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# W15a

Filed:	3/27/17
6 Months:	9/27/17
Staff:	M.Delaplaine-SF
Staff Report:	4/21/17
Hearing Date:	5/10/17

## STAFF REPORT: REGULAR CALENDAR

**Consistency Certification No.:** CC-0002-17

**Applicant:** City of San Diego

**Agent:** McCabe and Co.

**Location:** E.W. Blom Point Loma Wastewater Treatment Plant (WWTP), City of San Diego, with ocean outfall discharge point 4.5 miles offshore of Point Loma, San Diego County

**Project Description:** Reissuance of Secondary Treatment Waiver

**Federal Agency and Permit:** Environmental Protection Agency (EPA) Reissuance, under Section 301(h) and (j) of the Clean Water Act, of a modified National Pollutant Discharge Elimination System (NPDES) Permit for Wastewater Treatment Plant Discharges

**Staff Recommendation:** Concurrence

## SUMMARY OF STAFF RECOMMENDATION

The City of San Diego (City) has submitted a consistency certification for the reissuance of its secondary treatment waiver for the municipal discharges from its Point Loma Wastewater Treatment Plant (WWTP). The reissuance would be needed to allow the City to continue to discharge effluent receiving less than full secondary treatment in terms of total suspended solids (TSS) and biochemical oxygen demand (BOD). (A waiver for pH standards is not being requested.) If no waiver were granted, the City would be required under the Clean Water Act (CWA) to implement upgrades meeting secondary treatment requirements, which would mean

removal of 85% of both TSS and BOD. With a waiver, CWA Section 301(h) and (j) require, among other things, removal of 80% of TSS and 58% of BOD.

While other coastal municipalities that had sought past waivers have now upgraded to secondary treatment, the City is pursuing a different approach: as an alternative to upgrading to secondary treatment at the WWTP, the City proposes to reduce wastewater flows *to* the plant, through water recycling, which then reduces flows (and pollutant loads) into the ocean. The City has sought resolution of past lawsuits filed and public support of its alternative approach through, among other things, agreements with stakeholders.

On December 9, 2014, the City expanded and updated its previous commitments to aggressively pursue water reuse, in a Cooperative Agreement with San Diego Coastkeeper, the San Diego Chapter of Surfrider Foundation, the Coastal Environmental Rights Foundation, and the San Diego Audubon Society. This agreement spells out this agreed-upon alternative approach, and in it the City commits to a compliance schedule for initially implementing at least 15 mgd of potable water reuse by end of 2023, at least 30 mgd by the end of 2027, and ultimately achieving at least 83 million gallons per day (MGD) of wastewater reuse by the end of 2035. As a result of this reduction in flows to the WWTP the discharge can achieve “secondary equivalency” status for TSS discharges, as discussed in that agreement. Moreover, since that agreement was signed, the City has committed to a more aggressive schedule for interim implementation, committing to providing at least 30 mgd of water reuse by the end of 2022.

EPA's independent Technical Evaluation (TDD) determined that San Diego's discharges continue to meet the applicable Clean Water Act standards for a 301(h) waiver. On April 12, 2017, the RWQCB approved the 301(h) modified NPDES permit (in adopting Tentative Order No. R9-2017-0007 and NPDES Permit No. CA0107409). The RWQCB's Order incorporates the City's commitments to continue to pursue and implement its recycled water program, converting wastewater into potable water, under a program called “Pure Water San Diego.”

Based on (1) EPA's and the RWQCB's analyses establishing that the discharges meet the applicable Clean Water Act and California Ocean Plan standards, (2) the NPDES permit's compliance schedule discussion and table which incorporate the City's commitments to pursue water reuse, (3) the lack of evidence that the discharges are adversely affecting water quality or marine species (despite the stringent monitoring required under CWA Section 301(h)), (4) the City's past performance in implementing water reuse programs, and (5) the accelerated pursuit of significant future reductions in wastewater flow to the WWTP, the staff recommends the Commission find that the discharges over the life of the upcoming 5-Year NPDES permit term would be consistent with the applicable marine resources, water quality, fishing, and public recreation policies (Sections 30230, 30231, 30234, 30234.5, 30213, and 30220) of the Coastal Act.

The Commission staff therefore recommends **concurrence** with CC-0002-17. The **motion** to implement this recommendation is found on **Page 4**. The standard of review for this waiver reissuance is Chapter 3 of the Coastal Act.

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<b><u>Exhibit 10</u></b>	<b><u>Cooperative Agreement with Coastkeeper/Surfrider, February 2009</u></b>
<b><u>Exhibit 11</u></b>	<b><u>Federal Consistency Regulation 15 CFR § 930.65</u></b>

## I. APPLICANT’S CONSISTENCY CERTIFICATION

The City of San Diego has certified that the proposed activity complies with the California Coastal Management Program and will be conducted in a manner consistent with that program.

## II. MOTION AND RESOLUTION

### Motion:

*I move that the Commission **concur** with consistency certification CC-0002-17.*

Staff recommends a **YES** vote on the motion. Passage of this motion will result in an agreement with the certification and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

### Resolution:

*The Commission hereby **concurs** with consistency certification CC-0002-17 by the City of San Diego on the grounds that the project described therein would be consistent with the enforceable policies of the California Coastal Management Program.*

## III. FINDINGS AND DECLARATIONS

### A. PROJECT DESCRIPTION

The Point Loma WWTP serves the 450 sq. mi. Metropolitan San Diego area<sup>1</sup> and located on the west side of the Point Loma peninsula near the southern tip of the peninsula. The plant serves a population of approximately 2.2 million and discharges wastewater from the City of San Diego through the Point Loma ocean outfall (PLOO). The discharge point is 4.5 miles from shore, west of Point Loma, at a water depth of approximately 100 meters. The outfall terminates with a wye (Y-shaped) diffuser with two 2,496 foot long diffuser legs. The diffuser has 416 discharge ports (208 on each leg). The zone of initial dilution (ZID)<sup>2</sup> extends 93.5 meters (307 feet) on either side of the diffuser legs. In its permit, the RWQCB has established a minimum initial dilution factor for this permitting effort of 204:1. The sewer system also includes two pump stations, two water reclamation plants (WRPs) (North City and South Bay WRPs), and the Metro Biosolids Center at Marine Corps Air Station Miramar ([Exhibit 2](#)). Existing wastewater flows discharged from the facility through the PLOO in recent years (2010-2015) have been approximately 156-

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<sup>1</sup> The “Metro System” ([Exhibits 2-3](#)) includes the City and 15 participating agencies in the region. City flows account for 70% of the total flows. Total population served is approximately 2.2 million.

<sup>2</sup> The ZID ([Exhibit 5](#)) is the area where the discharge plume achieves natural buoyancy and first begins to spread horizontally, and outside of which, applicable water quality standards must be met.

132 million gallons per day (MGD) (average flows) (see Table 1, page 19 below). Projected flows (which are significantly higher than observed flows – see page 20) for the year 2022 (the end of the 5-year permit) are estimated at 157 MGD. System capacities are 240 MGD (average) and 432 MGD (peak wet weather flow).

The project service area and facilities are further described on pages 12-15 of EPA’s Tentative Decision Document (TDD) ([Exhibit 7](#)). The RWQCB’s Fact Sheet ([Exhibit 8](#)) summarizes planned upgrades and commitments the City has made to its treatment system since the previous waiver was granted in 2009, most notably:

***Planned Changes***

*As a condition of this Order/Permit, the Discharger has committed to implementing a comprehensive water reuse program called Pure Water San Diego that has the goal of producing potable water for the San Diego Region while offloading flows and loads from the Facility. This program is a long-term (approximately 20 years) joint water and wastewater facilities plan that would provide a safe, reliable, and cost-effective drinking water supply for the City of San Diego and surrounding areas through the application of advanced treatment technology to purify recycled water (i.e., potable reuse). This program envisions a significant investment in potable water reuse and ancillary facilities and is the result of collaboration between the Discharger, Metro Wastewater Joint Powers Authority (JPA)<sup>3</sup>, and a diverse array of regional stakeholders. The Discharger, Metro Wastewater JPA, and regional stakeholders have agreed to cooperate to:<sup>4</sup>*

- 1. Implement a comprehensive potable reuse program using state-of-the-art advanced treatment technology to achieve an ultimate goal of 83 MGD of potable reuse by December 31, 2035 - an amount that equates to approximately one-third of the total City of San Diego potable water demand;*
- 2. Sufficiently reduce influent flows and solids loads to the Facility so that ultimate PLOO TSS mass emissions are reduced to levels that would have occurred if the 240-MGD Facility were to achieve secondary treatment TSS concentration standards;*
- 3. Support the Discharger’s application for renewed 301(h)-modified TSS and BOD5 limitations for the Facility; and*

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<sup>3</sup> The Metro Wastewater JPA includes the City of Chula Vista, City of La Mesa, City of Del Mar, City of El Cajon, City of Lemon Grove, City of Poway, City of Coronado, City of Imperial Beach, City of National City, Padre Dam Municipal Water District, Otay Water District, and San Diego County.

<sup>4</sup> Cooperative Agreement in Support of Pure Water San Diego; City of San Diego, San Diego Coastkeeper, San Diego County Surfrider, CERF, San Diego Audubon Society; October 2014; Filed by the Office of the City Clerk San Diego, California on November 18, 2014; Signed and approved by the City of San Diego Attorney, Jan I. Goldsmith on December 9, 2014 ([Exhibit 9](#)).

4. *Support the Discharger's pursuit of administrative or legislative efforts to codify that, as a result of implementing the comprehensive Pure Water San Diego program, the PLOO discharge is recognized as equivalent to secondary treatment for purposes of compliance with the Clean Water Act (CWA). This concept is referred to as secondary treatment equivalency.*

On April 12, 2017, the RWQCB adopted its tentative order. The RWQCB's permit, which includes a compliance schedule for implementing the above commitments, has been incorporated into the City's consistency certification.

## **B. BACKGROUND**

### **Secondary Treatment**

The Clean Water Act divides pollutants into three categories for purposes of regulation, as follows: (1) conventional pollutants, consisting of total suspended solids (TSS); biochemical oxygen demand (BOD, a measure of the amount of oxygen consumed during degradation of waste); pH; fecal coliform bacteria; and oil and grease; (2) toxic pollutants, including heavy metals and organic chemicals; and (3) non-conventional pollutants (a "catch-all" category for other substances warranting regulation (e.g., nitrogen and phosphorus, chlorine, and fluoride)).

Guidelines adopted under Section 403 of the Clean Water Act (40 CFR Part 125.120-124, Subpart M, "Ocean Discharge Criteria") specify that beyond an initial mixing zone, commonly referred to as the zone of initial dilution (ZID) ([Exhibit 5](#)), the applicable water quality standards must be met. The ZID boundary denotes the area outside of which the discharge plume achieves natural buoyancy (i.e., its density is equivalent to that of the surrounding water), and first begins to spread horizontally. Discharged sewage is mostly freshwater, so it creates a buoyant plume that moves upward toward the sea surface, entraining ambient seawater in the process.

Clean Water Act standards for publicly owned treatment works (POTWs) that do not qualify for waivers must comply with the following effluent quality parameters for total suspended solids (TSS), biochemical oxygen demand (BOD) and pH:

#### **TSS and BOD:**

- (1) The 30-day average shall not exceed **30 mg/l** (milligrams per liter).
- (2) The 7-day average shall not exceed **45 mg/l**.
- (3) The 30-day average percent removal **shall not be less than 85%**;

#### **pH:**

The effluent limits for pH shall be maintained within the limits of **6.0 to 9.0 pH** units. (Note: the City is not seeking a waiver from this requirement.)

State water quality standards (i.e., the California Ocean Plan) require **removal of 75% of TSS**. The Ocean Plan **does not** have an effluent limitation for BOD; the comparable standard is for dissolved oxygen, which is measured in the receiving water column rather than the discharge. The Ocean Plan it requires that “dissolved oxygen **shall not at any time be depressed more than 10% from that which occurs naturally** as a result of the discharge of oxygen-demanding waste materials.”

### **Clean Water Act Section 301(h) Secondary Treatment Waivers**

Based on the understanding that marine discharges into the open ocean receive greater dispersion and mixing than most (i.e., non-ocean) municipal discharges, Congress amended the Clean Water Act in 1977 by adding Section 301(h), often referred to as the ocean waiver provision (or 301h waiver). This provision authorizes EPA to issue NPDES permits for POTW discharges meeting the nine waiver requirements listed below. To qualify for a waiver, dischargers needed to apply for eligibility within a specified time period; however, while it initially complied with the eligibility requirements by applying in 1979, San Diego later fell out of compliance and withdrew from the program (in 1987).

Section 301(h) requires the following tests to be met for EPA to grant a secondary treatment waiver:

- (1) there is an applicable water quality standard specific to the pollutant for which the modification is requested, which has been identified under section 304(a)(6) of this Act;*
- (2) such modified requirements will not interfere, alone or in combination with pollutants from other sources, with the attainment or maintenance of that water quality which assures protection of public water supplies and the protection and propagation of a balanced, indigenous population (BIP) of shellfish, fish and wildlife, and allows recreational activities, in and on the water;*
- (3) the applicant has established a system for monitoring the impact of such discharge on a representative sample of aquatic biota, to the extent practicable, and the scope of the monitoring is limited to include only those scientific investigations which are necessary to study the effects of the proposed discharge;*
- (4) such modified requirements will not result in any additional requirements on any other point or nonpoint source;*
- (5) all applicable pretreatment requirements for sources introducing waste into such treatment works will be enforced;*
- (6) in the case of any treatment works serving a population of 50,000 or more, with respect to any toxic pollutant introduced into such works by an industrial discharger for which pollutant there is no applicable pretreatment requirement in effect, sources introducing waste into such works are in compliance with all applicable pretreatment*

*requirements, the applicant will enforce such requirements, and the applicant has in effect a pretreatment program which, in combination with the treatment of discharges from such works, removes the same amount of such pollutant as would be removed if such works were to apply secondary treatment to discharges and if such works had no pretreatment program with respect to such pollutant;*

*(7) to the extent practicable, the applicant has established a schedule of activities designed to eliminate the entrance of toxic pollutants from nonindustrial sources into such treatment works;*

*(8) there will be no new or substantially increased discharges from the point source of the pollutant to which the modification applies above that volume of discharge specified in the permit;*

*(9) the applicant at the time such modification becomes effective will be discharging effluent which has received at least primary or equivalent treatment and which meets the criteria established under section 304(a)(1) of the Clean Water Act after initial mixing in the waters surrounding or adjacent to the point at which such effluent is discharged.*

EPA evaluates (and where appropriate, clarifies) these tests in a Tentative Decision Document (TDD). EPA's TDD for the City's current request is dated October 28, 2016 and attached ([Exhibit 7](#)). EPA's conclusions are summarized in pages 14-22 below. Additional Clean Water Act (Section 301(j)) tests applicable only to the City of San Diego are discussed in the following section.

### **History and Specific Waiver Criteria for City of San Diego**

Because it had withdrawn from eligibility, the City of San Diego needed special Congressional authorization to become eligible for a waiver. After the City had withdrawn its initial application, in 1994 Congress passed legislation authorizing the City to apply for a waiver during a 180-day period beginning October 31, 1994. See OPRA, Pub. L. No. 103-431, 108 Stat. 4396, codified at 33 U.S.C. S 1311(j)(5). This legislation also required the City, in addition to the other tests of Section 301(h), to:

(1) commit to implement a wastewater reclamation program that would achieve a system capacity of **45 million gallons of reclaimed wastewater** per day by January 1, 2010;

(2) commit to implement a wastewater reclamation program that would result in a **reduction in the quantity of suspended solids** discharged by the City into the marine environment during the period of the modification;

(3) show that modification would result in removal of not less than **80% of total suspended solids** (on a monthly average) in the discharge of the wastewater plant; and



(4) show that modification would result in removal of **not less than 58% of the biological oxygen demand** (on an annual average) in the discharge of the wastewater plant. See 33 U.S.C. S 1311(j)(5)(B) and (C).

### **History of Commission Action on San Diego Waivers**

On October 11, 1995, the Commission staff concurred with an administrative authorization of the City of San Diego's initial<sup>5</sup> waiver request (NE-94-95). While the matter was brought before the Commission in a public session, that review was performed as an administrative item due to unusual circumstances and history surrounding the waiver, including the Congressional exception to the normal waiver process that San Diego was afforded (and very limited time for review under the deadlines in place at the time). The Commission reviewed the City's subsequent secondary treatment waiver reissuance requests as consistency certifications.

On April 8, 2002, the Commission objected to the City's consistency certification for its waiver reissuance (CC-10-02). In that action, the Commission found the City had not adequately addressed three areas of concern: (1) reductions in permitted levels of mass emissions; (2) commitments for water reclamation; and (3) additional monitoring provisions. Two days later, on April 10, 2002, the Regional Water Quality Control Board (RWQCB), San Diego Region, reinforced these concerns by adopting modified permit conditions and addressed these Commission concerns in the following manner:

(1) The RWQCB modified the permit to reduce total allowable mass emission loadings by 6.7%, from 15,000 metric tons per year (MT/yr.) to 13,995 MT/yr. for the first four years (with the fifth year remaining at 13,599 MT/yr.).

(2) The RWQCB requested annual reports from the RWQCB's Executive Officer on the City's progress towards implementing water reclamation, and noted that the RWQCB could impose future reclamation requirements if adequate progress is not forthcoming.

(3) The RWQCB instructed its staff to review and prepare for future RWQCB adoption modifications to the monitoring program, including specific provisions for deep ocean receiving stations, human pathogens, and long term trends.

A Commission objection can be appealed to the Secretary of Commerce (under Subpart H of the Coastal Zone Management Act (CZMA) (15 CFR §930.120 et seq.)), and a RWQCB action can be appealed to the State Water Resources Control Board (SWRCB) (under the California Water Code (§13220)). In separate proceedings the City appealed both the Commission's and the RWQCB's actions. On May 8, 2002, the City appealed the Commission's objection (CC-10-02) to the Secretary of Commerce. On May 9, 2002, the City petitioned for review of the RWQCB's

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<sup>5</sup> I.e., the initial request postdating the special legislation mentioned in the previous section.

NPDES permit action modifying the mass emission limits by the SWRCB<sup>6</sup>. The City and the Commission staff agreed to “stay” any further deliberations in the Secretary of Commerce appeal, pending Commission reconsideration of the matter once the SWRCB acted. By this time, the City had also resubmitted its consistency certification to the Commission (CC-28-02).

On August 15, 2002, the SWRCB ordered the mass emission limits to be returned to the originally-drafted 15,000 MT/yr. (for the first four years). The SWRCB concluded that the RWQCB had “... failed to make findings, either in its order or during its deliberations, that justify reducing the mass emission limits for TSS from 15,000 metric tons per year to 13,995 metric tons per year in the waste discharge requirements.” Accordingly, the City clarified that its resubmitted consistency certification was for the waiver as modified and ordered by the SWRCB. On September 9, 2002, the Commission concurred with this resubmitted consistency certification (CC-028-02).

In reviewing the subsequent waiver reissuance (CC-043-09), on August 13, 2009, the Commission again objected to the City’s consistency certification (CC-043-09). For this waiver round, the RWQCB had acted prior to the Commission and had authorized the waiver. This time the City did not appeal the Commission’s objection to the Secretary of Commerce, but instead fairly quickly resubmitted its consistency certification to the Commission.<sup>7</sup> Upon such resubmittal, on October 7, 2009, the Commission conditionally concurred with the certification (CC-056-09). Under the Commission’s condition, which the City had agreed to during the public hearing, the City agreed to report back to the Commission within a timely manner describing its continuing efforts to implement an aggressive water reclamation and recycling program. The condition provided:

**Wastewater Reclamation and Recycling Opportunities Study.** The City will return for a public hearing before the Coastal Commission in (approximately) two years when its study of Wastewater Reclamation and Recycling Opportunities<sup>8</sup> is completed and the findings and recommendations have been documented in a report, and inform the Commission how, and to what extent, the City intends to implement the recommendations in the report or any alternatives to the recommendations in the report. If the City does not intend to implement the recommendations of the report, the City will

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<sup>6</sup> Only the first of the above RWQCB measures was an actual permit modification (i.e., the second and third measures were outside the scope of the permit).

<sup>7</sup> One consequence of this timely resubmittal was that the Commission did not adopt findings in support of its objection, although the Commission’s deliberations can be observed on the Commission’s video archive page, at <http://cal-span.org/unipage/index.php?site=cal-span&owner=CCC&date=2009-08-13>.

<sup>8</sup> This study refers to the “Study” agreed to in the City’s “Cooperative Agreement with San Diego Coastkeeper and the San Diego Chapter of Surfrider Foundation,” approved on February 18, 2009 ([Exhibit 10](#)).

provide an explanation of its reasoning to the Commission. As determined by the Commission, the City submitting the report and participating in any Commission hearings on the report shall constitute full compliance with this condition.

On October 10, 2012, the City met this obligation and updated the Commission on the status of its progress on implementing its water recycling program. The City has continued to implement its commitments, as described in the subject consistency certification.

### **Previous Commission Reviews of Other California Waivers**

In 1979, and 1983-1985, the Commission reviewed a number of consistency certifications for secondary treatment waiver applications, under the federal consistency provisions of the CZMA, and EPA ultimately granted many of these waivers. During these reviews the Commission expressed concern over the need for treatment meeting the *equivalent* of secondary treatment with respect to *removal of toxics*. At that time, the Commission consciously adopted a neutral position on the waivers. Since a position of "neutrality" is not an action that is recognized under CZMA regulations, the Commission's concurrence in the waivers was presumed pursuant to the CZMA and its administrative regulations. 16 USC § 1456(c)(3)(A); 15 CFR § 930.62(a).

Other than San Diego, which, as discussed previously, had a unique history, only a few of the initial round of waiver applicants continued to pursue waivers; by the mid-1990's the list was down to: Goleta, Morro Bay, and Orange County (CSDOC). In 2010, 2005, and 1997, the Commission concurred with Goleta's renewals (CC-32-09, CC-13-02 and CC-126-96, respectively). In 2009, 1999, and 1993, the Commission concurred with Morro Bay's renewals (CC-007-06, CC-123-98 and CC-88-92, respectively). On March 10, 1998, the Commission concurred with Orange County's renewal (CC-3-98). Morro Bay, Goleta, and Orange County have now all agreed to (or fully implemented) upgrades to secondary treatment and no longer need or seek waivers.

### **C. COMMISSION JURISDICTION AND STANDARD OF REVIEW**

Because EPA retains permitting authority for Section 301(h) waivers, and because EPA NPDES permits are "listed" permits under the CCMP,<sup>9</sup> they are subject to the Commission's federal consistency review. The California Coastal Management Program (CCMP) incorporates the standards set forth in Chapter 3 of the Coastal Act ("Chapter 3"), Cal. Pub. Res. Code Sections 30200-30265.5. Thus, in general, the standard of review for the Commission's assessment of consistency with the CCMP is whether an activity is consistent with the policies set forth in Chapter 3. In the context of activities involving the discharge of pollutants into waters of the United States, specifically including the territorial seas, that standard of review is expanded by Section 307(f) of the federal CZMA (16 USC § 1456(f)), which specifically incorporates all Clean Water Act-based requirements into the California Coastal Management Program (CCMP). Thus, in reviewing the impacts of the proposed discharges on water quality, the Commission considers not only the marine resource and water quality policies in Chapter 3, but also all of the

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<sup>9</sup> See CCMP List of Federal Permits at [https://www.coastal.ca.gov/fedcd/listlic\\_2015.pdf](https://www.coastal.ca.gov/fedcd/listlic_2015.pdf)

applicable federal and state requirements established by or pursuant to the Clean Water Act, the California Ocean Plan, and California Water Code Section 13142.5, as well as the directive in Chapter 5 (Section 30412(a)) of the Coastal Act to coordinate with and rely on determinations of the RWQCBs and SWRCB. Employing that standard, the Commission concurs with this consistency certification based on its finding that the project authorized by the federal permit is consistent with the policies set forth in Chapter 3, as well as these additional Clean Water Act-based requirements.

#### **D. OTHER AGENCY APPROVALS**

##### **EPA/RWQCB**

Implementation of the Clean Water Act in California, for the most part, has been delegated to the applicable RWQCB for issuance of NPDES permits. However, under a May 1984, a Memorandum of Understanding between EPA and the State of California, NPDES permits for secondary treatment waivers (regardless of location) are issued jointly by EPA and the applicable RWQCB. EPA describes its joint permitting authority with the RWQCB as follows:

*The PLOO discharges beyond the 3 nautical mile State waters limit, into federal waters. Therefore, EPA has primary regulatory responsibility for the discharge. However, in May 1984, a Memorandum of Understanding was signed between EPA and the State of California to jointly administer discharges that are granted 301(h) modifications from federal secondary treatment standards. Under California's Porter-Cologne Water Quality Control Act, the Regional Water Boards issue waste discharge requirements which serve as NPDES permits. The joint issuance of a 301(h)-modified NPDES permit for the Point Loma WTP discharge which incorporates both the federal 301(h) variance and State waste discharge requirements will serve as the State's concurrence, pursuant to 40 CFR 124.54.*

On April 12, 2017, the RWQCB adopted Tentative Order No. R9-2017-0007 and Draft NPDES Permit No. CA0107409, thereby providing its authorization. That permit will not be final until EPA jointly authorizes it, and in accordance with the CZMA, EPA will not issue the final NPDES permit until after the Commission acts.

##### **NMFS and USFWS**

The waiver is subject to review by the U.S. Fish and Wildlife Service (USFWS) and the NOAA National Marine Fisheries Service (NMFS) for consistency with the federal Endangered Species Act (ESA). NMFS also reviews the waiver under the Magnuson-Stevens Fishery Conservation and Management Act. By letter dated December 10, 2014, the applicant has requested determinations from these agencies. USFWS has issued its ESA concurrence for species under its jurisdiction (via email, August 9, 2016, from USFWS to City and EPA). NMFS' reviews are still pending.

**E. MARINE RESOURCES AND WATER QUALITY**

As indicated above, in reviewing the impacts of the proposed discharges on marine resources and water quality, the Commission considers not only the marine resource and water quality policies of Chapter 3, but also all of the applicable federal and state requirements established by or pursuant to the Clean Water Act, the California Ocean Plan, California Water Code Section 13142.5, as well as the directive in Chapter 5 (Section 30412(a)) of the Coastal Act to coordinate with and rely on determinations of the RWQCBs and SWRCB.

Section 30230 of the Coastal Act states:

*Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act states:

*The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Sections 30412(a) and (b) of the Coastal Act state:

*(a) In addition to Section 13142.5 of the Water Code, this section shall apply to the commission and the State Water Resources Control Board and the California regional water quality control boards.*

*(b) The State Water Resources Control Board and the California regional water quality control boards are the state agencies with primary responsibility for the coordination and control of water quality. The State Water Resources Control Board has primary responsibility for the administration of water rights pursuant to applicable law. The commission shall assure that proposed development and local coastal programs shall not frustrate this section. The commission shall not, except as provided in subdivision (c), modify, adopt conditions, or take any action in conflict with any determination by the State Water Resources Control Board or any California regional water quality control board in matters relating to water quality or the administration of water rights.*

*Except as provided in this section, nothing herein shall be interpreted in any way either as prohibiting or limiting the commission, local government, or port governing body from exercising the regulatory controls over development pursuant to this division in a manner necessary to carry out this division.*

Section 13142.5(a) of the Water Code (referenced in Section 30412) states:

*In addition to any other policies established pursuant to this division, the policies of the state with respect to water quality as it relates to the coastal marine environment are that:*

*(a) Waste water discharges shall be treated to protect present and future beneficial uses, and, where feasible, to restore past beneficial uses of the receiving waters. Highest priority shall be given to improving or eliminating discharges that adversely affect any of the following:*

- (1) Wetlands, estuaries, and other biologically sensitive sites.*
- (2) Areas important for water contact sports.*
- (3) Areas that produce shellfish for human consumption.*
- (4) Ocean areas subject to massive waste discharge.*

*Ocean chemistry and mixing processes, marine life conditions, other present or proposed outfalls in the vicinity, and relevant aspects of areawide waste treatment management plans and programs, but not of convenience to the discharger, shall for the purposes of this section, be considered in determining the effects of such discharges...*

The California Ocean Plan was originally adopted by the SWRCB and approved by the EPA in June 1972 and is revised every three years. The current Ocean Plan is dated 2015 and can be found at [http://www.swrcb.ca.gov/water\\_issues/programs/ocean/docs/cop2015.pdf](http://www.swrcb.ca.gov/water_issues/programs/ocean/docs/cop2015.pdf). Ocean Plan requirements include both general resource protection policies and objectives, as well as numerical standards, monitoring requirements, and prohibitions. The Ocean Plan standards are designed to protect beneficial uses of the marine environment, establish water contact standards, and protect shellfish harvesting. .

### **EPA's Evaluation**

EPA has conducted an independent technical evaluation analyzing San Diego's compliance with the Clean Water Act, California Ocean Plan, and other requirements. This evaluation is contained in a Tentative Decision Document (TDD) dated October 28, 2016 ([Exhibit 7](#)). EPA's tentative conclusion (TDD, p. 10) is that the discharges comply with the CWA and other applicable statutory requirements. The paragraphs below summarize the information and conclusions in the TDD concerning TSS and BOD removal rates in recent years, compliance with other water quality standards over this period, and system improvements implemented and/or planned. As this information shows: (1) the City is near to achievement of secondary

standards for TSS and should, through water reuse commitments, be able to achieve “secondary equivalency” for TSS in the foreseeable future; (2) TSS levels meet CWA Section 301(h) and (j) requirements; (3) BOD levels comply with Ocean Plan standards outside the ZID (and comply with 301(h) and (j) requirements); (4) mass emission levels meet the “reduced mass emissions” requirement of Section 301(j); and (5) the discharges comply with other regulatory requirements.

### Recent Performance - TSS

The City’s performance in recent years has achieved averaged removal rates of 89.7% for TSS and are provided in more detail in TDD Tables 5 and 4 below. Table 5 shows averages TSS percent removal, annually and monthly, and Table 4 shows average TSS effluent concentrations. As the tables show, while the City has consistently exceeded monthly TSS percent removal standards since January 2008 (when it was slightly below 85% removal), it has not consistently met the 30 day average TSS effluent concentration that would enable it to meet the secondary treatment requirement of 30 mg/l (monthly average). It has consistently met 301(j) requirements (80% removal).

Table 5. Monthly average and annual average percent removals for total suspended solids (%) at Point Loma WTP.

Month	2008	2009	2010	2011	2012	2013	2014	2015
January	84.1	89.2	87.7	86.9	87.3	88.8	92.1	91.5
February	85.8	89	88.2	87.6	87.6	87.8	90.6	92.9
March	85.7	89.8	88.2	87.6	89.2	89.4	92.4	91.9
April	87.3	90.9	88.5	88.2	89.9	90	93	92.9
May	87.3	90.1	90.1	87.7	90.2	90	93.6	92.1
June	87.5	90.9	88.9	88.2	91.1	90.1	92.6	92.8
July	90.4	90.2	89.5	87.5	90.1	87.1	92.7	92
August	90.5	89.6	89.9	87.9	89.9	92.2	91.5	92.2
September	91.6	89.8	89.1	86.7	90	92.9	91.7	91.5
October	91.3	89.9	87.9	86.6	90.3	92.5	91.9	90.7
November	89.1	89.5	88.2	87.7	89.3	92.3	91.5	89.7
December	88.2	88	85.2	87.5	88.7	92.1	91.7	89.8
Annual Average	88.2	89.7	88.5	87.5	89.5	90.4	92.1	91.7
Maximum Month	91.6	90.9	90.1	88.2	91.1	92.9	93.6	92.9
Minimum Month	84.1	88.0	85.2	86.6	87.3	87.1	90.6	89.7

Table 4. Monthly average and annual average effluent concentrations for total suspended solids (mg/l) at Point Loma WTP.

Month	2008	2009	2010	2011	2012	2013	2014	2015
January	39	30	35	41	46	35	27	29
February	34	29	36	37	44	39	32	25
March	38	31	36	35	38	37	26	29
April	37	29	37	38	38	36	25	26
May	36	32	34	42	34	38	23	30
June	38	30	39	41	32	38	26	27
July	29	31	36	44	39	50	25	29
August	28	34	34	46	36	27	29	28
September	24	33	37	46	36	24	29	30
October	24	31	39	47	34	25	29	32
November	31	32	37	42	35	26	30	36
December	30	36	45	39	35	27	28	35
Annual Average	32	32	37	42	37	34	27	30
Maximum Month	39	36	45	47	46	50	32	36
Minimum Month	24	29	34	35	32	24	23	25

### Recent Performance - BOD

Unlike TSS performance, BOD levels are not close to meeting secondary standards, although they do meet or exceed the Section 301(h) and (j) standards, as well as the “equivalent” California Ocean Plan test for dissolved oxygen. As can be seen in TDD Table 12 below, the City’s performance in recent years has achieved averaged removal rates of 64.5% for BOD, which complies with the CWA section 301(j)(5) requirement of not less than 58 % removal.

Table 12. Monthly average and annual average percent removals for biochemical oxygen demand (%) at Point Loma WTP.

Month	2008	2009	2010	2011	2012	2013	2014	2015
January	65.7	62.9	63.4	59.8	60.3	58.7	66.4	67.4
February	62.5	62.1	62.1	59.8	60.7	58.5	63.6	66.7
March	64.6	65.5	65.4	59.1	61.0	61.5	67.2	65.9
April	65.5	67.8	64.6	63.3	61.4	63.2	67.4	67.7
May	64.8	64.7	66.0	63.6	62.7	63.7	65.2	69.2



June	67.7	68.3	65.0	63.3	64.6	63.6	66.8	69.3
July	67.8	67.5	63.8	63.0	62.5	59.3	66.1	66.4
August	67.5	65.8	64.3	62.9	63.3	64.8	67.1	67.5
September	67.3	67.2	63.3	61.0	63.1	66.8	67.0	67.1
October	67.1	66.3	62.3	62.5	63.1	66.5	66.6	63.0
November	64.2	65.8	62.6	64.7	60.4	64.9	68.2	65.7
December	62.2	61.9	62.9	61.5	61.4	65.4	67.1	68.5
Annual Average	65.6	65.5	63.8	62.0	62.0	63.1	66.6	67.0
Maximum Month	67.8	68.3	66	64.7	64.6	66.8	68.2	69.3
Minimum Month	62.2	61.9	62.1	59.1	60.3	58.5	63.6	63.0

To determine compliance with California Ocean Plan standards, EPA reviewed whether those were met both within state waters and in federal waters outside the ZID. EPA determined, based on modeling and monitoring results, that BOD levels were in compliance with the “within 10% of natural DO levels” requirement of the Ocean Plan. EPA’s TDD states (p. 39-40):

*Both the applicant and EPA use modeling efforts to evaluate the potential for: (1) dissolved oxygen depression following initial dilution during the period of maximum stratification (or other critical period); (2) farfield dissolved oxygen depression associated with biochemical oxygen demand exertion in the wastefield; (3) dissolved oxygen depression associated with steady-state sediment oxygen demand; and (4) dissolved oxygen depression associated with the resuspension of sediments (Table 15). For these calculations, the applicant uses an initial dilution of 202:1 while EPA uses the worst-case initial dilution of 99:1.*

*Table 15. Predicted worst-case dissolved oxygen (DO) depressions (mg/l) and percent reductions (%) performed by San Diego (1995) and EPA (1995).*

<i>Sources of Potential Oxygen Demand</i>	<i>San Diego</i>	<i>EPA</i>
<i>DO depression upon initial dilution (and % reduction)</i>	<i>0.05 (&lt;1%)</i>	<i>0.08 (1.7%)</i>
<i>DO depression due to BOD exertion in the farfield (and % reduction)</i>	<i>0.14 (2.4%)</i>	<i>0.23 (5.9%)</i>
<i>DO depression due to steady-state sediment</i>	<i>0.045 (1.7%)</i>	<i>0.16 (4.7%)</i>

<i>Sources of Potential Oxygen Demand</i>	<i>San Diego</i>	<i>EPA</i>
<i>oxygen demand (and % reduction)</i>		
<i>DO depression due to abrupt sediment resuspension (and % reduction)</i>	0.077 (2.4%)	0.12 (3.5%)

*EPA has compared these model predictions to the most recent water quality data to assess the potential for the discharge to result in dissolved oxygen depressions more than 10 percent from that which occurs naturally. Under its existing NPDES permit, the City conducts the required quarterly monitoring for dissolved oxygen, throughout the water column, at a grid of 33 offshore stations located along the 98, 80 and 60 meter contours. EPA evaluated the applicant’s monitoring results from January 2008 through December 2013. At water depths frequented by the drifting wastefield, the long-term average concentrations for dissolved oxygen are around 4 to 5 mg/l. As shown in Table B-2 [TDD p. 141] and Figure A-6 [TDD p. 104], the long-term average concentration for dissolved oxygen at the near-ZID boundary station (F30) is similar to long-term average concentrations measured at nearfield and farfield stations. Dissolved oxygen depression associated with sediment demand should be compared to bottom waters at the outfall depth which, on average, show dissolved oxygen concentrations around 3 mg/l. This evaluation supports the conclusion that the Point Loma discharge does not result in more than a 10 percent reduction in dissolved oxygen concentrations, in areas within the wastefield where initial dilution is completed, from that which occurs naturally.*

*Based on the model predictions and receiving water monitoring results, EPA concludes it is unlikely that the dissolved oxygen concentration will be depressed more than 10 percent from that which occurs naturally outside the initial dilution zone, as a result of the wastewater discharge.*

**Recent Performance - Mass Emissions**

In analyzing total flows and mass emission levels, EPA notes that flows and mass emission rates have declined in recent years (see Table 1 below), although they are somewhat dependent on precipitation rates and user conservation measures. TDD Table 28, which looks at both past and *projected* mass emissions, shows that average annual flows and mass emissions from the WWTP should continue to decrease over the life of the current permit (although, as the footnotes note, project flows are conservatively set higher than anticipated flows).

Table 1. Actual and projected annual average and maximum daily/peak hour flows (mgd) for the Point Loma Ocean Outfall from 2001 through 2022.

Year	Observed Flows		Project Flows	
	Annual Average Flow <sup>1</sup>	Maximum Daily Flow <sup>1</sup>	Projected Annual Average Flow <sup>2,4,5,6,7</sup>	Maximum Projected Daily Flow <sup>3,8</sup>
2001	175	222	---	---
2002 <sup>4</sup>	169	189	---	---
2003	170	223	---	---
2004	174	295	---	---
2005	183	325	---	---
2006	170	224	---	---
2007	161	206	---	---
2008	162	233	---	---
2009	153	209	---	---
2010	157	394	---	---
2011	156	220	---	---
2012	148	191	---	---
2013	144	187	---	---
2014	139	181	---	---
2015	132	163	---	---
2016			158	273
2017			158	275
2018			158	277
2019			157	279
2020			157	281
2021			157	283
2022			157	284

<sup>1</sup> Data from monthly reports submitted to the Regional Water Board and EPA for 2008-2015. Maximum daily flow is the highest daily PLOO flow observed during the listed year.

<sup>2</sup> Average annual PLOO flow projections based on Metro System flow projections for long-term facilities planning. These flows are based on once in ten year wet weather event flows to the system. The flow projections for long-term facilities planning are conservative (overestimates that employ a factor of safety) to ensure that adequate future system capacity is maintained. Average annual PLOO flows will vary depending on hydrologic conditions, recycled water demands at the NCWRP and SBWRP and SBOO flows. This flow projection methodology is also used for Pure Water San Diego Project projections.

<sup>3</sup> Maximum projected daily wet-weather flow for a 10-year wet weather event.

<sup>4</sup> South Bay WRP is brought online.

<sup>5</sup> First increment of potable reuse brought online by Dec. 31, 2023. (15 MGD).

<sup>6</sup> Second increment of potable reuse brought online by Dec. 31, 2027. (15 MGD for a total of 30 MGD).

<sup>7</sup> Final increment of potable reuse brought online by Dec. 31, 2035. (53 MGD for a total of 83 MGD).

<sup>8</sup> The City continues to assess wet-weather flow projections. As part of this assessment, the City is evaluating the need to add equalization storage at Pump Station Nos. 1 and 2 (or implementing alternative peak-flow management options) to increase the ability of Metro System conveyance facilities to handle potential maximum flows.

Table 28. Point Loma Ocean Outfall flows (mgd) and total suspended solids loadings (MT/yr) projections for long-term facilities planning during the term of the proposed permit and proposed total suspended solids mass emission effluent limits.

Year	Projected Annual Average Flow	Projected TSS Mass Emissions	Proposed TSS Mass Emission Effluent Limits
2009	193	11,500	15,000
2010	194	11,800	15,000
2011	195	11,700	15,000
2012	197	11,800	15,000
2013	199	11,900	15,000
2014	202	12,100	13,598
2015	132	5466	13,598
2016	158	9424	13,598
2017	158	9445	12,000
2018	158	9467	12,000
2019	157	9488	12,000
2020	157	9509	12,000
2021	157	9530	11,999
2022	157	9552	11,999

EPA states that the emission rates should still be able to be reduced and within permitted limits, based on the assumption that the City will continue to pursue and implement water reclamation and reuse (TDD p. 89):

*The applicant's projections in Table 28 and proposed effluent limits in Table 27 satisfy the applicable requirements. Based on Table 30, EPA believes that a total suspended solids mass emission rate of 12,000 metric tons per year for first four years and 11,999 metric tons per fifth year would be achievable during the five years of the proposed 301(h) modification. During this period, EPA recognizes that reductions in mass emissions resulting from increased water reclamation are likely to be seasonal and anticipates the potential for corresponding higher mass emission rates during wet*

weather months. In the future, the City needs to pursue additional water reclamation and reuse projects, including those which demand a year-round supply of reclaimed water so as to maintain long-term compliance with this decision criterion. [Emphasis added]

EPA's TDD further notes (p. 31):

*The applicant requested TSS mass emission limitations of 12,000 mt/yr for years 1 through 4 of the permit (e.g., October 1, 2016 to September 30, 2020), and 11,999 mt/yr in year 5 of the permit (e.g., October 1, 2020 to September 30, 2021). This represents a 1,598 mt/yr reduction during years 1 through 4 of the permit, and 1,599 mt/yr reduction in year 5 of the permit, from the current mass emission limitation of 13,598 mt/yr. These mass reductions are consistent with the applicant's proposed plan to reduce mass emissions to 11,500 mt/yr by 2026, and to 9,942 mt/yr by 2028. An annual reduction down to 9,942 mt/yr is equivalent to levels that would have occurred if the 240-MGD Facility were to achieve secondary treatment TSS concentration standards, 30 mg/L, which is consistent with secondary treatment standards. [Emphasis added]*

### **Other Water Quality Standards and Criteria**

EPA's TDD further determined that:

- (1) the discharges would not significantly reduce light transmission outside the ZID;
- (2) pH levels would not be depressed;
- (3) removal would meet applicable standards for toxics and whole effluent toxicity, and would, therefore, "allow for the attainment or maintenance of water quality which assures protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife;
- (4) removal would not significantly affect: (i) sediment quality, benthic grain size, benthic habitat, or concentrations of toxics; (ii) public water supplies; (iii) phytoplankton and benthic fauna; (iv) fish and shellfish richness and abundance; (v) recreation (including but not limited to swimming, diving, boating, fishing, and picnicking, and sports activities along shorelines and beaches).

### **Improved Discharge**

Under Section 301(j)(5), EPA also needs to determine that the discharges "will result in a reduction in the quantity of suspended solids discharged by the applicant into the marine environment..." or what EPA calls the "improved discharge" test. TDD pages 14-15 of this evaluation describe the system improvements implemented and planned since the last waiver was granted. This discussion notes the upgrading of grit removal facilities at Point Loma, Pump Station improvements, improvements to enhanced settling and solids removal, and chlorine residual monitoring, improved pathogen disinfection, and planned decreases in flows to the plant

to be achieved through implementing water reuse. Concerning this last improvement, the TDD Evaluation notes that the City has completed three planning studies as part of the *Pure Water San Diego* program, and states:

*This reuse option would improve the reliability of water supplies within the San Diego Region, reduce the need for imported water, decrease salinity concentrations in the regional water supply, and reduce wastewater discharges to the ocean. Concurrent with the Recycled Water Study, the applicant initiated the multi-year Water Purification Demonstration Project to evaluate the feasibility of implementing a full-scale potable reuse project that would augment water supplies and improve water quality in local reservoirs. The Water Purification Demonstration Project featured the installation and operation of a 1 mgd demonstration Advanced Water Purification facility and the implementation of a comprehensive monitoring program to evaluate the quality of the purified water supply. The Water Purification Demonstration Project also convened an Independent Advisory Panel to provide expert review and feedback, and evaluated such potable reuse issues as source control, treatment performance and reliability, energy use, reservoir storage and regulatory compliance. The City's 2013 Water Purification Demonstration Project Report concluded that full-scale potable reuse is safe and feasible, that purified water supplies will meet all applicable regulatory requirements. Supplemental studies to assess these findings and to refine the proposed Pure Water facilities are currently underway. These studies will provide valuable information to the applicant, Metro System Participating agencies and regional stakeholders for future planning and decisions for the Pure Water San Diego water and wastewater facilities.*

### **RWQCB Evaluation**

The San Diego RWQCB has also independently evaluated the discharges, in Tentative Order R9-2017-0007/NPDES Permit CA1017409 (TO/NPDES Permit), which the RWQCB adopted on April 12, 2017. The RWQCB's documents are available at its website, at: [http://www.waterboards.ca.gov/sandiego/board\\_info/agendas/2017/Apr/Apr12.shtml](http://www.waterboards.ca.gov/sandiego/board_info/agendas/2017/Apr/Apr12.shtml). This website also contains EPA's and the RWQCB's responses to public comments, at: [http://www.waterboards.ca.gov/sandiego/board\\_info/agendas/2017/Apr/item9/21\\_Item\\_9\\_SD21\\_ResponseToComments\\_-DB.pdf](http://www.waterboards.ca.gov/sandiego/board_info/agendas/2017/Apr/item9/21_Item_9_SD21_ResponseToComments_-DB.pdf). The NPDES Permit adopted by the RWQCB incorporates the applicable California Ocean Plan requirements, requires extensive monitoring, contains a "reopener" provision enabling it to respond to unexpected events or improvement capabilities in regional monitoring (e.g., implementing recommendations from the Southern California Coastal Water Research Project (SCCWRP)), and incorporates City's proposed "Pure Water" water recycling goals, timetables, and tasks (Table 8), as follows:

**Table 8. Pure Water San Diego Potable Reuse Tasks<sup>1</sup>, Phase I, 30-MGD Potable Reuse, 2017-2022**

Category	Task	Completion Date <sup>1</sup>	Task Report Due Date (14 days after the date)
Environmental Impact Report (EIR)	Certify Final Program EIR for Pure Water San Diego	Task Completed	N/A
	Issue Notice of Preparation for North City Project EIR	Task Completed	N/A
	Certify Final North City Project EIR	October 31, 2018	November 14, 2018
32-MGD Morena Blvd. Wastewater Pump Station and Forcemain to North City Water Reclamation Expansion	Issue Notice to Proceed for final design	Task Completed	N/A
	Complete design	December 31, 2018	January 14, 2019
	Complete construction <sup>2</sup>	July 31, 2022	August 15, 2022
North City Water Reclamation Expansion	Issue Notice to Proceed for final design	Task Completed	N/A
	Complete design	December 31, 2018	January 14, 2019
	Complete construction <sup>2</sup>	July 31, 2022	August 15, 2022
Metro Biosolids Center Improvements	Complete design	December 31, 2018	January 14, 2019
	Complete construction <sup>2</sup>	July 31, 2022	August 15, 2022
30-MGD Potable Reuse Purification Facility	Complete design	March 31, 2019	April 15, 2019
	Complete construction <sup>2</sup>	July 31, 2022	August 15, 2022
30-MGD Purified Water Pump Station and Pipeline from North City Water Reclamation Expansion to Miramar Reservoir	Issue Notice to Proceed for final design	Task Completed	N/A
	Complete design	October 31, 2018	November 14, 2018
	Complete construction <sup>2</sup>	July 31, 2022	August 15, 2022
Commissioning	Initiate equipment testing and commissioning of potable reuse purification systems associated with start-up and eventual ramp-up to full capacity in accordance with regulatory requirements	August 1, 2022	August 15, 2022

1 Facilities planning, including the potential to accelerate the implementation schedule, has been aggressively pursued by the Discharger since the submittal of the Report of Waste Discharge for renewal of the Facility NPDES modified permit. Implementation of Pure Water San Diego faces a unique challenge, well beyond what a normal expansion of the water and wastewater infrastructure would experience. The detailed schedule included in Table 8 was provided by the Discharger on January 30, 2017. The Discharger has noted that this schedule is based on current progress and the completion dates may be modified based on issues related to the regulatory approval schedule, environmental review issues, or legal challenges to the proposed program or projects.

2 These tasks are dependent upon future approval by the Mayor and City Council of San Diego.

Under this schedule, the City's Pure Water Program proposes to use advanced water purification technology to produce potable water from recycled water and provide a safe, reliable and cost-effective drinking water supply for San Diego area. The City has committed to produce at least 83 MGD of potable reuse water by 2035 and reduce flows to the WWTP, which in turn would reduce wastewater flows and pollutant loads discharged to the ocean. The Program consists of the design and construction of new advanced water purification facilities and a new water reclamation plant; upgrades to existing water reclamation and wastewater treatment facilities; and design and construction of new pump stations and pipelines. The above schedule covers the 5 year permit period (through 2022) and states that the constructed facilities would have the ability to produce and deliver purified water to local reservoirs in volumes of at least 30 MGD by 2022. The RWQCB Compliance Schedule discussion, which preceded Table 8 in the RWQCB permit (and which is also reflected in [Exhibit 8](#) (page F-11)), notes that the City has committed to providing at least 83 MGD of potable water reuse by December 31, 2035. The RWQCB notes that the Pure Water Program "is the result of collaboration between the Discharger, Metro Wastewater Joint Powers Authority (JPA),<sup>10</sup> and a diverse array of regional stakeholders."

Concerning compliance with this schedule, the RWQCB adopted the following language (TO/NPDES p. 36):

*To demonstrate its commitment to move forward with implementation of Pure Water San Diego, the Discharger has committed to complete the tasks set forth in Table 8 below no later than the specified completion date. These tasks and associated due dates are enforceable to the maximum extent allowed by law.*

Compliance will also involve regular reporting and monitoring to show progress in implementing these tasks and timetables. The TO/NPDES (p. 38) requires regular Task Reports and Semiannual Progress Reports to be submitted to the RWQCB and EPA, and acknowledges that since some of the compliance dates would extend to beyond the duration of the NPDES permit, they would be provided and described in subsequent Orders/Permits.

### **Commission Analysis**

During the Commission's 2009 review of the City's previous waiver reissuance, the Commission noted that the City had entered into a Settlement Agreement with San Diego Coastkeeper and the San Diego Chapter of the Surfrider Foundation (February 2009). In that agreement the City committed to aggressively pursue water recycling as an alternative to implementing secondary treatment at the WWTP ([Exhibit 8](#)). On December 9, 2014, the City expanded and updated its commitments and signed a Cooperative Agreement in Support of Pure Water San Diego (dated October 2014) with San Diego Coastkeeper (Coastkeeper), the San Diego Chapter of Surfrider Foundation (Surfrider), the Coastal Environmental Rights Foundation (CERF), and the San Diego Audubon Society (Audubon) ([Exhibit 9](#)).

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<sup>10</sup> The JPA includes the cities of Chula Vista, La Mesa, Del Mar, El Cajon, Lemon Grove, Poway, Imperial Beach, National City, and the Padre Dam Municipal and Otay Water Districts.



The commitments and timetables have now been incorporated into the NPDES Permit and into the City’s consistency certification. If the City does not meet its commitments it will be required to provide status updates with explanations to EPA and the RWQCB. Both the NPDES Permit process and the federal consistency review process, contain “reopener provisions” in the event of non-compliance or modifications based on unanticipated circumstances. At the Commission staff’s request, the City has agreed to provide the same monitoring and compliance reports to the Commission staff to assure it continues to meet its commitments for water reuse. This commitment will enable the Commission to rely on similar procedures to those available to the RWQCB permit for a “reopening” if the permit terms are not complied with. The CZMA “reopener” procedures are contained in 15 CFR § 930.65 ([Exhibit 11](#)). The Cooperative Agreement itself provides remedies to Stakeholders available in the event of non-compliance. Finally, as noted by the RWQCB, compliance may be revisited in future NPDES permits reviewed after the 5-Year term of this NPDES permit.

The Commission also notes that if the City continues to aggressively pursue water recycling in compliance with the stated goal of ultimately achieving 83 MGD of potable water by the end of 2035, these efforts should enable the City to achieve the goal of providing “secondary equivalency” status for TSS (as discussed in the 2014 Cooperative Agreement), and should succeed in making up to a third of its entire potable water demand available for reuse.

Based on (1) EPA’s and the RWQCB’s analyses establishing that the discharges meet the applicable Clean Water Act and California Ocean Plan standards, (2) the NPDES permit’s compliance schedule discussion and table which incorporate the City’s commitments to pursue water reuse, (3) the lack of evidence that the discharges are adversely affecting water quality or marine species (despite the stringent monitoring required under CWA Section 301(h)), (4) the City’s past performance in implementing water reuse programs, and (5) the accelerated pursuit of significant future reductions in wastewater flow to the WWTP, the Commission concludes that the discharges over the life of the upcoming 5-Year NPDES permit waiver reissuance would be consistent with the applicable marine resources and water quality policies (Sections 30230 and 30231) of the Coastal Act.

#### **F. FISHING/PUBLIC ACCESS AND RECREATION**

Section 30230 of the Coastal Act, quoted in full on page 13, includes a requirement that:

*Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

The Coastal Act also contains more specific policies protecting commercial and recreational fishing; Section 30234 provides:

*Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.*

Section 30234.5 provides:

*The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.*

The Coastal Act also protects public recreation (such as surfing and other water-contact recreation). Section 30213 provides, in part:

*Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided..*

Section 30220 provides:

*Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

EPA's TDD (pages 68-90) ([Exhibit 7](#)) evaluated effects on both fishing and recreation, including analysis of effects from bioaccumulation of contaminants and effects on fish consumption, water contact recreation in state and federal waters, including but not limited to swimming, diving, boating, fishing, and picnicking, and sports activities along shorelines and beaches. The previous section of this report addresses numerous effects, or lack thereof, on the health of commercial and recreational fish species. Concerning other types of recreation, in reviewing previous waiver reviews, the Commission has found recreational activities that are most likely to be affected by the discharges are centered around the Point Loma kelp beds and in nearshore waters. SCUBA diving is very popular in the offshore kelp beds. Only limited diving occurs outside the area of the kelp beds. EPA's analysis of the City's plume modeling and The analysis covered City monitoring for bacteria indicators (enterococcus, fecal coliforms, and total coliforms) to examine spatial and temporal occurrences and trends. For shoreline exceedances that have occurred, EPA states (TDD, p. 78):

*As shown in Table B-9, single sample maximum bacterial objectives at shoreline stations exhibit low exceedance rates (2 percent). As shown in Tables B-10, geometric mean bacterial objectives at shoreline stations exhibit low exceedance rates (less than 1 percent). The applicant attributes these exceedances to surface runoff rather than the outfall plume. EPA agrees with this conclusion because of the lack of elevated concentrations at stations in the kelp bed and because modeling and monitoring results indicate that the outfall plume remains submerged in the offshore zone.*

EPA further states (TDD, p. 79):

*Based on this review, EPA finds that the improved modified discharge, as defined at 40 CFR 125.58(i) will meet bacterial water quality standards in State waters. EPA also finds that federal waters are not required to achieve the 304(a)(1) water quality criteria for bacteria because federally-defined primary contact recreational activities are not occurring in waters beyond 3 nautical miles. The reissued permit will require the City to record and report any primary contact recreational activities observed in federal waters, during offshore water quality monitoring surveys. The Regional Water Board and EPA conduct routine reviews of the City's discharge monitoring reports to assess compliance with the existing permit and water quality standards. EPA concludes that the improved modified discharge will allow for the attainment or maintenance of water quality which allows for recreational activities beyond the zone of initial dilution, including, without limitation, swimming, diving, picnicking, and sports activities along shorelines and beaches.*

The excerpts above establish that while there have been shoreline water quality standard exceedances documented, they are unlikely to be related to the City's outfall discharges and more likely to be from land based nonpoint source runoff. Rare exceedances of bacteriological water quality standards in the kelp beds (0.5% of samples) are being addressed by installation of effluent disinfection facilities (which add sodium hypochlorite to the discharges), brought on line in September 2008. As discussed in the water quality/marine resource section above, the City's monitoring efforts over the past five years have been sufficient to enable a determination that commercial/recreational fishing is protected and other recreational uses are not being adversely affected by the discharges.

Based on (1) EPA's and the RWQCB's analyses establishing that the discharges meet the applicable Clean Water Act and California Ocean Plan standards, (2) the NPDES permit's compliance schedule discussion and table which incorporate the City's commitments to pursue water reuse, (3) the lack of evidence that the discharges are adversely affecting commercial or recreational fishing or public health or recreational uses (despite the stringent monitoring required under CWA Section 301(h)), (4) the City's past performance in implementing water reuse programs, and (5) the accelerated pursuit of significant future reductions in wastewater flow to the WWTP, the Commission concludes that the discharges over the life of the upcoming 5-Year NPDES permit waiver reissuance would be consistent with the applicable commercial and recreational fishing and public access and recreation policies (Sections 30230, 30234, 30234.5, 30213, and 30220) of the Coastal Act.

## **APPENDIX A**

### **SUBSTANTIVE FILE DOCUMENTS**

1. RWQCB Tentative Order No. R9-2017-0007 and Draft NPDES Permit No. CA0107409; Waste Discharge Requirements and NPDES Permit for the City of San Diego E.W. Blom Point Loma Metropolitan Wastewater Treatment Plant Discharge to the Pacific Ocean through the Point Loma Ocean Outfall.
2. EPA Tentative Decision, City of San Diego WTP Outfall, Environmental Protection Agency, Region IX, dated/published October 28, 2016.
3. Application For Renewal of NPDES CA0107409 and 301(h) Modified Secondary Treatment Requirements, City of San Diego, January 2015.
4. Consistency Certifications No. CC-056-09, CC-043-09, CC-28-02 and CC-010-02 (City of San Diego, secondary treatment waiver).
5. Morro Bay, Goleta, and Orange County Consistency Certifications for secondary treatment waiver renewals, CC-88-92 and CC-123-98, and CC-007-06 (City of Morro Bay), CC-13-02 and CC-126-96 (Goleta Sanitary District), and CC-3-98 (County Sanitation Districts of Orange County (CSDOC)).
6. Consistency Certification No. CC-62-91/Coastal Development Permit No. 6-91-217 (City of San Diego, Point Loma outfall extension).
7. No Effects Determination NE-94-95 (City of San Diego, secondary treatment waiver).
8. Consistency Determination No. CD-137-96 (IBWC) International Boundary and Water Commission International Wastewater Treatment Plant Interim Operation.
9. Managing Wastewater in Coastal Urban Areas, National Academies Press, 1993.
10. Settlement Agreement, City of San Diego, San Diego Coastkeeper and San Diego Chapter of the Surfrider Foundation, February 2009.
11. Cooperative Agreement in Support of Pure Water San Diego, City of San Diego, San Diego Coastkeeper, San Diego Chapter of Surfrider Foundation, Coastal Environmental Rights Foundation, and San Diego Audubon Society, October 2014 Stakeholders, signed December 9, 2014.