg/L	24-hr composite	5 days / week
Settleable Solids	mL/L/hr	Grab	1X / 13 days
Total Coliform Bacteria	MPN/100 mL	Grab	5 days / week
Total Chlorine Residual	mg/L	Continuous	Daily
Turbidity	NTUs	24-hr composite	1X / 13 days
Oil and Grease	mg/L	Grab	1X / 13 days
Ammonia	mg/L	Grab	Monthly
Nitrate	mg/L	Grab	Monthly
Urea	mg/L	Grab	Monthly
Silicate	mg/L	Grab	Monthly
Acute Toxicity ^[1]	TUa	Grab	Semiannually
Chronic Toxicity ^[1]	TUc	Grab	Semiannually
Total Dissolved Solids	mg/L	Grab	Quarterly
Copper	µg/L	Grab	Quarterly
Zinc	µg/L	Grab	Quarterly
DDT	µg/L	Grab	Quarterly
Ocean Plan Table B Pollutants ^[2]	µg/L	24-hr composite ^[4]	Semiannually ^[3]
Remaining Priority Pollutants ^{[3][5]}	µg/L	24-hr composite ^[4]	3X per permit term ^[6]

^[1] Whole effluent, acute and chronic toxicity monitoring shall be conducted according to the requirements established in section V. of this Monitoring and Reporting Program.

^[2] Monitoring for the Ocean Plan (2005) Table B pollutants and whole effluent acute and chronic toxicity shall occur one time in a dry season and one time in a wet season each year so that characterization of effluent occurs one time per year when the discharge is primarily secondary treated wastewater (wet season) and one time per year when the discharge is primarily brine waste (dry season). Toxicity and Ocean Plan Table B pollutant sampling/monitoring shall be conducted concurrently as practicable.

^[3] Procedures, calibration techniques, and instrument/reagent specifications shall conform to 40 CFR PART 136 and applicable provisions of the Ocean Plan, including the Standard Monitoring Procedures

presented in Appendix III of the Ocean Plan. The Discharger shall instruct its analytical laboratory to establish calibration standards so that the Minimum Levels (MLs) presented in Appendix II of the Ocean Plan are the lowest calibration standards. The Discharger and its analytical laboratory shall select MLs, which are below applicable water quality criteria of Table B; and when applicable water quality criteria are below all MLs, the Discharger and its analytical laboratory shall select the lowest ML. In addition, data must comply with QA/QC requirements of 40 CFR 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR 136.

- [4] The Discharger shall utilize high volume water sampling (HVWS) methods employed by the CCLEAN program for compliance determination of the Table B pollutants and the implementation of all other pollutant monitoring requirements contained within this Order, when appropriate, given the subsequent analytical methods are in accordance with 40 CFR PART 136 or as allowable per the Implementation Provisions for Table B contained in section III.C.5.b of the Ocean Plan.
- [5] The "Remaining Priority Pollutants" (see list below) consist of the priority pollutants listed in Part D of EPA Form 3510-2A (Rev. 1-99) that currently do not have ocean criteria (water quality objectives) per Table B of the Ocean Plan. A complete EPA Form 3510-2A is required for all new and renewal NPDES permit applications pursuant to 40 CFR 122.21. Expanded Effluent Testing Data per Part D of EPA Form 3510-2A is required for all treatment works with design flows greater than or equal to 1.0 MGD or with a pretreatment program (or required to have a pretreatment program), or otherwise required by the permitting authority to provide the data.
- [6] At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old. Remaining priority pollutant monitoring shall occur at least one time in a dry season and one time in a wet season so that characterization of effluent occurs one time per year when the discharge is primarily secondary treated wastewater (wet season) and one time per year when the discharge is primarily brine waste (dry season).

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity (TUa)

Compliance with acute toxicity objective (TUa) shall be determined using a U.S. EPA approved protocol as provided in 40 CFR PART 136 (*Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, October 2002, U.S. EPA Office of Water, EPA-821-R-02-012 or the latest edition).

Acute Toxicity (TUa) = 100/96-hr LC 50.

LC 50 (percent waste giving 50% survival of test organisms) shall be determined by 96-hour static or continuous flow bioassay techniques using standard marine test species as specified in EPA-821-R-02-012 and as noted in the following table.

Table E-4. Approved Test - Acute Toxicity (TUa)

Species	Scientific Name	Effect	Test Duration
shrimp	<i>Holmesimysis costata</i>	survival	48 or 96 hours
shrimp	<i>Mysidopsis bahia</i>	survival	48 or 96 hours
silversides	<i>Menidia beryllina</i>	survival	48 or 96 hours
sheepshead minnow	<i>Cyprinodon variegatus</i>	survival	48 or 96 hours

If the effluent is to be discharged to a marine or estuarine system (e.g., salinity values in excess of 1,000 mg/L) and originates from a freshwater supply, salinity of the effluent must be increased with dry ocean salts (e.g., FORTY FATHOMS®) to match salinity of the receiving water. This modified effluent shall then be tested using marine species.

Reference toxicant test results shall be submitted with the effluent sample test results. Both tests must satisfy the test acceptability criteria specified in EPA-821-R-02-012. If the test acceptability criteria are not achieved or if toxicity is detected, the sample shall be retaken and retested within 5 days of the failed sampling event. The retest results shall be reported in accordance with EPA-821-R-02-012 (chapter on report preparation) and the results shall be attached to the next monitoring report.

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:

$$TUa = [\log(100 - S)]/1.7$$

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

When toxicity monitoring finds acute toxicity in the effluent above the limitation established by the Order, the Discharger shall immediately resample the effluent, if the discharge is continuing, and retest for acute toxicity. Results of the initial failed test and any toxicity monitoring results subsequent to the failed test shall be reported as soon as reasonable to the Executive Officer (EO). The EO will determine whether to initiate enforcement action, whether to require the Discharger to implement toxicity reduction evaluation (TRE) requirements (section VI.C.2.a of the Order), or to implement other measures.

B. Chronic Toxicity

The presence of chronic toxicity shall be estimated as specified in Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, EPA-821/600/R-95/136; Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, EPA-600-4-91-003; Procedures Manual for Conducting Toxicity Tests developed by the Marine Bioassay Project, SWRCB 1996, 96-1WQ; and/or Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, EPA/600/4-87-028 or subsequent editions.

Chronic toxicity measures a sub lethal effect (e.g., reduced growth or reproduction) to experimental test organisms exposed to an effluent compared to that of the control organisms.

$$\text{Chronic Toxicity (TUc)} = 100/\text{NOEL.}$$

The no observed effect level (NOEL) is the maximum tested concentration in a medium which does not cause known adverse effects upon chronic exposure in the species in question (i.e. the highest effluent concentration to which organisms are exposed in a chronic test that causes no observable adverse effects on the test organisms; e.g., the highest concentration of a toxicant to which the values for the observed responses are not statistically significantly different from the controls).

Examples of chronic toxicity include but are not limited to measurements of toxicant effects on reproduction, growth, and sublethal effects that can include behavioral, physiological, and biochemical effects.

In accordance with the 2005 Ocean Plan, Appendix III, *Standard Monitoring Procedures*, the Discharger shall use the critical life stage toxicity tests specified in the table below to measure TUC. Other species or protocols will be added to the list after State Water Resources Control Board review and approval.

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 of no fewer than three tests, monitoring can be reduced to the most sensitive species. Dilution and control water should be obtained from an unaffected area of the receiving waters. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with the test results.

Table E-5. Approved Tests—Chronic Toxicity

Species	Test	Tier ¹	Reference ²
Giant kelp, <i>Macrocystis pyrifera</i>	percent germination; germ tube length	1	a, c
Red abalone, <i>Haliotis rufescens</i>	abnormal shell development	1	a, c
Oyster, <i>Crassostrea gigas</i> ; mussels, <i>Mytilus spp.</i>	abnormal shell development; percent survival	1	a, c
Urchin, <i>Strongylocentrotus purpuratus</i> ; sand dollar, <i>Dendraster excentricus</i>	percent normal development	1	a, c
Urchin, <i>Strongylocentrotus purpuratus</i> ; sand dollar, <i>Dendraster excentricus</i>	percent fertilization	1	a, c
Shrimp, <i>Homesimysis costata</i>	percent survival; growth	1	a, c
Shrimp, <i>Mysidopsis bahia</i>	percent survival; fecundity	2	b, d
Topsmelt, <i>Atherinops affinis</i>	larval growth rate; percent survival	1	a, c
Silverside, <i>Menidia beryllina</i>	larval growth rate; percent survival	2	b, d

¹ First tier methods are preferred for compliance monitoring. If first tier organisms are not available, the Discharger can use a second tier test method following approval by the Regional Water Board.

² Protocol References:

- a. Chapman, G.A., D.L. Denton, and J.M. Lazorchak. 1995. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms. U.S. EPA Report No. EPA/600/R-95/136.
- b. Klemm, D.J., G.E. Morrison, T.J. Norberg-King, W.J. Peltier, and M.A. Heber. 1994. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms. U.S. EPA Report No. EPA-600-4-91-003.
- c. SWRCB 1996. Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project. 96-1WQ.
- d. Weber, C.I., W.B. Horning, I.I., D.J. Klemm, T.W. Nieheisel, P.A. Lewis, E.L. Robinson, J. Menkedick and F. Kessler (eds). 1998. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-87/028. National Information Service, Springfield, VA.

Dilution and control waters shall be obtained from an area of the receiving waters, typically upstream, which is unaffected by the discharge. Standard dilution water can be used, if the receiving water itself exhibits toxicity or if approved by the Water Board. If the dilution water used in testing is different from the water in which the test organisms were cultured, a second control sample using culture water shall be tested.

If the effluent is to be discharged to a marine or estuarine system (e.g., salinity values in excess of 1,000 mg/L) originates from a freshwater supply, salinity of the effluent must be increased with dry ocean salts (e.g., FORTY FATHOMS[®]) to match salinity of the receiving water. This modified effluent shall then be tested using marine species.

For this discharge, the presence of chronic toxicity at more than 1 TUc shall trigger the Toxicity Reduction Evaluation requirements of the Order (section VI.C.2.a).

C. Toxicity Reporting

1. The Discharger shall include a full report of toxicity test results with the regular monthly monitoring report and include the following information.
 - a. toxicity test results,
 - b. dates of sample collection and initiation of each toxicity test, and
 - c. acute and/or chronic toxicity discharge limitations (or value).
2. Toxicity test results shall be reported according to the appropriate guidance - Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, U.S. EPA Office of Water, EPA-821-R-02-012 (2002) or the latest edition, or Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012 (2002) or subsequent editions.
3. If the initial investigation TRE workplan is used to determine that additional (accelerated) toxicity testing is unnecessary, these results shall be submitted with the monitoring report for the month in which investigations conducted under the TRE workplan occurred.
4. Within 14 days of receipt of test results exceeding an acute or chronic toxicity discharge limitation, the Discharger shall provide written notification to the Executive Officer of:
 - a. Findings of the TRE or other investigation to identify the cause(s) of toxicity,
 - b. Actions the Discharger has taken/will take, to mitigate the impact of the discharge and to prevent the recurrence of toxicity.

When corrective actions, including a TRE, have not been completed, a schedule under which corrective actions will be implemented, or the reason for not taking corrective action, if no action has been taken.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

This section of the standardized permit form is not applicable to this Discharger.

VII. RECLAMATION MONITORING REQUIREMENTS

The Discharger shall comply with applicable State and local monitoring requirements regarding the production and use of reclaimed wastewater, including requirements established by the Department of Health Services at title 22, sections 60301 - 60357 of the California Code of Regulations, Water Recycling Criteria.

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Shoreline Bacteria Monitoring (Triggered) – Monitoring Locations K4, K5, and K6

Shoreline bacteria monitoring shall be implemented within 24 hours of receipt of effluent data showing effluent total coliform concentrations exceeded 2,400 MPN/100mL three or more times in a 30-day period. Bacteria monitoring shall be conducted in accordance with the following table.

Table E-6. Triggered Shoreline Bacteria Monitoring Schedule

Parameter	Units	Sampling Station	Sampling Frequency
Total and Fecal Coliform Bacteria ^{[1] [2] [4]}	MPN/100ml	K-4, K-5, K-6	Weekly ^[6]
Enterococcus Bacteria ^{[1] [3] [4]}	MPN/100 ml	K-4, K-5, K-6	Weekly ^[6]
Visual Monitoring ^[5]	Narrative	K-4, K-5, K-6	Weekly ^[6]

- ^[1] For all bacterial analyses, sample dilutions shall be performed so the range of values extends from 2 to 16,000 MPN/100ml. The detection methods used for each analysis shall be reported with the results of the analysis.
- ^[2] 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 US EPA pursuant to 40 CFR PART 136.
- ^[3] Detection methods used for enterococcus shall be those presented in EPA 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 Board (and approved by EPA) to be appropriate.
- ^[4] If a single sample exceeds any of the bacteriological single sample maximum (SSM) standards contained within section V.A.1 of the Order, 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 daily 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. Shore stations (immediately inshore of 30-foot contour sites) shall be sampled concurrent with 30-foot contour repeat sampling.
- ^[5] Visual monitoring shall include observations of wind (direction and speed), weather (e.g., cloudy, sunny, rainy), antecedent rainfall (7-day), sea state, and tidal conditions (e.g., high, slack, or low tide). Observations of water discoloration, floating oil and grease, turbidity, odor, material of sewage origin in the water or on the beach, and temperature (°C) shall be recorded and reported.
- ^[6] Until the Executive Officer agrees that normal sampling can resume.

Latitude and longitude shall be provided for all stations when reporting.

IX. OTHER MONITORING REQUIREMENTS

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

1. The Discharger shall participate in the implementation of the CCLEAN Regional Monitoring Program in order to fulfill receiving water compliance monitoring requirements and support the following CCLEAN Program objectives.
 - a. Obtain high-quality data describing the status and long-term trends in the quality of nearshore waters, sediments, and associated beneficial uses.
 - b. Determine whether nearshore waters and sediments are in compliance with the Ocean Plan.
 - c. Determine sources of contaminants to nearshore waters.
 - d. Provide legally defensible data on the effects of wastewater discharges in nearshore waters.
 - e. Develop a long-term database on trends in the quality of nearshore waters, sediments, and associated beneficial uses.
 - f. Ensure that the nearshore component database is compatible with other regional monitoring efforts and regulatory requirements.
 - g. Ensure that nearshore component data are presented in ways that are understandable and relevant to the needs of stakeholders.
2. General discharger components of the first phase of the CCLEAN Program are outlined in the following table. The CCLEAN Quality Assurance Project Plan (QAPP) will be revised as necessary each year to reflect any program adjustments and submitted to the Water Board Quality Assurance Officer for approval prior to initiation of CCLEAN sampling. A detailed technical study design description, including specific location of sampling sites and a description of the specific contents of the CCLEAN Annual Report, shall be provided as a component of the CCLEAN QAPP. Any year-to-year modifications to the program (including implementation of subsequent program phases) shall be identified in this document. The QAPP will also include program components funded by other participant agencies and organizations.

Table E-7. CCLEAN Monitoring Requirements

Sampling Sites	Parameters Sampled at Each Site	Frequency of Sampling	Applicable Water-Quality Stressors	Program Objectives
Water Sampling				
Four outfall sites (Santa Cruz, Watsonville, Monterey, Carmel) in effluent	30-day flow proportioned samples using automated pumping equipment, solid-phase-extraction techniques for: 1) persistent organic pollutants including PBDE, and weekly grab samples of effluent for 2) ammonia, silica, orthophosphate, urea, and nitrate, 3) turbidity and suspended sediment, 4) temperature, conductivity, and ph	Twice per year (wet season and dry season)	Persistent Organic Pollutants Nutrients Suspended Sediments	d
30-ft contour sites for each major discharge and sites sampled for AB 411	Grabs for total and fecal coliform, enterococcus ¹	Monthly	Pathogens	a, b, c, d
Sediment Sampling				
Four depositional sites and four background sites along 80-m contour	Single samples for benthic infauna, persistent organic pollutants including PBDE, total organic carbon and grain size	Annually	Persistent Organic Pollutants (and effects of)	a, b
Mussel Sampling				
5 rocky intertidal sites	One composite of 30-40 mussels for persistent organic pollutants including PBDE, total and fecal coliform, and enterococcus	Annually (wet season)	Persistent Organic Pollutants Pathogens	a, b, c

B. Solids/Biosolids Monitoring

1. The following information shall be submitted with the Annual Report required by X.B.5.d, below (or Standard Provision C.16).
 - a. Volume of biosolids removed, % moisture, and disposal and/or reuse destination. Order or permit number (if applicable) for the biosolids destination shall also be provided.

¹ If a single sample exceeds any of the bacteriological single sample maximum (SSM) standards contained within section V.A.1 of the Order, 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 daily 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. Shore stations (immediately inshore of 30-foot contour sites) shall be sampled concurrent with 30-foot contour repeat sampling. Note: this is not a CCLEAN requirement, but a requirement of the Order per Ocean Plan Section VI.D, paragraph b.

- b. Representative sample of biosolids removed for disposal and/or reuse shall be analyzed for the following parameters:

Arsenic	Cadmium	Copper
Lead	Mercury	Molybdenum
Nickel	Selenium	Zinc
Total Nitrogen		

- c. Biosolids shall be identified as Class A or Class B (in accordance with criteria specified at 40CFR 503). The basis for classification shall also be described.
- d. Pathogen reduction and vector attraction reduction achievement methods shall be described in adequate detail to demonstrate compliance with 40CFR 503.32.
1. If no biosolids are removed from the facility during the reporting period (the year), then the Discharger shall include such statement in the Annual Report required by X.B.5.d, below (or Standard Provision C.16).

C. Outfall Inspection

At least one time per year, the Discharger shall visually inspect the outfall structure and report in the Annual Report, regarding its physical integrity. The inspection shall note leaks and potential leaks using dye studies, if necessary.

D. MBNMS Spill Reporting

The Discharger shall report all sewage spills under its control that are likely to enter ocean waters, directly to the Monterey Bay National Marine Sanctuary (MBNMS) office at (888) 902-2778.

X. 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.

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 Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site 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 IX. The Discharger shall submit monthly 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 E-8. 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	1 st day of calendar month through last day of calendar month	Submit with monthly SMR
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	Submit with next monthly SMR
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	Submit with next monthly SMR
Annually	January 1 following (or on) permit effective date	January 1 through December 31	Submit with Annual Report

4. Reporting Protocols. The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in Part 136.

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

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

- b. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (\pm a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
 - d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.
5. 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), to the address listed below:

Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401
 - d. An Annual Self Monitoring Report shall be due on February 1 following each calendar year and shall include:

- Tabular and graphical summaries of the monitoring data obtained during the preceding year. Duplicate copies of monthly reports are not necessary and do not fulfill requirements for "summaries".
- A discussion of any incident of non-compliance and corrective actions taken to ensure compliance is restored.
- List of facility staff and corresponding certification levels.
- Summary of biosolids monitoring, as described above.
- Summary of collection system management plans, or reference report submitted under separate cover as required by this or separate sanitary sewer requirements.

C. Discharge Monitoring Reports (DMRs)

1. As described in Section X.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 Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

State Water Resources Control Board
Discharge Monitoring Report Processing Center
Post Office Box 671
Sacramento, CA 95812
3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

D. Other Reports

1. The Discharger shall report the results of any special monitoring, TREs, or other data or information that results from the Special Provisions, section VI. C, of the Order. The Discharger shall submit such reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date.

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ATTACHMENT F – FACT SHEET

As described in section II of the 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 and the Pebble Beach Community Services 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 Contacts, Title and Phone	Mark Scheiter, Plant Superintendent, (831) 624-1249 (x 230)
	Ray von Dohren, General Manager, (831) 624-1248
Authorized Person to Sign and Submit Reports	Mark Scheiter, Plant Superintendent, (831) 624-1249 (x 230)
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	N
Reclamation Requirements	Producer
Facility Permitted Flow	3.0 MGD
Facility Design Flow	3.0 MGD
Watershed	307.00
Receiving Waters	The Pacific Ocean at Carmel Bay
Receiving Water Type	Ocean Waters

A. The Carmel Area Wastewater District (hereinafter, the Discharger) is the owner and operator of a wastewater treatment plant, 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, a water of the United States, and is currently regulated by Order R3-2002-026, which was adopted on March 22, 2002 and expires on March 22, 2007. The terms and conditions of the current Order will be 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 renewal of its Waste Discharge Requirements (WDRs) and NPDES permit on December 21, 2006. A site visit was conducted on November 15, 2006, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

Three variable speed raw sewage pumps convey influent wastewater from an influent wet well to an influent manhole, where wastewater can be pre-chlorinated. Influent then flows by gravity through a flow meter, mechanically cleaned bar screens, barminutors, and an aerated grit tank, to two parallel primary clarifiers.

Primary effluent flows by gravity to an anoxic selector structure where it is mixed by coarse bubble diffused air with return activated sludge (RAS). Wastewater is then split into two streams and distributed to aeration basins nos. 1 and 2 or to aeration basins nos. 3 and 4. The activated sludge process is typically operated in a plug flow mode at the aeration basins, where aeration is accomplished using flexible membrane fine bubble diffusers.

Mixed liquor from the aeration basins flows by gravity to a distribution structure where polymer is added and flow is split to two secondary clarifiers. Secondary clarified effluent is metered, chlorinated and dechlorinated, and is diverted to tertiary treatment or discharged via two variable speed pumps to Carmel Bay.

Waste activated sludge is thickened by dissolved air flotation and blended with primary solids before anaerobic digestion. Digested sludge is dewatered by belt filter press and hauled offsite for composting at McCarthy Farms in Lost Hills, Kern County. Sludge beds provide backup dewatering capability.

The facility's tertiary treatment system provides reclaimed wastewater for irrigation of seven local golf courses and some smaller landscaped areas. Tertiary treatment is currently accomplished by eight upflow, continuous backwash sand filters, which are being replaced by microfiltration and reverse osmosis (MF/RO). Tertiary treatment MF/RO upgrades are scheduled for completion in the spring of 2008. Recycled water production

and use is regulated by Water Reclamation Requirements Order nos. 93-72 and 94-04, respectively.

The RO process, as contemplated by the Discharger, will treat secondary effluent to tertiary quality and produce a waste stream – RO reject or concentrate. The RO system will likely operate at 50 – 75 percent recovery (e.g., for every 100 gallons of secondary effluent that is treated by RO, 50 – 75 gallons of tertiary treated product water and 25 – 50 gallons of RO concentrate will be produced) and at a 95 percent rate of rejection (i.e., approximately 95 percent of all dissolved solids in secondary effluent will be concentrated in the RO concentrate stream). The net result will be concentration of dissolved solids by a factor of 2 to 4 in the RO concentrate.

Discharges to Carmel Bay will consist of dechlorinated secondary treated wastewater, RO concentrate, or combinations thereof depending on the seasonal demand for recycled water once the MF/RO facility is operational.

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 °, 32 ', 00 " N. latitude and 121 °, 55 ', 43 " W longitude. Carmel Bay is within the Monterey Bay National Marine Sanctuary and has been designated by the State Water Board¹ 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 Regional 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.

Discharges through Discharge Point 001 currently consist of secondary treated wastewater. When MF/RO capability is added to the facility, RO concentrate will also be discharged through this outfall.

The minimum probable initial dilution for Discharge Point 001 is 121 to 1. Regional Water Board staff used this dilution factor to determine the need for water quality based effluent limitations for Discharge Point 001 and calculate the effluent limitations.

¹ California Ocean Plan (2005), Appendix V

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

Effluent limitations contained in the existing Order for discharges from Discharge Point 001 and representative monitoring data for Monitoring Location EFF-001, from the term of the previous Order, are presented in the following tables.

Table F-2. Historic Effluent Limitations, Discharge Point 001

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Daily Maximum
BOD ₅	mg/L	30	45	90
TSS	mg/L	30	45	90
Oil & Grease	mg/L	25	40	75
Settleable Solids	mL/L/hr	1.0	1.5	3.0
Turbidity	NTUs	75	100	225
pH	pH Units	6.0 – 9.0		
Flow	MGD	Daily dry weather flow shall not exceed a monthly average of 3.0 MGD		
Dilution	---	The minimum initial dilution shall not be less than 121 to 1 (parts seawater to parts effluent)		
Coliform Bacteria	MPN/100 mL	The median number of coliform bacteria shall not exceed 230/100 mL, and the maximum number shall not exceed 10,000/100 mL in any one sample		
Ocean Plan Table B Pollutants	µg/L	Effluent limitations were established for all Table B pollutants so that water quality objectives from Table B would not be exceeded upon completion of initial dilution (using a dilution factor of 121:1)		

Table F-3. Summary of Monitoring Data, Monitoring Location EFF-001

Parameter	Units	2002	2003	2004	2005
Influent Flow					
Avg Monthly	mgd	1.9	1.9	1.9	2.0
Max Monthly	mgd	2.4	2.3	2.5	2.7
Reclaimed Water					
Avg Monthly	mgd	1.1	1.0	1.1	1.1
Max Monthly	mgd	1.5	1.5	1.4	1.5
Discharge Flow (Discharge Point 001)					
Avg Monthly	mgd	1.0	1.2	0.9	1.3
Max Monthly	mgd	4.2	5.3	5.7	5.1
BOD₅					
Avg Monthly	mg/L	8.6	3.1	5.1	3.6
	kg/day	36	12	14	17
Max Monthly	mg/L	22	5.3	12	8.6
	kg/day	130	26	29	54
Avg Monthly Removal	percent	98	99	99	99
TSS					
Avg Monthly	mg/L	5.8	4.1	5.6	3.6
	kg/day	19	7.6	16	16

Parameter	Units	2002	2003	2004	2005
Max Monthly	mg/L	8.5	17	14	4.6
	kg/day	47	28	35	39
Avg Monthly Removal	percent	98	99	98	99
Settleable Solids					
Avg Monthly	mLs/L/Hr	0.1	0.1	0.1	0.1
Max Monthly	mLs/L/Hr	0.1	0.1	0.1	0.1
Turbidity					
Avg Monthly	NTUs	3.6	2.7	3.2	2.1
Max Monthly	NTUs	6.5	4.8	8.8	1.3
pH					
Monthly Range	pH Units	6.7 – 7.2	6.6 – 6.9	6.6 – 7.3	6.7 – 6.9
Oil & Grease					
Avg Monthly	mg/L	5.6	5.0	5.0	5.0
	kg/day	19	22	18	24
Max Monthly	mg/L	10	5.0	5.0	5.0
	kg/day	36	36	40	48
Coliform Bacteria					
Avg Monthly	mpn/100 mL	2	2	2	2
Max Monthly	mpn/100 mL	2	2	2	2
Acute Toxicity					
Average	TUa	1.1	1.0	1.2	1.0
Maximum	TUa	1.4	1.0	1.7	1.1
Chronic Toxicity					
Average	TUc	9.6	9.1	7.9	5.2
Maximum	TUc	18	17.8	18	10

D. Compliance Summary

The following table outlines violations that occurred during the previous permit term. It should be noted that as a general rule the facility is operated and maintained with a high level of competency and professionalism. With the exception of a few reports being submitted a few days late or being incomplete, the Discharger regularly submits complete and timely reports of a high technical quality. Late or incomplete reports were all rectified within several days of notifying the Discharger. With the exception of the 2 million gallon discharge of tertiary treated effluent to the Carmel River and pump station failure resulting in a 10,000 gallon sewer release to the ocean in Pebble Beach, collection system overflows were relatively incidental (generally less than 1,000 gallons) and occurred as a result of sewer line blockages or damaged lines. It should also be noted that the Discharger sought prior authorization for the tertiary discharge to the Carmel River as needed to prevent a potential secondary overflow and discharge as a result of a damaged outfall line. Unfortunately, collection system overflows in Pebble Beach and Carmel have a high potential for discharges to the Pacific Ocean either directly or via storm drains. A majority of the noted collection system overflows occurred within portions of the collection system managed by the Pebble Beach Community Services District. In response to past overflows, both the Carmel Area Wastewater District and Pebble Beach Community

Services District have stepped up their collection system inspection and maintenance schedules. No incidents of collection system overflows resulting in discharges to the Pacific Ocean have been reported since December 29, 2004. Future oversight of sewer collection system management and overflow reporting for each agency's portion of the collection system tributary to wastewater treatment facility will be regulated via Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (State Water Board Order No. 2006-0003-DWQ).

Table F-4. Incidents of Non-Compliance

Date	Incident
May 12, 2003	Approximately 100 gallons raw sewage spilled to Stillwater Cove due to release from a relief valve
Sept. 10, 2003	Approximately 10,000 gallons raw sewage spilled to the Ocean due to pump station failure.
Jan 5, 2004	Approximately 500 gallons raw sewage spilled to Stillwater Cove due to landslide and subsequent line repair.
March 8, 2004	Approximately 200 gallon spill to storm drain and Carmel River Lagoon due to clogged line
March 7, 2004	950 gallon sewage spill to storm drain
Dec. 29, 2004	200 gallon sewage spill to Sawmill Gulch Creek
Dec. 31, 2004	2,000,000 tertiary treated effluent released to the Carmel River
Dec. 3, 2004	600 gallon sewage spill to storm drain
March 1, 2005	250 gallon sewage spill
Mar 1, 2005	Sewage spill (unknown amount) due to tree falling on sewer pipe near 17 Mile Drive and Old Drive
May 30, 2005	15,000 gallons secondary effluent spilled on WWTP grounds
September 6, 2006	Chlorine residual violation; permit limit of 7.32 mg/L; reported value of 8.2 mg/L

E. Planned Changes

To provide higher quality tertiary treated effluent for irrigation uses, the Discharger is currently upgrading the treatment facility's tertiary treatment system. The existing eight sand filters, with a capacity to treat 1.8 mgd, will be replaced by microfiltration (MF) and reverse osmosis (RO) units. The upgraded system will have a capacity to treat approximately 1.9 mgd and produce a blended MF/RO product water with a lower TDS. The new tertiary treatment system coupled with a new storage reservoir will allow the Discharger to operate the tertiary treatment facility continuously throughout the year (during periods of low irrigation demand). Although annual reclaimed water use and ocean discharge rates will not change from current rates, the ocean discharge effluent (Discharge Point 001) will contain approximately 400,000 gpd of RO reject water that is higher in dissolved constituents. The Discharger is currently evaluating seasonal RO reject disposal (non-NPDES) alternatives to augment the Carmel River Lagoon in lieu of discharging it through the ocean outfall.

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 is 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 California Water Code (commencing with section 13370). It shall serve as an 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 Water Code (commencing with section 13260).

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 Regulations, Policies, and Plans

- 1. Water Quality Control Plans.** The Regional Water Board has adopted a *Water Quality Control Plan for the Central Coast Region* (the Basin Plan) that 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, and 2005. The most recent amendment to the Ocean Plan was adopted by the State Water Resources Control Board (the State Water Board) on April 21, 2005 and became effective on February 14, 2006.

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 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 and the Ocean Plan for the Pacific Ocean are described in section II. H of the Order.

Requirements of this Order implement the Basin Plan and Ocean 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 objectives for estuarine and coastal waters.

Existing Discharges to Coastal Waters (Discharge Point 001)

- Elevated temperature wastes shall comply with limitations necessary to assure protection of the beneficial uses and Areas of Special Biological Significance.

Requirements of this Order implement the Thermal Plan.

- 3. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes. [65 Fed. Reg. 24641 (April 27, 2000), codified at 40 CFR 131.21] 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.
- 4. Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. As discussed in section IV. B of the Fact Sheet, the Order establishes technology-based effluent limitations for biochemical oxygen demand (BOD₅); total suspended solids (TSS); settleable solids; oil and grease, turbidity, and pH for both Discharge Points 001 and 002. These technology-based limitations implement the minimum, applicable federal technology-based requirements. The Order also contains effluent limitations in addition to the minimum, federal technology-based requirements, necessary to meet applicable water quality standards. These limitations are not more stringent than required by the CWA.

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. For Discharge Point 001, procedures for calculating individual WQBELs are based on the Ocean Plan, which was approved by USEPA on February 14, 2006. All beneficial uses and water quality objectives contained in the Ocean Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000.

For Discharge Point 002, to the extent that WQBELs for toxic pollutants are derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. Procedures for calculating individual WQBELs for priority pollutants are based on the CTR and the SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA 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 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.

5. **Antidegradation Policy.** NPDES regulations at 40 CFR 131.12 require that 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, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that the existing quality of waters 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. As discussed later in this Fact Sheet, the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.
6. **Anti-Backsliding Requirements.** CWA Sections 402 (o) (2) and 303 (d) (4) and NPDES regulations at 40 CFR 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. As discussed in this Fact Sheet, effluent limitations and other requirements established by this Order satisfy applicable anti-backsliding provisions of the CWA and NPDES regulations.

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

Carmel Bay is not identified as impaired pursuant to CWA section 303 (d), which requires states to identify receiving waters which are not meeting applicable water quality standards after imposition of technology-based requirements on point source discharges, as required by CWA sections 301 (b) (1) (A and B).

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 (State Water Resources Control Board Water Quality Order, NPDES General Permit No. CAS000001, for Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.

Sewage or wastewater treatment works facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility with a design flow of one million gallons per day or more or required to have an approved pretreatment program under 40 CFR Part 403 are subject to the requirements of NPDES General Permit No. CAS000001.

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 CFR 122.44 (a) permits are required to include applicable technology-based limitations and standards; and at 40 CFR 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 CFR 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 III. 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 III. B (Overflows and bypasses 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 CFR 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 III. 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 Regional Water Board during the process of permit reissuance.

4. Discharge Prohibition III. D (Discharges of radiological, chemical, or biological warfare agent or high level radioactive waste to the Ocean is prohibited). This prohibition is retained from the previous permit and restates a discharge prohibition established in section III. H of the Ocean Plan.
5. Discharge Prohibition III. 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 III. F (Discharge of sludge and sludge digester supernatant to the Ocean is prohibited). This prohibition is retained from the previous permit and restates a discharge prohibition established in section III. H of the Ocean Plan.

B. Technology-Based Effluent Limitations

1. Scope and Authority

NPDES regulations at 40 CFR 122.44 (a) require that permits include applicable technology-based limitations and standards. This Order includes such limitations based on the minimum level of effluent quality attainable by secondary treatment, as established at 40 CFR 133. This Secondary Treatment Regulation includes requirements for BOD₅, suspended solids, and pH. The State Water Board, in Table A of the Ocean Plan, has supplemented these technology based requirements with additional requirements for conventional pollutants (settleable solids, oil and grease), which are applicable to the facility.

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 CFR 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 CFR 125.3.

2. Applicable Technology-Based Effluent Limitations

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

Table F-5. Summary of Technology-Based Effluent Limitations

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
Discharge Point 001				
BOD ₅ ⁽¹⁾	mg/L	30	45	90
	lbs/day	750	1130	2250
	kg/day	340	510	1020
TSS	mg/L	30	45	90
	lbs/day	750	1130	2250
	kg/day	340	510	1020
Settleable Solids	mL/L/hr	1.0	1.5	3.0
Turbidity	NTUs	75	100	225
Oil & Grease	mg/L	25	40	75
	lbs/day	630	1000	1880
	kg/day	280	450	850
pH	pH units	6.0 – 9.0 at all times		

⁽¹⁾ The average monthly percent removal of BOD₅, as measured at Discharge Point 001, shall not be less than 85 percent.

Concentration-based limitations for BOD₅ and TSS and pH limitations, described above, are required pursuant to the Secondary Treatment Regulations at 40 CFR 133. Mass-based limitations for BOD₅ and TSS for Discharge Point 001 are based on the design, dry weather treatment capacity of the facility of 3.0 MGD.

Limitations for settleable solids, turbidity, and oil and grease for Discharge Point 001 are required pursuant to Table A of the Ocean Plan.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

NPDES regulations at 40 CFR 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, the CTR, and the NTR.

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 CFR 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 Ocean Plan and are described by Section II. (Findings) H of the Order.

Water quality criteria applicable to ocean waters of the Region are also 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 B 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 CFR 122.44 (d) (1), and in accordance with procedures established by the Ocean Plan (2005), the Regional Water Board has performed a reasonable potential analysis (RPA) to determine the need for effluent limitations for the Table B toxic pollutants.

3. Determining the Need for WQBELs

Procedures for performing a Reasonable Potential Analysis (RPA) for ocean dischargers are described in Section III. C. and Appendix VI of the Ocean Plan. In general, the procedure is a statistical method that projects an effluent data set while taking into account the averaging period of water quality objectives, 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 B 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 B water quality objective.

The State Water Resources Control Board has developed a reasonable potential calculator, which is available at:

<http://www.waterboards.ca.gov/plnspols/docs/oplans/rpcalc.zip>.

The calculator (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 Regional 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 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.

Here, the RPA was conducted using secondary effluent monitoring data generated in four monitoring events between 2002 and 2005. Data for each pollutant that was quantified, during these monitoring events, at concentrations greater than their detection limits were multiplied times a factor of 4 to represent worst-case conditions – when reverse osmosis (RO) concentrate makes up 100 percent of this discharge.

The RO process, as contemplated by the Discharger, will treat secondary effluent to tertiary quality and produce a waste stream – RO reject or concentrate. The RO system will likely operate at 50 – 75 percent recovery (e.g., for every 100 gallons of secondary effluent that is treated by RO, 50 – 75 gallons of tertiary treated product water and 25 – 50 gallons of RO concentrate will be produced) and at a 95 percent rate of rejection (i.e., approximately 95 percent of all dissolved solids in secondary effluent will be concentrated in the RO concentrate stream). The net result will be concentration of dissolved solids by a factor of 2 - 4 in the RO concentrate.

The following table presents results of the RPA, performed in accordance with procedures described by the Ocean Plan and summarized above, for the Carmel

Area Wastewater District facility. The RPA endpoint for each Table B pollutant is identified. As shown in the following table, the RPA commonly leads to Endpoint 3 (RPA Inconclusive) for most Table B pollutants. The RPA resulted in Endpoint 1 (reasonable potential) for copper, zinc, and DDT, and Endpoint 2 (RPA inconclusive) for no pollutants.

A conclusion of "reasonable potential" for total residual chlorine and whole effluent, acute and chronic toxicity, also Table B pollutants, is based on information about the receiving water and/or the discharge instead of characterization of effluent monitoring data. Such a determination is consistent with the RPA procedure of the Ocean Plan which requires consideration of all available information, including the "potential toxic impact of the discharge" to determine if WQBELs are necessary, notwithstanding the statistical procedure with which the RPA is conducted for most pollutants.

As stated above, there is reasonable potential for copper, zinc and DDT based on RPA Endpoint 1 and reasonable potential for residual chlorine and whole effluent, acute and chronic toxicity based on the potential toxic impact of the discharge. Reasonable potential is inconclusive (RPA Endpoint 3) for all remaining Table B pollutants because of insufficient data. The Ocean Plan requires that where reasonable potential is inconclusive, existing effluent limitations for that pollutant shall remain in the permit.

Therefore, effluent limitations and monitoring for all Table B [Ocean Plan] pollutants are required for Discharge Point 001.

Table F-6. RPA Results for Discharges to Carmel Bay

Table B 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					
Arsenic	8	4	4	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Cadmium	1	4	4	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chlorinated Phenolics	1	3	3	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chromium (VI)	2	4	3	20	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Copper	3	4	0	288	Endpoint 1 – An effluent limitation must be developed for this pollutant. Monitoring is required.
Cyanide	1	4	2	21.6	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Endosulfan (total)	0.009	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Endrin	0.002	3	3	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
HCH	0.004	3	2	0.0744	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Lead	2	4	3	0.8	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.

Table B Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	RPA Result, Comment
Mercury	0.04	4	3	1.2	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Nickel	5	4	2	15.6	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Non-chlorinated Phenolics	30	3	3	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Selenium	15	3	3	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Silver	0.7	4	3	0.48	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Zinc	20	4	0	3040	Endpoint 1 – An effluent limitation must be developed for this pollutant. Monitoring is required.
Objectives for Protection of Human Health – Noncarcinogens					
1,1,1-Trichloroethane	540000	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
2,4-Dinitrophenol	4.0	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
2-Methyl-4,6-Dinitrophenol	220	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Acrolein	220	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Antimony	1200	4	3	1.2	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Bis(2-Chloroethoxy)Methane	4.4	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Bis(2-Chloroisopropyl)Ether	1200	2	1	11.2	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chlorobenzene	570	2	0	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chromium (III)	190000	4	3	34.8	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Dichlorobenzenes	5100	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Diethyl Phthalate	33000	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Dimethyl Phthalate	820000	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Di-n-Butyl Phthalate	3500	2	1	220	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Ethylbenzene	4100	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Fluoranthene	15	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Hexachlorocyclopentadiene	58	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Nitrobenzene	4.9	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Thallium	2	4	4	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Toluene	85000	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Tributyltin	0.0088	4	4	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.

Table B 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 Human Health – Carcinogens					
1,1,2,2-Tetrachloroethane	2.3	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,1,2-Trichloroethane	9.4	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,1-Dichloroethylene	0.9	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,2-Dichloroethane	28	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,2-Diphenylhydrazine	0.16	2	1	0.48	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,3-Dichloropropylene	8.9	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,4 Dichlorobenzene	18	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
TCDD Equivalentents	3.9E-9	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
2,4,6-Trichlorophenol	0.29	2	0	3.8	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
2,4-Dinitrotoluene	2.6	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
3,3'-Dichlorobenzidine	0.0081	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Acrylonitrile	0.10	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Aldrin	2.2E-5	2	3	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Benzene	5.9	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Benzidine	6.9E-5	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Beryllium	0.033	4	4	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Bis(2-Chloroethyl)Ether	0.045	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Bis(2-Ethylhexyl)Phthalate	3.5	2	1	18.8	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Carbon Tetrachloride	0.90	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chlordane	2.3E-5	3	3	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chlorodibromomethane	8.6	1	0	40	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chloroform	130	2	1	140	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
DDT (total)	0.00017	3	2	0.052	Endpoint 1 – An effluent limitation must be developed for this pollutant. Monitoring is required.
Dichlorobromomethane	6.2	1	0	7.2	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Dieldrin	0.00004	3	3	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Halomethanes	130	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.

Table B Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	RPA Result, Comment
Heptachlor	0.00005	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Heptachlor Epoxide	0.00002	1	1	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Hexachlorobenzene	0.00021	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Hexachlorobutadiene	14	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Hexachloroethane	2.5	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Isophorone	730	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Methylene Chloride	450	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
N-Nitrosodimethylamine	7.3	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
N-Nitrosodi-n-Propylamine	0.38	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
N-Nitrosodiphenylamine	2.5	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
PAHs (total)	0.0088	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
PCBs	1.9E-5	3	3	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Tetrachloroethylene	2.0	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Toxaphene	0.00021	3	3	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Trichloroethylene	27	2	2	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Vinyl Chloride	36	2	2	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 are from 2002 to 2005.

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 Carmel Bay, the Regional Water Board is establishing WQBELs for copper, zinc, DDT as well as the remaining pollutants with RPA endpoint 3. The Regional Water Board is also establishing WQBELs for chlorine and whole effluent, acute and chronic toxicity, which are also pollutants or pollutant parameters identified by Table B of the Ocean Plan.

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

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

Where ...

Ce = the effluent limitation ($\mu\text{g/L}$)

Co = the concentration (the water quality objective) to be met at the completion of initial dilution ($\mu\text{g/L}$).

Cs = background seawater concentration ($\mu\text{g/L}$)

Dm = minimum probable initial dilution expressed as parts seawater per part wastewater (here, Dm = 121)

For the Carmel Area Wastewater District's wastewater treatment plant, a Dm of 121 is unchanged from Order No. R3-2002-026. 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 B implementing procedures, Cs equals zero for all pollutants, except the following.

Table F-7. Background Concentrations (Cs) - Ocean Plan (Table C)

Pollutant	Background Seawater Concentration
Arsenic	3 $\mu\text{g/L}$
Copper	2 $\mu\text{g/L}$
Mercury	0.0005 $\mu\text{g/L}$
Silver	0.16 $\mu\text{g/L}$
Zinc	8 $\mu\text{g/L}$

For all other Table B parameters, Cs=0

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

Table F-8. Water Quality Objectives (Co)–Ocean Plan (Table B)

Objectives for Protection of Marine Aquatic Life

Pollutant	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Arsenic	ug/L	8	32	80
Cadmium	ug/L	1	4	10
Chromium (VI)	ug/L	2	8	20
Copper	ug/L	3	12	30
Lead	ug/L	2	8	20
Mercury	ug/L	0.04	0.16	0.4
Nickel	ug/L	5	20	50
Selenium	ug/L	15	60	150
Silver	ug/L	0.7	2.8	7
Zinc	ug/L	20	80	200
Cyanide	ug/L	1	4	10
Total Chlorine Residual	ug/L	2	8	60
Ammonia	ug/L	600	2400	6000

Pollutant	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Acute Toxicity	TUa	-----	0.3	-----
Chronic Toxicity	TUc	-----	1	-----
Non-chlorinated Phenolics	ug/L	30	120	300
Chlorinated Phenolics	ug/L	1	4	10
Endosulfan (total)	ug/L	0.009	0.018	0.027
Endrin	ug/L	0.002	0.004	0.006
HCH	ug/L	0.004	0.008	0.012
Radioactivity ⁽¹⁾	ug/L	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations. Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.		

⁽¹⁾ The narrative reference to radioactivity limits per Table B of the 2005 Ocean Plan as noted here is outdated and there currently are no federal or state adopted radioactivity standards for marine aquatic life protection, or other pertinent criteria applicable to ocean discharges. The reference to radioactivity standards contained within the previous permit (based on drinking water MCLs contained within Title 22 of the CCRs) has been retained within the Order along with radioactivity monitoring to avoid potential violation of anti-backsliding requirements. It is anticipated that the radioactivity effluent limitations within this Order, or subsequent versions, will be changed at some time in the future once an appropriate standard is adopted.

Objectives for Protection of Human Health - (Non-Carcinogens)

Pollutant	Units	30-day Average
Acrolein	ug/L	220
Antimony	ug/L	1200
Bis(2-Chloroethoxy)Methane	ug/L	4.4
Bis(2-Chloroisopropyl)Ether	ug/L	1200
Chlorobenzene	ug/L	570
Chromium (III)	ug/L	190,000
Di-n-Butyl Phthalate	ug/L	3500
Dichlorobenzenes	ug/L	5100
Diethyl Phthalate	ug/L	33000
Dimethyl Phthalate	ug/L	820,000
2-Methyl-4,6-Dinitrophenol	ug/L	220
2,4-Dinitrophenol	ug/L	4
Ethylbenzene	ug/L	4100
Fluoranthene	ug/L	15
Hexachlorocyclopentadiene	ug/L	58
Nitrobenzene	ug/L	4.9
Thallium	ug/L	2
Toluene	ug/L	85,000
Tributyltin	ug/L	0.0014
1,1,1-Trichloroethane	ug/L	540,000

Objectives for Protection of Human Health - (Carcinogens)

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

Using the equation, $C_e = C_o + D_m (C_o - C_s)$, effluent limitations are calculated as follows (effluent limitations for RPA endpoint 1 pollutants, chlorine, and acute and chronic toxicity are shown here for example only).

Copper

$$\begin{aligned}C_e &= 3 + 121 (3 - 2) = 124 \mu\text{g/L (6-Month Median)} \\C_e &= 12 + 121 (12 - 2) = 1,220 \mu\text{g/L (Daily Maximum)} \\C_e &= 30 + 121 (30 - 2) = 3,420 \mu\text{g/L (Instantaneous Maximum)}\end{aligned}$$

Zinc

$$\begin{aligned}C_e &= 20 + 121 (20 - 8) = 1,470 \mu\text{g/L (6-Month Median)} \\C_e &= 80 + 121 (80 - 8) = 8,790 \mu\text{g/L (Daily Maximum)} \\C_e &= 200 + 121 (200 - 8) = 23,400 \mu\text{g/L (Instantaneous Maximum)}\end{aligned}$$

DDT

$$C_e = 0.00017 + 121 (0.00017 - 0) = 0.02074 \mu\text{g/L (30-Day Average)}$$

Chlorine

$$\begin{aligned}C_e &= 2 + 121 (2 - 0) = 244 \mu\text{g/L (6-Month Median)} \\C_e &= 8 + 121 (8 - 0) = 976 \mu\text{g/L (Daily Maximum)} \\C_e &= 60 + 121 (60 - 0) = 7,320 \mu\text{g/L (Instantaneous Maximum)}\end{aligned}$$

Chronic Toxicity

$$C_e = 1 + 121 (1 - 0) = 122 \text{ TUc (Daily Maximum)}$$

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 limitation is determined by the following equation.

$$C_e = C_o + (0.1) (D_m) (C_o)$$

The resulting effluent limitation calculation is therefore:

$$C_e = 0.3 + (0.1) (121) (0.3) = 3.9$$

Mass Based Effluent Limitations

Implementing provisions at Section III. C of the Ocean Plan require that in addition to concentration-based effluent limitations, effluent limitations for Table B pollutants be expressed in terms of mass. Paragraph k. of Ocean Plan Section III.C requires that mass based effluent limitations shall be determined using the effluent concentration limit and observed flow rate in MGD per the equation in paragraph j. of the same Section. Tables 6 and 7 of the Order includes mass-based effluent limitations based on a flow rate of 3.0 MGD and the following footnote (to Table 7 with a reference to it within Table 6):

^[4] The mass-based (lbs/day) effluent limitations in this table are based on the average dry weather flow design capacity of 3.0 MGD for the treatment facility and are therefore only good up to this flow. For flows above 3.0 MGD, mass-based effluent limitations shall be calculated individually using the concentration-based effluent limitations and the observed flow at the time of sampling per the following equation:

$$\text{lbs/day} = 0.00834 \times C_e \times Q$$

where:

C_e = the effluent concentration limit in $\mu\text{g/L}$

Q = observed flow rate in MGD

5. WQBEL Changes Based on Ocean Plan Updates

No changes. Previous permit consistent with Table B of the 2005 Ocean Plan.

It should be noted that the radioactivity standards contained within the previous permit that reference drinking water standards per Title 22 of the California Code of Regulations were retained. It is anticipated that the effluent limitations for this Order or subsequent versions, will be updated once appropriate standards are adopted and included by reference in the Ocean Plan (see section II.C of Attachment G for more discussion).

6. 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.

Regional Water Board staff have determined that treated wastewater from the wastewater treatment facility has a reasonable potential to cause or contribute to acute and/or chronic toxicity in the discharge. Such a determination is consistent with the RPA procedure of the Ocean Plan which requires consideration of all available information, including the "potential toxic impact of the discharge" to determine if WQBELs are necessary, notwithstanding the statistical procedure with which the RPA is conducted for most pollutants. Due to the sensitive nature of the receiving water, an ASBS, and potential cumulative effects of various pollutants present at low levels, acute and chronic toxicity limitations are retained from the previous permit.

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.

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 technology based effluent limitations established by the previous permit for BOD₅, TSS, oil and grease, settleable solids, turbidity, and pH. Water quality based effluent limitations (WQBELs) for all Ocean Plan Table B pollutants have also been retained from the previous permit per the RPA results discussed above.

The Ocean Plan was amended in 2005 to include a procedure for determining "reasonable potential" by characterization of effluent monitoring data. A RPA, using the updated Ocean Plan procedure, resulted in "no reasonable potential" (endpoint 2) for none of the Table B pollutants. Therefore, all effluent limitations for Table B pollutants have been retained.

Elimination of WQBELs for Table B pollutants is consistent with the exception to the Clean Water Act's anti-backsliding requirements expressed at section 402 (o) (2) (B) (i) of the Act, which allows a reissued permit to include less stringent limitations when "information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods), and which would have justified the application of a less stringent effluent limitation at the time of permit issuance." In these circumstances, less stringent limitations (the elimination of limitations per the RPA) are based on new data, which was generated during the term of previous permit, and which demonstrates no reasonable potential for discharges from the facility to cause or contribute to exceedances of applicable water quality standards for these pollutants.

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

2. Satisfaction of Anti-degradation Policy

Provisions of the Order are consistent with applicable anti-degradation policy expressed by NPDES regulations at 40 CFR 131.12 and by State Water Board Resolution No. 68-16. Limitations and conditions of the Order assure maintenance of the existing quality of receiving waters.

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 BOD₅; 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. 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

This section of the standardized permit is not applicable to the Carmel Area Wastewater District.

G. Reclamation Specifications

The Order does not address use of reclaimed wastewater except to require compliance with applicable State and local requirements regarding the production and use of reclaimed wastewater, including those requirements established by the Department of Health Services at title 22, sections 60301 - 60357 of the California Code of Regulations, Water Recycling Criteria.

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 generally include the receiving water limitations of the previous Order; however these limitations have been supplemented and modified to reflect all applicable, general water quality objectives of the Basin Plan and all applicable general water quality objectives of the Ocean Plan for ocean waters.

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

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 also authorize the Regional 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, monitoring for BOD₅ 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 the Ocean Plan Table B pollutants was increased from annually to semiannually beginning in 2007. This monitoring shall be conducted once in the dry season and once in the wet season in conjunction with whole effluent toxicity testing to account for potential variations in pollutant loading as a result of the addition of RO concentrate to the discharge and seasonal variations due to potential dilution effects of infiltration and inflow. This data will be used to measure compliance with the Effluent Limitations for Toxic Pollutants per section IV. A. 1 of the Order and to conduct the reasonable potential analysis for the evaluation of effluent limitations for the next permit cycle. Changes in the character of the discharge as a result of the addition of RO concentrate warrant increased monitoring.
- Whole effluent toxicity (acute and chronic) monitoring was decreased from quarterly to semiannually to coincide with semiannual monitoring for Ocean Plan Table B pollutants as noted above and below. The Discharger's historical compliance with the toxicity limitations in conjunction with increased Table B pollutant monitoring warrant decreased monitoring. Appendix II of the Ocean Plan requires at least annual monitoring for Table B pollutants (including acute and chronic toxicity) for discharges between 1 and 10 MGD.

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 limitations for acute and chronic toxicity for Discharge Point 001 from the previous permit and decreases monitoring from quarterly to semiannually.

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 with the following modifications:

- River and stream mouth (coastal confluence) sampling requirements were eliminated for persistent organic pollutants (POPs), urea, nitrate, silicate, total suspended solids, and bacteria (total and fecal coliform and enterococcus). These requirements were removed from the Order because the CCLEAN data clearly show the majority of the pollutant loading for most of these parameters to Monterey Bay is coming from non-point source discharges to inland surface waters and not the permitted ocean discharges². The CCLEAN Dischargers are in support of continued coastal confluence monitoring to evaluate relative loading, but are generally not willing to have their rate payers bear the cost of non-point source discharge related monitoring. Although these program elements have been eliminated from the Monitoring and Reporting Program, they are still maintained in the current CCLEAN Program Objectives and will ideally be supported by the participation of non-point source dischargers in CCLEAN in the future. In the interim, it is anticipated that two of the CCLEAN Dischargers will continue river mouth monitoring for persistent organic pollutants due to the influence of their respective urban areas on the rivers that flow through these areas, whereas monitoring of other parameters (nutrients, pathogen indicators, suspended sediment) at coastal confluences will be maintained through the Central Coast Ambient Monitoring Program's (CCAMP) Coastal Confluence monitoring.
- The CCLEAN Dischargers have expressed interest in expanding effluent monitoring to evaluate for additional POPs, including polybrominated diethyl ethers (PBDEs) and other hormone related or mimicking compounds and

² There is substantial evidence that runoff from the land is the largest source of persistent organic pollutants (POPs) that are impairing beneficial uses in Monterey Bay, rather than point source discharges of treated municipal wastewater. Cumulative loads of various POPs from rivers and streams over a four year period were 2.4 to 394 times greater than from point source municipal wastewater ocean discharges.

personal care products³. Although PBDE was the only specific constituent added to the CCLEAN effluent monitoring requirements, the CCLEAN steering committee is currently generating a list of additional monitoring constituents and appropriate sampling and analytical protocols.

- PBDE was added to the monitoring parameters for sediment sampling and the annual sampling frequency was retained.
- PBDE was added to the monitoring parameters for mussel sampling and the sampling frequency was reduced from semiannually to annually during the wet season. CCLEAN data show that the wet season represents the worst-case concentrations of contaminants in mussels corresponding to rainfall and high runoff events. The wet season sampling is also consistent with the sampling period used by the National Status and Trends program in their long-term measurements of POPs in mussels along the California Coast. This sampling efficiency will maintain the capacity for trend monitoring in mussel tissue for POPs and will represent a cost efficiency that is consistent with the relative cumulative loading of these chemicals from the ocean discharges versus non-point sources, as noted above.

2. Biosolids/Sludge Monitoring.

40 CFR Part 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.

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. Decreased sludge monitoring and reporting requirements of this Order, compared to the previous permit, therefore reflect the fact that USEPA, not the Regional Water Board, oversees compliance with 40 CFR Part 503.

3. Outfall Inspection

The Order includes the addition of requirements to conduct annual visual inspections (including dye tracer tests) of the outfall structure and report to the Regional Water Board regarding its physical integrity. This requirement is based on failure of the outfall structure during 2004 that resulted in the authorized discharge of tertiary

³ There are other emerging contaminants of concern, such as PBDEs, personal care products and hormones that CCLEAN has not measured. Some of these emerging contaminants of concern have been shown to come predominantly from wastewater. For example, PBDEs are widely used flame retardants integral to a wide array of synthetic compounds found in common household products such as fabrics, foam padding, furniture and electronic equipment. They are chemically very similar to PCBs and accumulate to high concentrations in fatty tissues of organisms near the top of the food web, such as humans and sea otters. CCLEAN began measuring PBDEs in 2006-2007 and preliminary data indicate that concentrations of PBDEs in wastewater are 1-2 orders of magnitude greater than in the rivers and loads from wastewater may exceed those from rivers.

effluent to the Carmel River as noted in section II.D, Compliance History, of the Fact Sheet.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

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

NPDES regulations at 40 CFR 122.41 (a) (1) and (b - 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 CFR 123.25 (a) (12) allows the State to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 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 CFR 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 No. 01-87. When toxicity monitoring measures acute 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 require the Discharger to implement toxicity reduction evaluation (TRE) requirements, or other measures are warranted.

b. Water-Contact Monitoring (Bacterial Characteristics)

A repeat water-contact bacteriological monitoring provision was added to the permit in accordance with Ocean Plan section III.D.1.b, for exceedance of a

single sample maximum (SSM) bacteria standard contained within section V.A.1 of the Order. This requirement is also footnoted in Table E-6 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 on September 22, 2002 and March 17, 2003, respectively. The March 17, 2003 report showed no measurable effect of the discharge on the ASBS and more intensive or frequent monitoring is therefore not required per Resolution No. 84-78. The next ten year comprehensive study cycle occurs during the next five year permit cycle. This special provision acts as a place holder for the next ten year comprehensive study workplan and report due September 2012 and March 2013, respectively.

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program

The 2005 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. The 2005 Ocean Plan PMP language is included to provide guidance in the event that a PMP must be developed and implemented by the Discharger.

4. Construction, Operation, and Maintenance Specifications

This section of the standardized permit template is 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 CFR Part 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 Regional Water Board, will oversee compliance with 40 CFR Part 503.

40 CFR Part 503.4 (Relationship to other regulations) states that the disposal of sewage sludge in a municipal solid waste landfill unit, as defined in 40 CFR 258.2, that complies with the requirements in 40 CFR part 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 CFR Part 503.

b. Pretreatment

Pretreatment requirements for POTWs are contained within 40 CFR Part 403. Per 40 CFR 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 CFR 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 No. CAS000001 - *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities*.

7. Compliance Schedules

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

VIII. PUBLIC PARTICIPATION

The Central Coast Regional Water Quality Control 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, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has 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 their written comments and recommendations. Additional public notification was provided by the Discharger through Notification the following **<Describe Notification Process (e.g., newspaper name and date)>**

B. Written Comments

Regional Water Board staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted 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.

To receive a full response from the Regional Water Board staff and to be considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on **February 11, 2008**.

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **March 21, 2008**
Time: **8:30 AM**
Location: **Salinas City Council Chambers**
200 Lincoln Avenue
Salinas, CA, 93901

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

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

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

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

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, 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 (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 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 Mathew Keeling at (805) 549-3685 or MKeeling@waterboards.ca.gov.

H. Public Comment

See Attachment G for public comments and responses and other changes made to the draft Order.

ATTACHMENT G – COMMENTS AND CHANGES

I. COMMENTS AND RESPONSES

A. Carmel Area Wastewater District

As of February 27, 2008 comments from the Discharger are still pending and will be included as a supplemental sheet(s) to the Water Board public hearing agenda package. The Discharger's comments will be included herein as part of the final Order.

B. Monterey Bay National Marine Sanctuary

The following comments were submitted via letter dated January 29, 2008:

The Monterey Bay National Marine Sanctuary (MBNMS) has reviewed the Tentative Draft Waste Discharge Requirements Order No. R3-2008-0007, National Pollutant Discharge Elimination System (NPDES) No. CA0047996 for the Carmel Area Wastewater District. The MBNMS reviewed this NPDES permit under its authority defined at 15 CFR Sections 922.49 and 922.134(b), and procedures defined in Section V.E of the Memorandum of Agreement on water quality protection within the Sanctuary (June 1992).

Renewal of this draft permit, proposed under the Central Coast Regional Water Quality Control Board (RWQCB) Order No. R3-2008-0007, is a continuation of discharging operations at the permittees' plant. This Order will allow the discharge of secondary treated domestic wastewater and reverse osmosis (RO) concentrate to the Pacific Ocean within an Area of Special Biological Significance and the Monterey Bay National Marine Sanctuary. This renewal will allow a discharge of up to 3.0 million gallons per day (MGD) of dechlorinated secondary treated wastewater, or combinations of reverse osmosis concentrate and effluent.

The MBNMS is interested in improving water quality efforts within the sanctuary, and has long been a proponent for water re-use alternatives. Staff are pleased to note that this facility's tertiary treatment system provides reclaimed wastewater for irrigation of seven local golf courses and some smaller landscaped areas.

While the MBNMS supports this Tentative Order, we do have some specific comments that need to be addressed as indicated below:

1. Monitoring

On page F-5 of the Order, it states that discharges to Carmel Bay will include RO concentrate and the secondary treated water. However, on page F-8 of the Factsheet it indicates that there will be an increase in total dissolved solids from the RO at a rate of 400,000 gpd. Given this increase, it seems appropriate to include total dissolved solids to the monitoring list found in table E-3. Please make that adjustment.

RWQCB Response to Comment: Quarterly effluent monitoring for total dissolved solids (TDS) has been added to Table E-3 per the comment.

2. Also, MBNMS staff note that Table F-3 results do not include all of the analytes listed in Table E-3 such as NO₃, NH₃, Urea, Cu, Zn and DDT. Please explain this discrepancy and indicate where that information can be found.

RWQCB Response to Comment: Historical data presented in the data summary of Fact Sheet do not always mirror monitoring requirements of the new permit as the monitoring requirements may have changed. Limited data for copper, zinc and DDT is presented in Table F-6 of the Fact Sheet (please note that the "most stringent WQO" presented in this table does not represent the effluent limitations for this facility – those can be found in Tables 6 and 7 of the Order). Staff will compile available data for these constituents as practicable and include it in the supplemental sheet addressing CAWD's comments and Table F-3 of final Order. Staff did not have time to do this in preparation of the draft Order for the agenda package.

3. Mapping

The Tentative Order lists the latitude and longitude information for the outfall location in narrative form. It would greatly aid reviewers of this document if the diffusion pipe and discharge locations were included on the maps on page B-1. Additionally, it may be appropriate to denote other areas of state and federal jurisdiction on the maps, including the Sanctuary and ASBS boundaries. Please make these additions.

RWQCB Response to Comment: Staff concurs with this comment. However, staff currently lacks requisite software and expertise to accurately facilitate this request in time for the hearing. Staff will request technical support to revise the maps for issuance of the final Order, or subsequent Orders.

4. Spills

Although no incidents of collection system overflows resulting in discharges to the Sanctuary have been reported since 2004, it should be noted that the regulations for the Monterey Bay National Marine Sanctuary at 15 CFR Part 922.132 prohibit unauthorized discharges from within the boundaries of the MBNMS. Unauthorized discharges occurring outside the MBNMS that subsequently enter and injure Sanctuary resources or qualities are similarly prohibited.

In order to protect the health of the MBNMS, we request that the permittee immediately notify our office at 888-902-2778 of any spills that are likely to enter ocean waters.

RWQCB Response to Comment: A requirement to report any spills that are likely to enter ocean waters directly to MBNMS via the noted phone number was added to Attachment E (Monitoring and Reporting Program) as section IX.D. (MBNMS Spill Reporting).

Please note that this requirement only applies to spills from the wastewater treatment facility and portions of the collection system under the direct management of CAWD. This Order has no authority over portions of the collection system tributary to the CAWD treatment facility that are owned and managed by the Pebble Beach Community Services District. Regulatory authority over the Pebble Beach Community Services District's collection system is through Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (State Water Board Order No. 2006-0003-DWQ) adopted by the State Water Resources Control Board on May 2, 2006. A formal requirement for MBNMS spill reporting will need to be requested from the State Water Resources Control.

The MBNMS looks forward to continuing our work with the Regional Board to ensure that the MBNMS is protected from beach closures resulting from effluent violations. In addition, we also hope that Carmel Area Wastewater District recognizes the need for, and value of, a healthy marine ecosystem, as both the MBNMS and the RWQCB facilitate multiple uses the marine ecosystem that are compatible with resource protection (including wastewater management). Properly managing a wastewater facility is a necessary element of sound coastal stewardship, and is necessary to ensure that essential recreational uses, such as surfing, kayaking, boating, whale watching, fishing, research and beach walking are not compromised.

Assuming that our comments are incorporated into the Tentative Order, and on the basis of the conditions defined in the draft NPDES permit and the monitoring and reporting program in the permit, the Sanctuary does not object to the issuance of this NPDES permit [15 CFR Section 922.49(e)]. Thank you for coordinating with the Sanctuary on this NPDES permit. Please send a copy of the signed permit to the Sanctuary office after the Regional Board adopts it at the March 21, 2008 public meeting.

Thank you for the opportunity to review this NPDES permit for the Carmel Area Wastewater District. If you have any questions regarding our comments please contact Ms. Deirdre Hall in the MBNMS office by phone at 831-647-4207 or via email at deirdre.hall@noaa.gov. Thank you for your cooperation with the Monterey Bay National Marine Sanctuary.

C. Carmel River Steelhead Association

The following comments were submit via letter dated February 7, 2008:

The Carmel River Steelhead Assoc. would like to object to the waste of the people's reclaimed water to the ocean. We would like to see it put to beneficial use. The wise use we believe it could be put to is the creation of New isolated coastal wetland on Calif. State Park land and/or Big Sur Land trust land. In a recent meeting conducted by Ray von Dohren at Carmel Area Wastewater District office, representatives of both land owners expressed interest in the use of treated waste and reverse osmosis concentrate to create new isolated wetlands.

RWQCB Response to Comment: Staff concurs with this comment with the noted exception that reclaimed water is currently not being discharged to the ocean. Only secondary treated wastewater is being discharged to the ocean.

Staff is excited about the prospect of utilizing excess reclaimed water or reverse osmosis concentrate from the CAWD facility to augment and improve the Carmel River Lagoon habitat either through direct discharges to the lagoon habitat or indirect discharges to the adjacent habitat or isolated (terminal) wetlands created adjacent to the lagoon habitat. Staff is committed to helping facilitate a process that will result in the successful implementation and permitting of such alternatives as feasible in an effort to protect and restore the beneficial uses of the Carmel Lagoon.

II. ADDITIONAL CHANGES TO DRAFT ORDER

A. Water Quality Based Effluent Limitations (WQBELs)

The Tentative Draft Order submitted under cover of our January 3, 2008 transmittal letter and February 1, 2008, revised draft monitoring and reporting program (Attachment E) submitted under cover of our February 6, 2008 transmittal letter contained references to significant figures and rounding, and contained effluent limitations that, for a number of constituents in Table 7, were slightly different from the previous permit due to rounding.

The rounded effluent limitations and significant figure language regarding compliance determination contained within these drafts were based on informal State Water Resources Control Board guidance regarding significant figure convention as applicable to effluent limitations. Effluent limitations contained within this Order have been changed to be consistent with the previous permit to allay potential anti-backsliding concerns and all references to the application of significant figure convention for compliance determination have been removed pending formal State Board policy or guidance regarding this issue.

B. Outfall Inspection

Annual outfall inspection requirements were added to Attachment E as section IX.C consisting of the following:

At least one time per year, the Discharger shall visually inspect the outfall structure and report in the Annual Report, regarding its physical integrity. The inspection shall note leaks and potential leaks using dye studies, if necessary.

The following additional language was added to the Fact Sheet under section VI.E.3 for documentation:

The Order includes the addition of requirements to conduct annual visual inspections (including dye tracer tests) of the outfall structure and report to the Regional Water Board regarding its physical integrity. This requirement is based on failure of the outfall structure during 2004 that resulted in the authorized discharge of tertiary effluent to the Carmel River as noted in section II.D, Compliance History, of the Fact Sheet.

C. Radioactivity Effluent Limitations

The narrative reference to radioactivity effluent limitations per Table B of the Ocean Plan contained within Table 7 of the draft Order was removed and replaced with the narrative reference to drinking water standards (Title 22) contained within the previous permit (Order No. R3-2002-0026). The 2005 Ocean Plan radioactivity water quality objective standard reference is stated as follows:

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.

The narrative reference to radioactivity limits contained within Table B of the Ocean Plan is outdated and [Section 30253 of Article 1] refers to human exposure through occupational exposure and references federal regulations on the same subject. A January 9, 2007, State Water Resources Control Board staff Issue Paper on the subject indicates the CCR reference may have originally contained radioactivity criteria for drinking water that have been moved to Title 22. These human health standards are not applicable to ocean discharges given the exposure pathways are inconsistent and the standards are difficult, if not impossible, to translate into units that are applicable to effluent or receiving water sampling. In addition, these standards are likely not protective of aquatic life and are therefore inconsistent with the Ocean Plan.

There currently are no federal or state adopted radioactivity standards for marine aquatic life protection, or other pertinent criteria applicable to ocean discharges. The State Water Resources Control Board held a public scoping meeting in June 2007 to address this issue along with other tentative amendments to the Ocean Plan. The June 2007 scoping document discusses several alternatives, but falls short in recommending an interim solution until appropriate standards are adopted and in setting a timeline for addressing this issue. It is uncertain when this will be resolved.

Although radioactivity standards for aquatic life protection currently do not exist and it is unclear when this issue will be resolved, the following narrative reference to the Title 22 radioactivity standard per the previous permit has been retained (with modification noted in underline) within the proposed Order along with monitoring requirements to avoid potential violation of the anti-backsliding requirements:

Not to exceed limits specified in California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5, Section 64443

It is anticipated that the radioactivity effluent limitations within this Order will be updated at some time in the future when an appropriate standard is adopted is adopted.

The 2005 Ocean Plan Table B radioactivity standard reference was added to Table F-8 of the Fact Sheet with the following footnote for clarification:

[¹] The narrative reference to radioactivity limits per Table B of the 2005 Ocean Plan as noted here is outdated and there currently are no federal or state adopted

radioactivity standards for marine aquatic life protection, or other pertinent criteria applicable to ocean discharges. The reference to radioactivity standards contained within the previous permit (based on drinking water MCLs contained within Title 22 of the CCRs) has been retained within the Order along with radioactivity monitoring to avoid potential violation of anti-backsliding requirements. It is anticipated that the radioactivity effluent limitations within this Order, or subsequent versions, will be changed at some time in the future once an appropriate standard is adopted.

The following paragraph was also added to section, IV.C.5., WQBEL Changes Based on Ocean Plan Updates, of the Fact Sheet to act as place holder for future permit revisions:

It should be noted that the radioactivity standards contained within the previous permit that reference drinking water standards per Title 22 of the California Code of Regulations were retained. It is anticipated that the effluent limitations for this Order or subsequent versions, will be updated once appropriate standards are adopted and included by reference in the Ocean Plan (see section II.C of Attachment G for more discussion).

D. Changes Based on Comments to the MRWPCA draft Order

The following changes were made to this Order based on changes made to the Monterey Regional Water Pollution Control Agency (MRWPCA) draft Order (R3-2008-0008) in response to comments by MRWPCA that are appropriate to both Orders. The original comments can be found in Attachment G to Order No. R3-2008-0008 as noted below.

MRWPCA Comment No. 13 (pertains to Prohibition III.C of this Order)

The following language was added to paragraph III.E.1 (as second paragraph) of the Fact Sheet to clarify the General Storm Water permit requirement:

Sewage or wastewater treatment works facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility with a design flow of one million gallons per day or more or required to have an approved pretreatment program under 40 CFR Part 403 are subject to the requirements of NPDES General Permit No. CAS000001.

In addition, all references to [Water Quality Order] 97-03-DWQ were removed from the Order (paragraph VI.C.6.a) and Fact Sheet (paragraph III.E.1) to reflect future revisions of the General Permit.

MRWPCA Comment Nos. 16 and 42 (pertains to mass-based effluent limitations)

The following footnote was added to Table 7 (with a reference to it within Table 6) for clarification of the mass-based effluent limitations:

^[4] The mass-based (lbs/day) effluent limitations in this table are based on the average dry weather flow design capacity of 3.0 MGD for the treatment facility and are therefore only good up to this flow. For flows above 3.0 MGD, mass-based effluent limitations shall be calculated individually using the concentration-based effluent limitations and the observed flow at the time of sampling per the following equation:

$$\text{lbs/day} = 0.00834 \times C_e \times Q$$

where:

C_e = the effluent concentration limit in $\mu\text{g/L}$

Q = observed flow rate in MGD

The language in Section IV.C.4 of the Fact Sheet under Mass Based Effluent Limitations was also modified as follows to clarify this change:

Implementing provisions at Section III. C of the Ocean Plan require that in addition to concentration-based effluent limitations, effluent limitations for Table B pollutants be expressed in terms of mass. Paragraph k. of Ocean Plan Section III.C requires that mass based effluent limitations shall be determined using the effluent concentration limit and observed flow rate in MGD per the equation in paragraph j. of the same Section. Tables 6 and 7 of the Order include mass-based effluent limitations based on a flow rate of 3.0 MGD and the following footnote:

^[4] The mass-based (lbs/day) effluent limitations in this table are based on the average dry weather flow design capacity of 3.0 MGD for the treatment facility and are therefore only good up to this flow. For flows above 3.0 MGD, mass-based effluent limitations shall be calculated individually using the concentration-based effluent limitations and the observed flow at the time of sampling per the following equation:

$$\text{lbs/day} = 0.00834 \times C_e \times Q$$

where:

C_e = the effluent concentration limit in $\mu\text{g/L}$

Q = observed flow rate in MGD

MRWPCA Comment Nos. 19, 20 and 21 (pertains to Ocean Plan update WQBEL changes)

A new section, IV.C.5..WQBEL Changes Based on Ocean Plan Updates, was added to the Fact Sheet (the section discussing "Whole Effluent Toxicity [WET]" was moved to IV.C.6.) as a place holder to document WQBEL changes due to future Ocean Plan Table B changes. The previous CAWD permit, Order R3-2002-0026, is consistent with Table B of the 2005 Ocean Plan. Therefore, no changes are noted.

MRWPCA Comment No. 22 (pertains to bacterial surface water limitation contained within section V.A of the Order)

The first paragraph under section V.A of the Order was change from:

The following receiving water limitations are based on water quality objectives (Water-Contact Standards) contained in the Ocean Plan and are a required part of this Order. Compliance shall be determined from samples collected at stations representative of the area as defined below.

to:

The discharge shall not cause a violation of the following receiving water limitations, which are based on water quality objectives (Water-Contact Standards) contained in the Ocean Plan. Compliance with these limitations shall be determined from an area within the waste field where initial dilution is completed except where other sampling stations are defined below.

MRWPCA Comment No. 23 (pertains to Toxicity Reduction Requirements)

The following changes were made to the last paragraph of section VI.C.2.a of the Order:

When monitoring measures toxicity in the effluent above a limitation established by this Order, the Discharger shall resample immediately as soon as practicable if the discharge is continuing and retest for whole effluent toxicity. Results of an initial failed test and results of subsequent monitoring shall be reported to the Executive Officer (EO) as soon as possible following receipt of monitoring results. ~~The EO will determine whether to initiate enforcement action, whether to require the discharger to implement a Toxicity Reduction Evaluation, or to implement other measures. If subsequent monitoring indicates that the discharge consistently exceeds a toxicity effluent limitation,~~ the Discharger, upon notification of the EO, shall conduct a TRE giving due consideration to guidance provided by the U.S. EPA's Toxicity Reduction Evaluation Procedures, Phases 1, 2 and 3 (EPA document nos. EPA 600/3-88/034, 600/3-88/035, and 600/3-88/036, respectively). A TRE, if necessary, shall be conducted in accordance with the following schedule.

The following provision was also added after Table 8:

The discharger shall take all reasonable steps to reduce toxicity once the source of toxicity is identified.

MRWPCA Comment No. 23 (pertains to Water Contact Monitoring [Bacterial Characteristics])

The following changes were made the first paragraph of section VI.C.2.b of the Order:

If a single sample exceeds any of the bacteriological single sample maximum (SSM) standards contained within section V.A.1 of this Order, repeat sampling at that location shall be conducted to determine the extent and persistence of the

exceedance. The EO should shall be notified within 24 hours of receiving analytical results and Repeat sampling shall be conducted within 24 hours of receiving analytical results and continued per a sampling frequency as directed by daily based on a recommended frequency of the EO 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.

MRWPCA Comment No. 41 (pertains to Reasonable Potential Analysis discussion)

The following paragraph was added prior to the last paragraph preceding Table F-6 to clarify the RPA results:

As stated above, there is reasonable potential for copper, zinc and DDT based on RPA Endpoint 1 and reasonable potential for residual chlorine and whole effluent, acute and chronic toxicity based on the potential toxic impact of the discharge. Reasonable potential is inconclusive (RPA Endpoint 3) for all remaining Table B pollutants because of insufficient data. The Ocean Plan requires that where reasonable potential is inconclusive, existing effluent limitations for that pollutant shall remain in the permit.

MRWPCA Comment No. 43 (pertains to Whole Effluent Toxicity and Toxicity Reduction Evaluation)

The following changes were made to the last paragraph of section IV.C.6 (formerly IV.C.5) of the Fact Sheet:

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 ~~whether to implement other measures~~.

MRWPCA Comment No. 45 (pertains to Toxicity Reduction Requirements)

The following changes were made section VII.B.2.a of the Fact Sheet to be consistent with changes to the Order as noted above:

The requirement to maintain a Toxicity Reduction Work Plan is retained from Order No. 01-87. 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~~.