SEWER SYSTEM MANAGEMENT PLAN

June 2026

Order No. R9-2019-0167, NPDES No. CA0109347
Order 2022-0193-DWQ
Order No. R9-2007-0005

REVISIONS:

Camp Pendleton SSMP 2011

Camp Pendleton SSMP 2-year Audit 2013

Camp Pendleton SSMP 2-year Audit 2015

Camp Pendleton SSMP 2016 (missed 5-year Recertification Requirement)

Camp Pendleton SSMP 2018 (missed 2-year Audit/Recertification Requirement)

Camp Pendleton SSMP 2019 (Update/Recertification)

Camp Pendleton SSMP 2-year Audit 2021 (including revision)

Camp Pendleton SSMP 3-year Audit 2024 (including revision)

Camp Pendleton SSMP 2025 (Update/Recertification)

Camp Pendleton SSMP 2026 (Updates)

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ACRONYMS:

AC/S	Assistant Chief of Staff
BEQ	Bachelor Enlisted Quarters
BO	Base Order
CCTV	Closed Circuit Television
CG	Commanding General of MCB Camp Pendleton
CPEN	Camp Pendleton
CPR	Camp Pendleton Requirements
DOD	Department of Defense
ES	Environmental Security
FEAD	Facilities Engineering and Acquisition Division
FOG	Fats, Oils, and Grease
FSC	Facilities Support Contract Division
HQMC	Headquarters Marine Corps
MCB	Marine Corps Base Camp Pendleton
MCCS	Marine Corps Community Services
MCIWEST	Marine Corps Installations West
MCO	Marine Corps Order
NPDES	National Pollutant Discharge Elimination System
NRTTP	Northern Regional Tertiary Treatment Plant
O&M	Operations and Maintenance
OWS	Oil Water Separator
POC	Point of Contact
PACP	Pipeline Assessment Certification Program
PWD	Public Works Department
RWQCB	Regional Water Quality Control Board
SCPP	Source Control Pretreatment Program
SRTTP	Southern Regional Tertiary Treatment Plant
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SSORP	Sanitary Sewer Overflow Response Plan
TAPS	Tributary Area Pump Station
UFC	Unified Facilities Criteria
WRD	Water Resources Division

Section 1: Goals and Introduction

Attachment D: Sewer System Management Plan Required Elements– Order 2022-0103-DWQ
The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system, reduce and prevent spills, and mitigate any spills that do occur.

The Sewer System Management Plan (SSMP) will be developed in accordance with applicable permits including Order WQ 2022-0103-DWQ Statewide Waste Discharge Requirements General Order for Sanitary Sewer Systems, Order No. R9-2007-0005 Waste Discharge Requirements for Sewage Collection Agencies in the San Diego Region, and Order No. R9-2019-0167 (NPDES No. CA0109347) Waste Discharge Requirements for the Marine Corps Base, Camp Pendleton Southern Regional Tertiary Treatment Plant and Advanced Water Treatment Plant at Haybarn Canyon Discharge to the Pacific Ocean Through the Oceanside Ocean Outfall. The SSMP will be implemented to meet the goals identified to properly manage, operate, and maintain the sanitary sewer system. An internal audit of the SSMP will be performed every three years and will be updated at least every six years to comply with regulatory requirements.

Marine Corps Base Camp Pendleton is located between the City of Oceanside and the City of San Clemente in San Diego County and serves a community of more than 42,000 active duty personnel, with an average population served of 55,000 military and civilian personnel. The sanitary sewer collection system is operated by civilian staff and is comprised of more than 150 miles of sewer pipes, more than 3,300 sewer manholes, more than 4,000 sewer cleanouts, 64 sewer lift stations, and 35 miles of force mains. Camp Pendleton maintains an up-to-date map of the sanitary sewer system for appropriate management of the system.

The PRIMARY goals of MCB Camp Pendleton's Sewer System Management Program are:

1. Prevent SSOs.
2. Properly manage, operate, and maintain all portions of the MCB's Collections System.
3. Ensure adequate sewer capacity to convey the peak wastewater flows.
4. Minimize the frequency of any SSO's that do happen.
5. Mitigate the impacts associated with any SSO.
6. Meet all applicable regulatory notification and reporting requirements.

The SPECIFIC goals of MCB Camp Pendleton's Sewer System Management Program are:

1. Clean all gravity sewer mains and sewer manholes once every four years.
2. Structurally condition assess all gravity sewers within a 4- year period using Closed Circuit Television (CCTV).
3. Condition assess all sewer manholes (SMHs) once every four years.
4. Perform a condition assessment of all lift stations within four years
5. Perform a condition assessment of all force mains within three years
6. Inspect and perform preventative maintenance on all sewer lift stations (SLSs) semiannually.
7. Perform monthly inspections of air relief valves.
8. Implement a scheduled education and training program for response staff, maintenance staff, and contractors to convey regulatory requirements and reduce SSOs. The plan will include annual sanitary sewer overflow response plan (SSORP) training and review.

Section 2: Organization

Attachment D: Sewer System Management Plan Required Elements– Order 2022-0103-DWQ
The SSMP must identify:
A) Name of the Legally Responsible Official;
B) Position titles, telephone numbers, and email addresses for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP. Include lines of authority as shown in an org chart or similar document; and
C) The chain of communication for reporting spills, from receipt of a complaint or other information, including the person responsible for reporting spills to the State and Regional Water Board and other agencies as applicable (such as County Health Officer, County Environmental Health Agency, and State Office of Emergency Services (OES)).

The legal responsibility for MCB Camp Pendleton's Sanitary Sewer Systems is assigned in accordance with 40 CFR Part 122.22 (a) (3) *For a municipality, State, Federal, or other public agency* (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

For Camp Pendleton, that senior executive officer is the Commanding General for Marine Corps Installations West and Marine Corps Base Camp Pendleton.

Camp Pendleton's Director, Water Resources Division, meets the requirements of 40 CFR Part 122.22 (b) (2) *as the individual having responsibility for the overall operation of the regulated facilities*.

A) Legally Responsible Official:

Director, Water Resources Division, is Camp Pendleton's designated Legally Responsible Official.

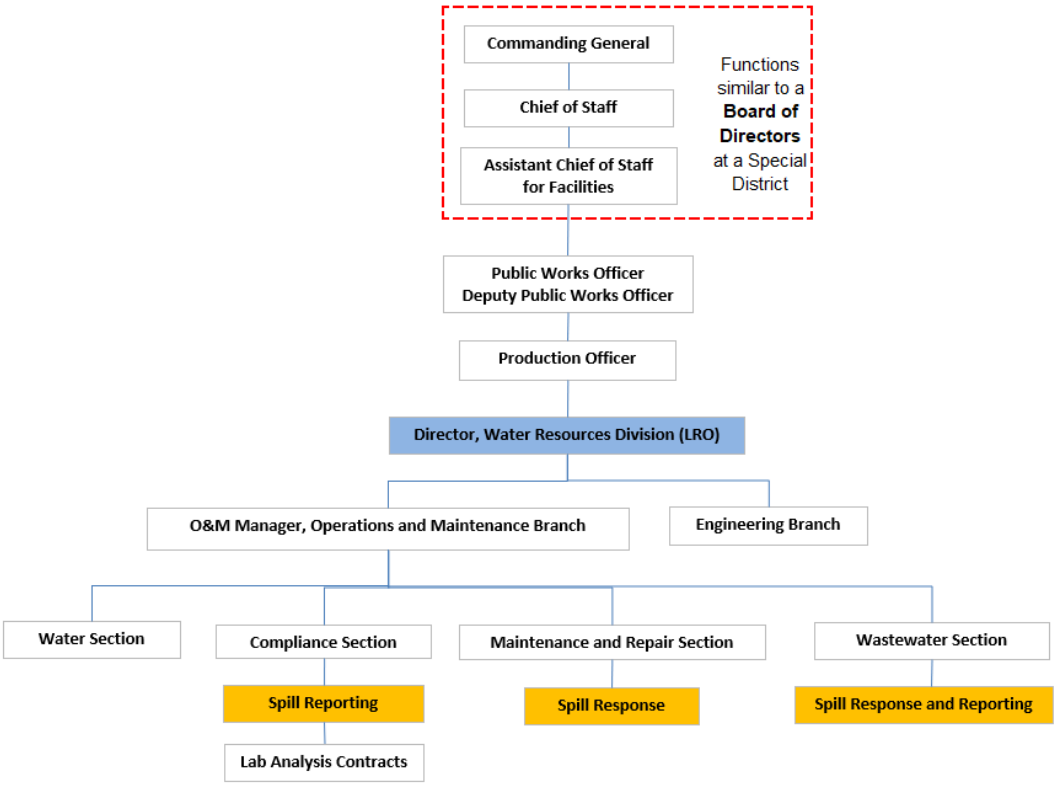
In accordance with 40 CFR Part 122.22 (b) (1), Joel Heywood, Camp Pendleton's Director, Water Resources Division, is authorized in writing to sign all reports and other information required by the San Diego Water Board, State Water Board, or USEPA as the duly authorized representative of MCIWEST-MCB Camp Pendleton's Commanding General.

B) SSMP Specific Measure Responsibilities

Table 2-1: Implementation Responsibilities for SSMP

SSMP Element	Responsible Position	Name	Number	Email
1. Goals and Introduction	Director, WRD	Mr. Joel Heywood	760-214-4553	joel.heywood@usmc.mil
2. Organization	Director, WRD	Mr. Joel Heywood	760-214-4553	joel.heywood@usmc.mil
3. Legal Authority	Director, WRD	Mr. Joel Heywood	760-214-4553	joel.heywood@usmc.mil
4. O&M Program	O&M Manager, WRD	Mr. Josh Capito	760-846-2273	joshua.capito@usmc.mil
5. Design and Performance Provisions	Director, WRD	Mr. Joel Heywood	760-214-4553	joel.heywood@usmc.mil
6. Overflow Emergency Response	Wastewater Section Supervisor	Mr. Ricky Good	760-637-6732	ricky.good@usmc.mil
7. FOG Control Program	Wastewater Section Supervisor	Mr. Ricky Good	760-637-6732	ricky.good@usmc.mil
8. System Evaluation and Capacity Assurance Plan	Director, WRD	Mr. Joel Heywood	760-214-4553	joel.heywood@usmc.mil
9. Monitoring, Measurement, and Program Modifications	O&M Manager, WRD	Mr. Josh Capito	760-846-2273	joshua.capito@usmc.mil
10. SSMP Program Audits	O&M Manager, WRD	Mr.Josh Capito	760-846-2273	joshua.capito@usmc.mil
11. Communication Program	Director, WRD	Mr. Joel Heywood	760-214-4553	joel.heywood@usmc.mil

Below is the pertinent portion of Camp Pendleton's Organizational Chart illustrating the lines of authority and responsibility with respect to the operation, maintenance and management of the Installation's wastewater systems.



Commanding General and Executive Staff

The Commanding General and his Executive Staff (Chief of Staff – Marine Corps Colonel and Assistant Chief of Staff for Facilities – US Navy Captain) in addition to their myriad of complex military duties and responsibilities provide strategic and policy direction to the Public Works Officer/Deputy Public Works Officer, approve and issue Base wide policies and orders, execute communication plans, and approve staffing and budget levels for PWD. In terms of a typical California Special District, they function as a Board of Directors for the water and wastewater operations at Camp Pendleton.

Public Works Officer and Deputy Public Works Officer

Under strategic and policy direction from the Chief of Staff for Facilities, the Public Works Officer and Deputy Public Works Officer manage, administer, plan, and organize the public works functions of the installation including utility services, facility operations, engineering construction and management, facility planning, and service support contracts.

Production Officer/Deputy Production Officer

Under strategic and policy direction from the Public Works Officer/Deputy Public Works Officer, the Production Officer/Deputy Production Officer manages, plans, and organizes the installation utility systems, facility operations, solid waste management systems, and local program development and

execution. The Production Officer is responsible for maintaining efficient and effective execution of workload within budgets, goals, processes, and performance metrics.

Director, Water Resources Division

Under strategic and policy direction from the PWO/DPWO and Production Officer, the Director manages, plans, organizes, and controls public utility water and wastewater programs, services and resources in accordance with short- and long-term goals, policy statements and directives; interprets and administers policies of the Board; and performs related work as required. The Director requires notification of all SSOs as soon as practical, following control of the situation and is Camp Pendleton's designated LRO and certifying official in CIWQS.

Operations and Maintenance Manager, Water Resources Division

Under the general direction of the Director, serves as an executive level manager to plan and schedule, the water and wastewater utility engineering processes and public services; manages and participates in the gathering and compiling of data and professional engineering work in the areas of planning, survey, design, construction management, construction contract administration, cost estimates, specifications, maps, reports, potable, recycled and wastewater, corrosion control and water quality system structures and facilities depending on assignment. Oversees the Wastewater Section, Maintenance and Repair Section, and the Compliance Section. Coordinates the implementation of the SSMP, requires notification of all SSOs as soon as practical, following control of the situation. Manages the supervisors of assigned Sections; performs short and long-range planning of WRD programs and services; conducts studies and prepares administrative reports of findings and recommendations of WRD programs and activities; and performs related work as required, including CIWQS report submission and spill reporting.

Wastewater Section Supervisor

Under the general direction of the O&M Manager, plans, organizes and supervises a staff of employees assigned to the wastewater collections section; performs a variety of technical and administrative support functions; and performs related work as required. The Wastewater Section Supervisor makes recommendations for and implements the SSMP and sewer system response; investigates, drafts documentation, and ensures that SSOs have been reported and certified; communicates with Division management regarding overflow specifics, response, and remediation; and trains Collections field crew. This position also has responsibility over FOG (Fats, Oils and Greases) Control program; become SSO incident commander and has CIWQS spill reporting capabilities.

Maintenance and Repair Section Supervisor

Under the general direction of the O&M Manager, plans, organizes and supervises a staff of employees assigned to the maintenance and repair section; performs a variety of technical and administrative support functions; and performs related work as required. The Maintenance and Repair Supervisor works directly with the Wastewater Supervisor to ensure all mechanical and electrical aspects of the collection system are managed and in good operating condition; directs/coordinates repair efforts to

pipelines in the collection system. Becomes SSO incident commander and has CIWQS spill reporting capabilities.

Collection System Workers/Field Maintenance Crew

Under the supervision of the Wastewater Supervisor and/or Maintenance and Repair Supervisor, performs specialized and skilled work in the wastewater collections systems; and performs related work as required. The collections field crew performs preventative maintenance activities; mobilizes and responds to notification of stoppages and SSOs; drafts SSO documentation and completes required initial notification and reporting, if necessary, during after-hours events. All Work Leaders become incident commanders and have CIWQS spill reporting capabilities.

Compliance Section

Under supervision of the O&M Manager, this section manages all wastewater contracted laboratory sampling and analysis; troubleshoots and validates flow signal issues, electrical problems, autosampler issues, plant process, and investigate non-compliance reports (NCR's) to resolve personnel and procedural problems; review analytical reports QA/QC and field sampling logs for accuracy and compliance determination; review and interpret State and Federal rules and regulations as related to the permit and requirements to meet compliance; respond 24/7 to any spills that reach the waters of the US that requires environmental sampling. Prepares and submits all required CIWQS reports and has spill reporting capabilities.

C) Chain of Communication for Reporting SSOs

In general, WRD is notified of a sewer system overflow by a call received through the installation's 24/7 call center (Unity Control Room). If the potential SSO call is received during the day (0700-1600), the Unity Control Room Operator will contact a Wastewater Work Leader or Supervisor who will mobilize personnel and equipment to respond to and remediate any spill. If the potential SSO call is received after work hours (1601-0659), the Unity Control Room Operator will use the Wastewater Section ON-CALL CALENDAR/PRIORITY CALL LIST to contact the Collection Systems Operator on duty who will mobilize personnel and equipment to respond and remediate the spill.

Once the spill has been controlled and remediated, WRD staff drafts the report of the overflow incident, and if needed, completes the initial notifications in accordance with SWRCB Monitoring and Reporting Program Order No. WQ 2022-0103-DWQ and Order R9-2007-0005.

The Director, Water Resources Division, is designated as the Legally Responsible Official (LRO) for Camp Pendleton's Wastewater Systems and, with administrative support from WRD staff, will oversee the reporting process and certifying of all SSOs. The LRO has designated authorized data submitters from WRD to report overflows to all necessary agencies as well as the online database CIWQS. Per SWRCB orders and guidelines, initial notification reports may be done in draft form with a finalized report submitted once all data is complete and verified.

The following table provides the WRD personnel duties and responsibilities during and SSO:

Name	Title	Contact	SSO Responsibility
Ricky Good	Supervisor	760-637-6732	Incident Commander/CIWQS Reporting
Horace Fisher	Work Leader	760-725-4018	Incident Commander
Tony Velletto	Supervisor	760-587-3779	Incident Commander/CIWQS Reporting
Roy Peiler	Work Leader	760-725-4018	Incident Commander
Matt Guerra	Work Leader	760-725-4018	Incident Commander
Kevin Curry	Env Protection Specialist	760-519-9216	CIWQS Reporting
Melvin Kutaka	Lead Engineer	760-587-3850	CIWQS Reporting
Josh Capito	O&M Manager	760-846-2273	CIWQS Reporting
Joel Heywood	Director	760-214-4553	CIWQS Certifying

Section 3: Legal Authority

Attachment D: Sewer System Management Plan Required Elements– Order 2022-0103-DWQ
Plan must include: copies or an electronic link to Enrollee's current sewer system use ordinances, service agreements, and/or other legally binding procedures to demonstrate that it possesses the necessary legal authority to:
A) Prevent illicit discharges into its sanitary sewer system from I/I, unauthorized stormwater, chemical dumping, unauthorized debris, roots, fats, oils, and grease, and trash including rags and other debris that may cause blockages;
B) Collaborate with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure;
C) Require that sewers and connections be properly designed and constructed;
D) Ensure access for maintenance, inspection, and/or repairs for portions of the lateral owned or maintained by the Enrollee;
E) Enforce any violation of its sewer ordinances, service agreements, or other legally binding procedure; and
E) Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable

This chapter describes the legal authority to implement the SSMP plans and procedures.

A) As a Federal installation, MCB Camp Pendleton's authority to prevent illicit discharges into its sanitary sewer system comes from the following Federal Statues:
   - Water Quality Act of 1965 (Public Law 89-234)
   - Water Quality Improvement Act of 1970 (Public Law 91-224)
   - Federal Water Pollution Control Act (FWPCA) of 1972
   - Clean Water Act (CWA) of 1977 (33 U.S.C. 1251 et seq.)
   - Water Quality Act of 1987 (Public Law 100-4)

   Marine Corps Order 5090.2 sets Marine Corps policies and responsibilities for compliance with environmental requirements and management of environmental programs. Marine Corps environmental programs ensure compliance with environmental requirements and protect human health and the environment. The order applies to all Marine Corps active and Reserve installations, Commands, detachments, components, tenants, and personnel. The MCIWEST-MCB Camp Pendleton Commanding General (CG) is responsible for ensuring compliance with all federal, state, and local environmental laws, including the Clean Water Act and is authorized to use administrative and disciplinary actions to enforce the above statues and to issue local orders that prevent illicit discharges into the sanitary sewer system.

   Marine Corps Order 5090.2 can be found at the following link:https://www.pendleton.marines.mil/Staff/Principal-Staff/G-F-Facilities/#Tab/water-resources-division

MCIWEST-MCB Camp Pendleton Base Order 5000.5, is the local order issued by the CG and includes enforcement mechanisms to everyone on Camp Pendleton. Chapter 1, Base Regulations, establishes responsibilities and procedures which govern the conduct of all personnel and activities on MCB CPEN including prohibition of illicit discharges into the sanitary sewer system. Violations of Base Orders can result in disciplinary (fines, reduction in rank, incarceration, etc.) action against military personnel. Violations of Base Orders by DoD civilian personnel can result in (fines, detention, termination, etc.). Violations of Base Orders by non-DoD personnel or businesses can result in expulsion from the base, detention, and referral to EPA for enforcement actions (fines, incarceration, etc.) Chapter 8 and 9 outline the legal authority to prevent illicit discharges into the sanitary sewer system. Chapter 8 provides preventative measures by instructing personnel to dispose of waste appropriately and identifies non-stormwater discharges are generally not allowed and constitute an illicit discharge. Chapter 9 provides the requirements to minimize pollutant transport.

MCIWEST-MCB Camp Pendleton Base Order 5000.5 can be found at the following link: https://www.pendleton.marines.mil/Staff/Principal-Staff/G-F-Facilities/#Tab/water-resources-division

B) The authority to require the collaboration with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure comes from MCO 5090.2. The order requires installations to develop and maintain a comprehensive Spill Prevention, Control, and Countermeasure (SPCC) Plan including establishing procedures for notifying and coordinating with outside agencies in the event of a spill that could affect their jurisdiction (Volume 4 Water Compliance Manual). The manual mandates that installations develop an Illicit Discharge Detection and Elimination (IDDE) program as part of the Stormwater Management Plan (SWMP) including creating and maintaining a complete map of the storm sewer systems, specifically to identify and eliminate any improper connections from the sanitary sewer system.

C) The authority to require that sewers and connections be properly designed and constructed comes from the Unified Facilities Criteria (UFC). UFC documents provide planning, design, construction, sustainment, restoration, and modernization criteria, and apply to the Military Departments, the Defense Agencies, and the DoD Field Activities in accordance with DoD Directive 4270.5 (Military Construction) and USD (AT&L) Memorandum dated 29 May 2002. Requirements are further specified and all local design and construction requirements are set forth in the Camp Pendleton Requirements (CPR) which are issued to every contractor and become part of every contract awarded for construction, products and services at Camp Pendleton.

UFC: https://www.wbdg.org/dod/ufc

CPR: https://www.pendleton.marines.mil/Staff/Principal-Staff/G-F-Facilities/#section/architecture-and-engineering-branch

D) The legal authority to ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency is inherent to the congressionally mandated legal authority of a Commanding General of a military installation. Personnel with “by direction” authority from the CG have guaranteed access to ALL facilities on base for maintenance, inspection or repairs.

E) The legal authority to limit the discharge of fats, oils, and grease and other debris that may cause blockages flows from the CG through Base Order 11345.2 “Fats, Oils and Grease (FOG) Control Program”, which establishes proper FOG handling procedures, grease interceptor maintenance and inspection requirements, training and education requirements, and a public awareness campaign.

F) The legal authority to enforce any violation of Camp Pendleton’s sewer ordinances is derived from the legal statues shown above in part A, the inherent congressionally established authorities of an installation Commanding General and the specific Base Orders from the CG that set forth sewer ordinances.

Section 4: Operations and Maintenance Program

Attachment D: Sewer System Management Plan Required Elements Order 2022-0103-DWQ
The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system.
A) An up-to-date map of the sanitary sewer system, and procedures for maintaining and providing State and Regional Water Board staff access to the map(s). The maps must show all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;
B) Describe routine preventative operation and maintenance activities by staff and contractors, including a system for scheduling inspection and regular maintenance activities; higher-frequency inspections and maintenance of known problem areas, including areas with tree root problems; regular visual and closed-circuit television (CCTV) inspections of manholes and sewer pipes. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders, including system areas/components prone to root-intrusion potentially resulting in system backup and/or failure;
C) Provide in-house and external training on a regular basis for staff in sanitary sewer system operations and maintenance and require contractors to be appropriately trained. The training must cover requirements of the General Order, Enrollee's Spill Emergency Response Plan procedures and practice drills, skilled estimation of spill volume for field operators, and electronic CIWQS reporting procedures for staff submitting data and
D) Provide adequate equipment and replacement part inventories, including identification of critical replacement parts.

A) Collection System Mapping:

Maps are utilized by the Wastewater Section Collection System Operators and the Repair and Maintenance Section to identify the location of critical components of the system such as sewer mains, force mains, manholes, and lift stations. Maps are updated periodically (typically at least annually) as field crews note discrepancies or changes. WRD Engineering is responsible for working with the operations, repair and maintenance personnel to maintain updated collection systems maps using GIS software. Field crews refer to hard copies of maps or digital through a tablet/laptop/phone. The sanitary sewer system maps reflect the most recent pipeline condition assessment performed by contracted support personnel. The set of maps include locations of grease traps, manholes, lift stations, OWS's, gravity mains, force mains, and condition of gravity mains.

The GIS data, including the sanitary sewer system service area boundary map, is protected from public disclosure pursuant to 10 USC 130e. RWQCB board staff may request maps of the sanitary sewer collection system in accordance with 10 USC 130e.

B) Preventative and Corrective Maintenance:

CPEN WRD has developed several maintenance programs to maintain the sewer system and prevent SSOs. These include:

1. Regular maintenance activities:
    a. Collection System monitoring and inspections
    b. Lift station preemptive maintenance
    c. Regular Main Line Cleaning
    d. Force main air release valve maintenance and documentation
    e. Annual and Semi-Annual PM Program for Electrical and Mechanical Equipment
    f. Quarterly De-ragging Program for All Sewer Lift stations
    g. Fats, Oils and Grease (FOG) Program
2. Regular visual and closed circuit camera (CCTV) inspection
    a. Manholes
    b. Pipelines
3. Known problem area higher-frequency maintenance and inspection
    a. Periodic Manhole Cleaning and Jetting (rating/condition based)

Table 4-1 reflects the authorized personnel to perform these responsibilities. Current staffing levels as of May 2026 for the Wastewater section and Maintenance and Repair section are 67% combined. Staff perform scheduled overtime to conduct preventative and corrective maintenance to account for the vacancies within the organization. A service contractor performs inspections of the manholes, and a future service contract is planned later this year that will provide inspection and cleaning of the collection system pipelines. CPEN WRD Wastewater Section has (23) personnel including Collection System Workers, Wastewater Utility Workers, and Laborers responsible for daily inspections and operation of the collection system, sewer cleaning operations and system maintenance of main line, manhole, lift station, and emergency response; manhole and pipeline inspections; and Air Release Valve preventative and corrective maintenance;. WRD Repair and Maintenance Section supports the water and wastewater utility assets and has (6) two/three-man Preventive Maintenance (PM) crew for electrical and mechanical equipment with (3) additional two/three-man Corrective Maintenance team of mechanics and electricians, and (2) three-man crews responsible for pipe repairs. These crews are led by (2) Supervisors and (4) Work Leaders.

Table 4-1: Collection Crews and Responsibilities

	Crew	Positions	Responsibilities
1	Booster Operations	9 Collection System Workers	Daily inspections and operations of lift stations
2	Vactor Operations and System Maintenance	4 Collection System Workers, 4 Wastewater Utility Workers, and 3 Laborers	Main line cleaning, lift station cleaning, manhole cleaning, line jetting, CCTV, and ARV maintenance

3	PM Crew	1 Electronics Industrial Controls Mechanic, 2 Electronics Mechanic, 1 Electricians, 4 industrial Equipment Mechanics, 4 Maintenance Mechanics, 1 Maintenance Worker	Perform all annual and semi-annual preventative maintenance inspections on all lift stations. Document all discrepancies and report to Work Leader
4	CM Crew	1 Electronics Industrial Controls Mechanic, 1 Electronics Mechanic, 2 Industrial Equipment Mechanic, 2 Maintenance Mechanic and 2 Maintenance Worker	Responsible for all lift station corrective maintenance and proper documenting of said maintenance. They directly report to Work Leader.
5	Pipe Repair Crew	3 Pipefitters and 2 Maintenance Workers	Responsible for pipeline repairs.

Lift Stations

Timeline: MCB CPEN's wastewater lift stations are inspected daily by a roving patrol and continuously monitored by SMART COVER, a subscription-based service subject to funding and administrative availability telemetry systems. Maintenance programs are conducted annually, semi-annually, quarterly, monthly and include mechanical and safety inspections including inspections of the valves and air release valves on the force mains. Wet wells are also cleaned on a monthly schedule. CPEN performs all operation and maintenance of its lift stations.

Lateral Maintenance

MCB CPEN is responsible for laterals associated with all facilities except Public Private Venture Housing units. MCB CPEN responds to blockages and other emergencies.

FOG

MCB CPEN has a FOG ordinance and a program to help keep the fats, oils and grease out of the main sewer system. It is MCB CPEN's goal to conduct inspections and testing of FOGs on an annual basis, or more frequently, if needed, and as staffing priorities allow.

Regular visual and CCTV inspection:

(1) As part of the O&M program, each sewer line segment is surveyed using CCTV and assigned a condition grade from 0 to 5 according to the PACP code matrix shown in Table 4-2 below. Grades are assigned based on the significance of the defect, extent of damage, percentage of flow

capacity restriction, or amount of wall loss as a result of deterioration. Information collected about each sewer pipeline segment including the PACP grade, CCTV inspection and cleaning results (e.g., number of cleaning passes, type and quantity of FOG, roots, sediment, and rocks recovered) are evaluated and input to the Structured Query Language Maintenance Management Database which uses an algorithm to generate a risk assessment for the development of a sewer line failure (e.g., blockage, collapse, rupture). The risk assessment, in turn, provides recommended maintenance and/or repair (e.g., lining) including a prioritization schedule to minimize the risk of a sewer line failure. In addition, manholes are visually inspected and condition assessment performed in conformance with Manhole Assessment and Certification Program (MACP) protocols by both contract and Government staff. Recommendations are made and repairs scheduled based on severity of the manhole condition.

(2) The sewer line cleaning/condition assessment contractor performs cleaning and CCTV inspections according to the recommended schedule. WRD Engineering section program recommended repairs into the MCB CPEN Capital Improvement Plan based on the designated priority. (See Table 4-2 below)

(3) In house trained employees also perform CCTV inspections. Information gathered from the inspections is stored in Data Collection System for review by management, engineering, department head and leads. Repair and replacement projects are typically the result of observed deficiencies in the sanitary sewer system. During the inspection of an individual main, numeric scores are given to the defects and then an overall grade will be assigned to that segment. This grade will put that main in one of three categories for further review and assignment for cleaning, root control, repairs or further inspections.(see table 2)

Table 4-2: PACP Grade and Repair–Priority Code Summary

PACP Grade	**Repair– Priority Code**	**Definition**	**Recommended Hydro Jetting Frequency**
5	Immediate	Severe damage observed; requires immediate attention.	Within 6 months to observe that there is no longer O&M defect affecting pipeline quality
3 or 4	Poor	Significant defects observed that are likely to cause sanitary sewer overflows and other operational problems; give higher priority in terms of repair fund allocation.	Yearly
2	Fair	Some defects observed; must be frequently monitored.	Every 2 years
1	Good	No significant defects observed; may be put on a lower monitoring frequency.	Every 3 years
0	Excellent	Pipe is either new or free from any observed defects.	Every 4 years

Known problem area higher-frequency maintenance and inspection:

Areas of concern identified during cleaning and CCTV inspection are given a shorter recommended hydro jetting frequency as identified on Table 4-2 above. These line segments and manholes are inspected more frequently to reduce the risk of system failure. Sanitary sewer force mains with known issues (blockages, failures, etc.) are inspected and flushed on a schedule to help reduce the risk of system failure.

C) Training

MCB CPEN takes a proactive approach towards the safety of their employees by implementing a comprehensive safety training program.

Wastewater Collections and Maintenance and Repair personnel are trained in the following fields, within their first year of employment:

- Traffic Control and Flagging
- Confined Space and Confined Space Rescue
- Hazardous Materials Handler
- Trenching and Shoring Awareness
- Combination Truck Training
- CPR/First Aid
- Pumps and Motors
- Lockout/Tag out
- Electrical Hazards

Personnel are also required to read and understand all MCB CPEN safety program documents and attend weekly Safety Meetings. Training records are kept by the Maintenance Work Leaders.

MCB CPEN also performs refresher training on an annual basis or as required. The annual training consists of review of the Emergency Response Plan procedures including hands-on training, estimating spill volume, and overview of the applicable permits. Additionally, there are periodic seminars and training sessions targeting all areas of the wastewater profession. External training will be scheduled pending availability of funding.

MCB CPEN staff responsible for CIWQS reporting will perform initial and refresher training on CIWQS electronic reporting procedures and review the applicable permits and General Order annually.

D) Equipment and Replacement Parts

MCB CPEN's WRD has all the necessary equipment to operate and maintain the sanitary sewer system.

MCB CPEN has three combination trucks for cleaning the system. They are dual axle with 1,000 gallon tank for fresh water, 2,000 gallon debris tank, and positive displacement blowers. Additionally, MCB CPEN has a van with a CCTV system, a pan & tilt color camera, and 1000' of cable which is used for

sewer pipe inspection and the creation of MCB CPEN's video library. Along with the van, MCB CPEN has a box truck with a main line and lateral launch camera with 100' of cable. All aforementioned MCB CPEN equipment has replacement parts and trained employees capable of doing most all repairs needed to the camera system. As an additional backup, MCB CPEN has a (1) - hand-pushed 200' camera system and (1) - 400' hand pushed camera system.

Crew trucks include numerous utility bed with tailgate lift trucks, (2) 1-ton extended cab with utility bed with tailgate lift trucks, and numerous drain cleaning machines and a trailer mounted 'jetter.' All trucks are stocked with various replacement parts and hand tools. Additionally, the Maintenance and Repair Section has (2) 3-ton flat-bed trucks with 3-ton cranes mounted on trucks for pulling pumps and general heavy lifting, asphalt cutting machine and (2) light stands.

The safety equipment for confined space and rescue consist of: (4) main 4-gas detectors, (10) personal 4-gas detectors, and rescue rated harnesses, (2) DBI/Sala tripods and (1) Davit arm with (2) main wenches and (2) self-retracting life lines, as well as (4) ventilation blowers.

To the extent possible, MCB CPEN keeps replacement parts and motors in stock for all lift stations. Parts include: motors, impellers, volutes, front and back heads and seals. Smaller pumps are replaced with new units when necessary. Replacement parts for equipment are basic with a few exceptions of critical parts (jetting hose, check valves, nozzles etc.) for the combination trucks.

Section 5: Design and Performance Provisions

Attachment D: Sewer System Management Plan Required Elements Order 2022-0103-DWQ
The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system.
A) Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; If existing design criteria and construction standards are deficient to address necessary component-specific hydraulic capacity as specified in section 8, the procedures must include component-specific evaluation of the design criteria; and
B) Procedures and standards for inspecting and testing the installation of new sewers, pumps and other appurtenances and for rehabilitation and repair projects.

A) MCB CPEN's Design and Construction Standards for Sewer System Construction is contained within the *Camp Pendleton Requirements* (CPR) Standards for the installation (link provided in section 3). The CPR are design requirements developed specifically for Camp Pendleton based on the installation's mission, environment, and lessons learned. Additional design and construction standards used at MCB CPEN are the Department of Defense's Unified Facilities Criteria (UFC), and the Uniform Plumbing Code/California Plumbing Code.

B) Based on the design and performance standards described above, a set of procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects are identified in each individual contractual document. The US Resident Officer In Charge of Construction (ROICC) office at Camp Pendleton or Facilities Support Contracting (FSC) Camp Pendleton oversee the construction and performance verification and testing for projects at MCB CPEN. After performance verification is completed, the ROICC or FSC transfers the new infrastructure or equipment (real property) to MCB CPEN as an asset to be managed under the installation's asset management program.

Section 6: Spill Emergency Response Plan

Attachment D: Sewer System Management Plan Required Elements Order 2022-0103-DWQ
Each Enrollee shall develop and implement a spill emergency response plan to ensure prompt detection and response to spills to reduce spill volumes and collect information for prevention of future spills. At a minimum, this plan must include the following:
A) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSO's in a timely manner;
B) Notify other potentially affected entities (health agencies, water suppliers, etc.) of spills that potentially affect public health or reach waters of the State;
C) Comply with the notification, monitoring and reporting requirements of the General Order, State law and regulations, and applicable Regional Water Board Orders;
D) Procedures to ensure that appropriate staff and contractor personnel implement the Emergency Response Plan and are appropriately trained;
E) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
F) A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States or any drainage conveyance system; to minimize and remediate public health impacts and adverse impact on the environment resulting from the SSOs; remove sewage from the drainage conveyance system; clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving water;
G) Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery;
H) Implement pre-planned coordination and collaboration with storm drain agencies and other utility agencies/departments prior, during, and after a spill event;
I) Conduct post-spill assessments of spill response activities;
J) Document and report spill events as required by the General Order;
K) Annually, review and assess effectiveness of the Spill Emergency Response Plan, and update the SSMP as needed

Requirements (A-K) are consolidated below:

Objective of the Spill Emergency Response Plan

MCB CPEN WRD operates a diverse system of collections sewers, lift stations, force mains, and treatment facilities that are well maintained. The Spill Emergency Response Plan, also identified as the Sanitary Sewer Overflow Response Plan (SSORP) is maintained as Appendix B to this Sewer System Management Plan. The SSORP describes procedures to ensure prompt detection and response to spills and collect information for prevention of future spills including procedures to contain, terminate, recover, clean up, and mitigate.
The overflow emergency response plan is directed toward several key actions:

- Protecting the public health and the environment
- Performing repair, clean-up, and restoration of the area affected

- Returning damaged equipment and/or facilities back to normal operations as quickly as possible

Overflow Detection

MCB CPEN WRD may receive notification of a sewer system overflow (SSO) from the Marines and Sailors (and/or their family members) training and residing on the installation; contractors performing work on the installation; employees of the various businesses that operate on the installation; civilian employees of the installation; WRD field personnel; or early warning signals sent by "Smartcover" monitoring systems located at each of the installation's sewer lift stations and selected manholes in certain hot spots within the collections system.

If the individual discovering the SSO does not work within the Facilities Department (GF) at MCB CPEN, they will likely dial 911 (connecting them to the Provost Marshall's Office [PMO]) upon detecting the SSO. PMO dispatch operators will dispatch PMO personnel to investigate and secure the site and to ensure public safety. All PMO dispatch operators are also trained to forward the call to the GF-Unity Room (760-725-4324).

Upon receiving the call, GF-PWD trouble desk or the GF-Unity Room will immediately contact the WRD Wastewater Supervisor during working hours, or the on-duty WRD Wastewater O&M Crew Leader after working hours.

Alerts received from the SMARTCOVER monitoring system are sent automatically via email and text to all WRD leadership, all WRD Wastewater and Maintenance Section Supervisors, and on-duty Wastewater O&M personnel.

Initial Response

Upon notification of a spill, a Wastewater/Maintenance Work Leader or Supervisor assumes the responsibilities of Incident Commander and dispatches the closest emergency team (Pumper truck/Mechanic/Electrician) to survey the spill site.

A Handbook titled, "Spill Response and Reporting Instructions" (representative sections shown in Appendix B) has been developed to provide detailed instructions for response and notification in the event of a sanitary sewer spill. These instructions include wastewater personnel actions, spill volume estimation methodologies, and they cover both immediate in-house and regulatory notifications specific to the type of spill that has occurred.

Once on site, the emergency team assesses the situation and determines if additional personnel and/or equipment are required to support the response efforts – this includes any safety or traffic concerns. The cause of the spill (i.e. pipe blockage, pipe break, pump station failure, power failure, etc.) is then determined and arrested. A determination is made as to whether the spill reached surface waters or a conveyance to surface waters. The emergency team commences preliminary steps to mitigate the spill and completes the Quick Report Form (Appendix B).

Recovery and Cleanup (Mitigation)

All WRD Wastewater and Maintenance and Repair section personnel are trained to determine the proper course of action and equipment needed to stop an overflow and begin recovery and cleanup efforts, however, a Wastewater/Maintenance Work Leader or Supervisor assumes the responsibilities of Incident Commander. Every effort is made to contain and prevent the discharge of untreated and partially treated wastewater to surface waters and storm drains and to minimize or correct any adverse impacts on the environment resulting from an SSO. Sewer flows will be contained by creating berms with the use of sandbags, dirt, or other appropriate methods.

WRD personnel utilize a variety of equipment in recovery and clean-up efforts including combination / vactor trucks, drain cleaning machines, CCTV equipment, containment devices, and heavy equipment for repairs or assistance with cleanup. There is significant emphasis placed on containment and wash down in order to recover debris and overflow to include removal of sewage from the drainage conveyance system, however, great care is taken to ensure that wash down water does not reach water, dry riverbeds, storm drains, etc. Berms will be in place to contain sewage from spreading further downstream and staff will recover as much sewage discharge as possible for proper disposal to the collection system, including removal of sewage from the drainage conveyance system utilizing combination sewer cleaning trucks. Once enough of the solids have been removed, the impacted area will be washed with clean water (no disinfectants). All wash down water should be contained and subsequently removed to the sanitary sewer system by pump or sewer cleaning vacuum truck.

Public Access and Warning

During a response to an SSO, WRD personnel will make a determination regarding whether or not this issue of adverse public access is reasonably anticipated. In making this decision, several factors are considered, including but not limited to:

- Ease of public access/restriction based on fencing or resident property
- Terrain
- Destination of spill (i.e. land, storm drain, surface water)
- Proximity to schools
- Spill recovery requirements
- Ability to treat and remediate spill area

If it is determined that there is potential for adverse public access, WRD personnel will work with PMO and post the appropriate warning signs in all appropriate locations in accordance with the SSORP.

Additionally, when notification is made to the local health agency, they may request or require public warning postings depending on the specifics of the spill. WRD personnel will make certain that all posting requirements are met. Signs must be posted at all areas, including water bodies, where the public may encounter wastewater spills.

Water Quality Sampling and Analysis

WRD Wastewater Section Supervisor will coordinate with WRD Environmental Protection Specialist to ensure that proper sampling and analysis is conducted to comply with permit requirements and any regulatory agency requests. WRD will conduct water quality sampling within 18 hours after initial SSO notification for sewage spills in which an estimated 50,000 gallons or greater are spilled to surface waters. Samples will be collected at three locations and analyzed for ammonia and appropriate bacterial indicators per requirements in Order 2022-0103-DWQ. If the receiving water has no flow during the duration of the spill, the receiving water sampling locations will be reported as "No Sampling Due To No Flow". Water quality results will be uploaded into CIWQS. Additional details are provided in the SSORP.

Investigation and Documentation

As discussed above, upon arrival at the SSO, the emergency response crew observes flow volume and location of flow (both source and destination). They will utilize the methodologies illustrated in WRD's "Spill Response and Reporting Instructions Handbook" (Appendix B) to estimate sewer spill volume. They will determine if there are any witnesses to the overflow, and if so, gather additional information pertaining to start time, as well as other observations. This information is compiled and included on the SSO Report Forms found in the Spill Response and Reporting Instruction Handbook (Appendix B), which is then completed in its entirety by the crew in collaboration with the WRD Wastewater Section Supervisor and with WRD Senior Staff. The report form is thoroughly reviewed to provide the regulatory agencies with the most accurate information known at the time. Whenever possible, digital photographs will be taken to document pertinent aspects of the SSO. These photographs are kept in digital files maintained by WRD. If there are elements of the overflow that require further investigation or assessment, an in-depth investigation will continue beyond the scope of immediate response and remediation.

Equipment

WRD Wastewater Section personnel utilizes a variety of equipment in recovery and clean-up efforts including combination/vactor trucks, drain cleaning machines, CCTV equipment, containment devices, and heavy equipment for repairs or assistance with cleanup. A complete inventory of collections department equipment can be found in this SSMP, Section IV, Operations and Maintenance Program, Equipment and Replacement Parts.

Training

During a new employee's probationary period, the WRD Wastewater Section Supervisor conducts training on the proper procedures for responding to a SSO. In addition, employees receive field training conducted by the WRD Wastewater Section Work Leaders and senior collection systems personnel. Instruction includes:

- SSO Emergency Response
- Mitigation and Remediation
- Necessary Equipment
- Information Gathering, Documentation, and Completion of the SSO Report Forms

Regulatory Notification and Reporting

Camp Pendleton WRD is committed to making all regulatory notifications as required depending on the size, location, and final destination of the sanitary sewer overflow. Regulatory notification and reporting is done using as much data as is available at the time of the spill to meet required deadlines. This includes the development of a thoroughly reviewed and complete SSO Report Form.

Based on the requirements and guidelines set forth by each regulatory agency, CPEN WRD follows up on spill notifications with appropriate written/digital reporting depending on the criteria of each spill.

The following table is a summary of Regulatory Agency notification and reporting requirements.

Summary of SSO Regulatory Requirements		
Category 1	Definition	*Discharges of untreated or partially treated wastewater of any volume that reaches or will likely reach surface water/drainage channel tributary or that reach a storm drain and are not fully captured.*
	Notification	• ≥1,000 gallons, notify Cal OES and San Diego County DEH within 2 hours and obtain a notification control number; notify the San Diego Water Board within 24 hours.
	Reporting	In CIWQS, submit draft report within 3 business days of becoming aware of the SSO. Certify the report within 15 calendar days of SSO end date.
	Sampling	≥50,000 gallons, water quality sampling must be conducted within 18 hours after initial SSO notification and uploaded to CIWQS. An SSO Technical Report is required to be submitted within 45 days.
Category 2	Definition	*Discharges of untreated or partially treated wastewater of ≥1,000 gallons that do not reach surface water, drainage channel or municipal storm system.*
	Notification	• ≥1,000 gallons, notify Cal OES within 2 hours and obtain a notification control number
	Reporting	In CIWQS, submit draft report **within 3 business days** of becoming aware of the SSO. Certify the report **within 15 calendar days** of SSO end date.
Category 3	Definition	Discharges of untreated or partially treated wastewater *≥50 gallons* **and <1,000 gallons** that does not discharge to a surface water.
	Reporting	In CIWQS, submit certified report within 30 calendar days of the end of the month in which the SSO occurred.
Category 4	Definition	Discharges of untreated or partially treated wastewater of ***<50 gallons*** that does not discharge to a surface water.
	Reporting	In CIWQS, submit certified report within 30 calendar days of the end of the month in which the SSO occurred.
Owned and/or Operated	Definition	Discharges of untreated or partially treated wastewater *≥1,000 gallons and/or result in a discharge to a drainage channel and/or surface water; and/or discharge to a storm drain pipe that was not fully captured and returned to the sanitary sewer system* resulting from blockages or other problems within MCB CPEN Public-Private Venture housing sewer lateral connected to the enrollee's sewer system.

	Notification	• ≥1,000 gallons, notify Cal OES within 2 hours and obtain a notification control number; notify the San Diego Water Board within 24 hours.
	Reporting	In CIWQS, submit certified report within 30 calendar days of the end of the month in which the SSO occurred.

*Detailed reporting requirements with regulatory personnel and phone numbers is included in the MCB CPEN WRD "Spill Response and Reporting Instructions Handbook" (Appendix A).

Section 7: Sewer Pipe Blockage Control Program

Attachment D: Sewer System Management Plan Required Elements – Order 2022-0103-DWQ
The SSMP must include procedures for the evaluation of the Enrollee's service area to determine whether a sewer pipe blockage control program is needed to control fats, oil, grease, rags and debris. If the Enrollee determines that a program is not needed, the Enrollee must provide justification for why it is not needed. The procedures shall include the following as appropriate:
A) An implementation plan and schedule for a public education outreach program that promotes proper disposal of pipe-blocking substances;
B) A plan and schedule for the disposal of pipe-blocking substances generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of substances generated within a sanitary sewer system service area;
C) The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages;
D) Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;
E) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;
F) An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and
G) Implementation of source control measures for all sources of FOG reaching the sanitary sewer system for each section identified above.

The procedures detailed in this Section are implemented by all new and existing non-residential food preparation facilities located aboard the Installation and are instituted by all area commanders that oversee and are involved with the construction, operation, and maintenance of facilities that generate and/or work with any FOG. Personnel subject to these guidelines include, but are not limited to, any civilian or military member who processes, handles, serves, or otherwise works in association with food in facilities such as mess halls, restaurants, snack bars, cooking schools, or any other potential generator of FOG.

A) Public Information and Outreach

Public awareness is essential to any Sewer Pipe Blockage Control Plan. The Installation will maintain an educational and enforcement program that emphasizes proper operation and maintenance of any grease trap connected to the wastewater system and best management practices for proper disposal of items that can disrupt the operation of the sanitary sewer collection system and treatment plants . All public awareness efforts must be documented and records must be available for inspection.

Commercial Facilities on Camp Pendleton Education - The Installation recognizes that food service establishments typically have limited time and resources available for activities other than food preparation. Furthermore (personnel turnover may be high and the facility may be unaware of the environmental aspects of their activities. However, it is critical that FOG is kept from the wastewater

system. Therefore, all non-residential establishments that work with FOG shall establish and maintain a grease control training program.

- At a minimum, the training shall establish waste awareness by informing all new and current employees of food waste impacts (on the wastewater system) and proper food waste handling techniques. This training shall be given to all new employees prior to food handling. All employees shall receive yearly refresher training on FOG impacts and proper handling techniques. FOG training course DVD titled "Oil & Grease Handling" is provided to all food service establishments.
- A training checklist is also provided to all food service establishments as an example of information that should be posted by drains to increase employee awareness of proper FOG handling techniques. All training efforts shall be documented and training records shall be available for inspection.
- Facility supervisors are critical to this Grease Control Program Policy's success. Supervisors are responsible for maintaining employee awareness of and compliance with this Base Orders. The level of commitment by supervisors can be directly correlated to the achievements of the program. Therefore, supervisors are strongly encouraged to attend more frequent training on FOG best management practices. Supervisors will be held accountable for all FOG violations at their facility.

Residential Communities on Camp Pendleton – As part of the WRD's Source Control Pretreatment Program, best management practice general awareness information is disseminated yearly to all Installation residents via informational flyers. At a minimum, this information explains the proper method of grease disposal and pipe-blocking substances. If grease loading of the wastewater system becomes an issue, the program will be modified to provide more frequent distribution.

Camp Pendleton Units Operating Oil Water Separators (OWS) and Grease Traps – All units receive mandatory initial training and annual training in the operations and maintenance of OWS and Grease Traps.

Quarterly meeting between Public Works staff and Area S4 staff are conducted. Proper disposal of pipe-blocking material is included in these meetings on an as needed basis to educate Area command staff of concerns and disruptions to the wastewater collection system.

B) Plan and Schedule for Pipe-Blocking Substance Disposal

The MCB CPEN grease interceptor service contract is managed by a WRD contract executed through Facilities Support Contracts (FSC). WRD identifies roles and responsibilities for proper disposal of FOG at approved sites located off-Base. All waste removed from grease interceptors must be disposed of at facilities permitted by the County of San Diego or applicable regulatory agencies to receive such waste.

The Base contract identifies roles and responsibilities for the FOG contractor to dispose of FOG at approved sites located off Base. The addresses for each disposal site are listed below.

1. Atlas Pumping Services, 12740 Vigilante Rd. Lakeside, CA 92040

2. Baker Commodities, 4020 Bandini Blvd. Vernon, CA 90058

3. Co-West Commodities, 2586 Shenandoah Way San Bernardino, CA 92407

Other pipe-blocking substances are removed and hauled to drying beds located at select sewer lift stations on Camp Pendleton for dewatering prior to disposal to a landfill.

C) Legal Authority to prohibit discharges and measures to prevent spills/blockages

MCB CPEN has legal authority to inspect, maintain, and prohibit discharges of FOG originating from oil water separators and grease traps discharging into the wastewater system through Base Orders (BO) 5000.5 Base Regulations, 11345.1A *OWS, Closed-loop system, and Vehicle Washrack Management* and 11345.2 *FOG Program* . Grease Trap design standards and installation requirements are identified in the *DOD OWS Guidance manual*. Each FOG producing facility is responsible for maintaining records for their respective grease trap or OWS. MCB CPEN has created a document outlining each Unit's responsibility titled *Oil/Water Separator Unit Guidance* available on request.

https://www.pendleton.marines.mil/Staff/Principal-Staff/G-F-Facilities/#Tab/water-resources-division

D) Requirements and Standards Related to Grease Removal Devices

All facilities built on the base must comply with the Camp Pendleton Requirements (CPRs). CPRs have been developed from the DOD Uniform Guide Specifications, the Uniform Plumbing Code and other pertinent specifications. The CPRs are incorporated into every construction contract awarded at MCB CPEN.

Examples of pertinent CPRs:

- To effectively remove FOG, grease traps must be properly sized, constructed, and installed in the correct location. All grease-bearing drains, such as mop sinks, wash sinks, prep sinks, utility sinks, dishwashers, pre-rinse sinks, and floor drains in food preparation areas should discharge to a grease trap . A toilet or clothes washing machine should not be plumbed to a grease trap.
- It is essential that only grease- laden wastewater be permitted to enter the grease trap. Suspended solids, such as sugar, starches, and other non-FOG food items will accumulate in the grease trap and reduce its efficiency. Solid waste items, such as straws, napkins, and mop strings, can cause blockages in the system. Under no circumstances should waste strainers be removed from, and/ or solid waste disposed into, the grease trap.

All facilities at MCB CPEN that have the potential to generate FOG are required to have Grease Traps per BOs and CPRs.

Grease traps are cleaned in accordance with the Contractor's work schedule on either a monthly or quarterly basis. The contract standard requires grease traps to be left clean and free of grease on baffles, perforated surfaces, and all other removable parts so they function to meet their intended purpose. Records and reports are generated for each cleaning and provided to FSC monthly. WRD staff is actively working with the FSC Contracts Division to enhance contracted monitoring and cleaning efforts to better align with Unified Facilities Criteria (UFC) and Best Management Practices (BMPs).

E) Inspection and Enforcement Authority

As a US Military Installation, the MCIWEST-MCB Camp Pendleton Commanding General has complete authority over all facilities on base. The Commanding General has delegated the authority to inspect all commercial and military grease producing facilities and the ability to take any enforcement action to the Facilities Directorate, Public Works Department. Camp Pendleton is appropriately staffed to inspect and enforce the FOG ordinances and performs this via contract on a quarterly basis.

F) Sewer System FOG "Hot-Spots" and Maintenance Schedule

All *commercial food services* facilities and military *"Dining Halls"* are FOG hot-spots subject to blockages and BO 11345.2 requires the following Grease Trap Maintenance Schedule:

1. Dining hall and commercial restaurant supervisors and/or WRD representatives shall inspect grease traps at least once every 90 days. A grease trap inspection checklist form shall be completed every 90 days and will be maintained for a period of three years. Facilities that have a history of grease trap problems shall be inspected more often. Appropriate type and concentrations of biological agents and/ or enzyme use shall be confirmed semi-annually.
2. Grease traps will be skimmed as needed. Grease traps will be pumped out as required to prevent overflows, wastewater system blockages, and excessive biological and chemical oxygen demands on the system. Complete cleaning of grease traps should include removal of all grease caps, liquids, and solids. The sides should be scraped or hosed down and the trap refilled with water.
3. Dining hall supervisors should contact FSC at (760) 725-3342 if any problems with the grease traps are experienced and/or when a grease trap needs to be serviced. Problems are indicated by wastewater backups, reduced wastewater flow rates, and a foul smell coming from the drain area. Facilities should never continuously run hot water to flush the grease trap.

Washing and cleaning military vehicles and equipment is a critical requirement for their proper operations and maintenance. This function is accomplished at "Wash Racks" located across MCB CPEN. All wash racks have installed *Oil Water Separators* (OWS). MCB CPEN OWS are "closed loop systems" when operated and functioning properly. As with all facilities systems, operator error and malfunctions occur. All OWS overflow into MCB CPEN sanitary sewer system making them all FOG "hot-spots". BO 11345.1A requires the following OWS Operations and Maintenance Schedule:

1. Ensure that equipment washrack drains and sediment basins are free of trash and debris.
2. Ensure that all OWS and sediment basin manway covers are accessible and that bolts can be removed for access, inspection, and cleaning.
3. Ensure weekly inspections of OWSs and sediment basins are performed and documented in a bound logbook. The inspections will be conducted in the following manner:
    a. Using a SludgeJudge™ or similar device, measure and record the oil and sediment levels in each compartment of the OWS and sediment basin. Some facilities aboard MCB CamPen may not have sediment basins.
    b. Record the results of the measurements for each OWS compartment and sediment basin in a bound logbook. This logbook shall be available for review at all times.

4. If there is an accumulation of six or more inches of sediment or three or more inches of oil in any OWS compartment or sediment basin, the unit Hazardous Waste Manager will contact the ES Waste Minimization Manager at (760) 725-1963 to request that the OWS be cleaned. The request must include the location and size of the OWS, the number of inches of oil and water observed, and the level of sediment observed in each OWS compartment and sediment basin.

G) FOG Source Control Measures

MCB CPEN's source control measures for commercial food service facilities and military dining halls, begins with Base Order 11345.2 which directs the following "Proper FOG Handling Techniques":

1. The intentional release, disposal, or introduction of FOG into the wastewater system is prohibited aboard MCB CPEN. Under no conditions should FOG, or FOG components, be poured, scraped, or otherwise disposed of in sinks, toilets, or any other wastewater system constituent.
2. The best way to manage FOG is to keep it out of the sewer system. All fryer oil should be collected and managed appropriately. FOG under fryer baskets should be soaked up with food grade paper and disposable towels. Cloth towels should not be used as grease will enter the wastewater system when the towel is washed.
3. A large portion of the FOG in the wastewater system originates from dishwashing and clean-up activities at food preparation facilities. The majority of this FOG comes from the pot sink. All FOG should be scraped off all cooking supplies and equipment, including cookware, utensils, dishes, and other serving ware, and disposed of in the proper container, such as a rendering tank or trash can. FOG collection containers are typically supplied by the disposal contractor and consist of a 55-gallon container with a clamp-on type cover. Do not dispose of scrapings in the sink, toilet, floor drain, or any other component of the wastewater system.

WRD must approve all detergents and cleaning products that are ultimately discharged to the wastewater system. Grease trap plans are based on estimates of the peak and average daily water flow and FOG concentrations. Unusually high water flows and FOG concentrations associated with hood cleaning and special events cannot be properly processed by the system. Therefore, FOG cleaning events involving large water use such as hood cleaning require notification of supporting contractors/WRD.

MCB CPEN's source control measures for Oil Water Separators (OWS) begin with Base Order 11345.1A which directs the following:

1. Directs each Command, unit or activity that operates and maintains a washrack to designate an Environmental Compliance Coordinator (ECC) with the responsibility of coordinating the operations and maintenance of each OWS and its associated equipment.
2. Ensure that personnel assigned with ECC and/or OWS responsibilities have completed the ECC Course and the Oil Water Separator Course.
3. Prohibit the following improper use of equipment washracks:
    a. Use of soaps, detergents, cleansers, degreasers, or solvents.
    b. Parking of vehicles, storage of equipment, or materials on the equipment washrack for any purpose other than washing.
    c. Disposal of wastes such as oils, radiator fluids, solvents, and paint.
    d. Performing vehicle or equipment maintenance on the equipment washrack.
    e. Flushing and/or washing of fuel tanks, SIXCONs, jerry cans, and similar containers.
4. Provide the following assistance before and after cleaning:

   a. Prior to cleaning, ensure that all vehicles and equipment are removed from the equipment washrack area, all OWS and sediment basin manway covers are accessible, and that bolts can be removed.
   b. After the contractor has cleaned the OWS, record the date of cleaning in the logbook. Obtain a copy of the DD 1348-1 Form (manifest) from the ES Waste Minimization Manager for the oil and sediment removed from the OWS.
5. Immediately report any OWS malfunction to the ES Waste Minimization Manager.

Section 8: System Evaluation, Capacity Assurance, and Capital Improvements

Attachment D: Sewer System Management Plan Required Elements Order 2022-0103-DWQ
The collections system agency shall prepare and implement a plan to include procedures and activities for routine evaluation and assessment of system conditions; capacity assessment and design criteria; prioritization of corrective actions; and a capital improvement plan (CIP)
A) System Evaluation and Condition Assessment Plan including procedures to: evaluate the sanitary sewer system assets utilizing the best practices and technologies available; identify and justify the amount (percentage) of its system to be assessed each year; prioritize the condition assessment of system areas that hold a high level of environmental consequence if vulnerable to collapse, failure, blockage, capacity issues, or other system deficiencies; prioritize the condition assessment of system areas that are located in or within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas; prioritize the condition assessment of system areas that are within the vicinity of a receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) list; assess the system conditions using visual observations, video surveillance and/or other comparable system inspection methods; utilize observations/evidence of system conditions that may contribute to exiting of sewage from the system which can reasonably be expected to discharge into a water of the US; maintain documents and recordkeeping of system evaluation and condition assessment inspections and activities; and identify system assets vulnerable to direct and indirect impacts of climate change, including but not limited to sea level rise, flooding and/or erosion due to increased storm volumes, frequency, and/or intensity, wildfires, and increased power disruptions.
B) Capacity Assessment and Design Criteria: Include procedures to identify system components that are experiencing or contributing to spills caused by hydraulic deficiency and/or limited capacity, including procedures to identify the appropriate hydraulic capacity of key system elements for dry-weather peak flow conditions that cause or contribute to spill events; appropriate design storms or wet weather events that causes or contributes to spill events; capacity of key system components; and identify the major sources that contribute to the peak flows associated with sewer spills. The capacity assessment must consider data from existing system condition assessments, system inspections, system audits, spill history, and other available information; capacity of flood-prone systems subject to increased infiltration and inflow, under normal local and regional storm conditions; capacity of systems subject to increased infiltration and inflow due to large and/or higher-intensity storm events as a result of climate change; increases of erosive forces in canyons and streams near underground and aboveground system components due to larger and/or higher-intensity storm events; capacity of major system elements to accommodate dry weather peak flow conditions, and updated design storm and wet weather events; and necessary redundancy in pumping and storage capacities.
C) Prioritization of Corrective Action: Findings of condition assessments and capacity assessments must be used to prioritize corrective actions. Prioritization must consider the severity of the consequences of potential spills.
D) Capital Improvement Plan: include project schedules including completion dates for all portions of the capital improvement program; internal and external project funding sources for each project; and joint coordination between operations and maintenance staff, and engineering staff/consultants during planning, design, and construction of capital improvement projects; and interagency coordination with other impacted utility agencies.

A) System Evaluation and Condition Assessment:

MCB CPEN WRD does not experience overflow events caused by peak flow or hydraulic deficiencies. From 2008-2010, a series of projects designed to upgrade and increase the capacity of CPEN's wastewater systems based on the Congressional/DOD initiative known as "Grow the Force" (significantly growing the size and capacity of the US Marine Corps) were developed, validated and funded. These Military Construction (MILCON) and Centrally Managed (Marine Corps) projects began award and execution beginning in 2011. The "Grow the Force" initiative was subsequently abandoned in 2013-14 and has the newest initiatives seek to reduce the size of the US Marine Corps and its facilities. Thus, MCB CPEN facilities have an excess of capacity versus hydraulic deficiencies.

Design (South System)	
Design Avg Daily Flow	7.5 MGD
Design Max Day Flow	15 MGD
Actual (South System)	
Current Average Daily Flow	2.4 MGD
Current Max Day Flow	4.1 MGD

Design (North System)	
Design Avg Daily Flow	4 MGD
Design Max Day Flow	8 MGD
Actual (North System)	
Current Average Daily Flow	0.8 MGD
Current Max Daily Flow	1.2 MGD

The SSMP goals for condition assessments are identified in section 1 of this SSMP. The planned condition assessment for the gravity pipelines is 25% per year, manholes is 25% per year, force mains is 33% per year, and lift stations is 25% per year. These assessment frequencies are based on current conditions and may be adjusted if assessments and conditions warrant changes.

Condition assessments of the collection system will be prioritized based on most current assessment date; based on location that may cause a high level of environmental consequence; within 500 ft of a surface water, steep terrain, high groundwater level, or environmentally sensitive area; or within the vicinity of a receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) list. Condition assessments will be performed by the use of visual observations and/or video surveillance (CCTV). Records of system evaluation and condition assessment inspections will be maintained, including a database of all collection system inspections. Vulnerabilities to collection system assets will be identified during condition assessments due to impacts of climate change, including but not limited to: sea level rise; flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; wildfires; and increased power disruptions.

B) Capacity Assessment and Design Criteria:

Design criteria for MCB CPEN wastewater systems do exist and are not deficient. Wastewater system design criteria address required sizing and/or upgrading of all system components to ensure the hydraulic capacity of the wastewater system supports all new facilities and/or repair and improvements to existing facilities. These design criteria are contained in the Camp Pendleton Requirements (CPR) documents contained within all awarded contracts and based on the Unified Facilities Criteria (UFC), the Uniform Plumbing Code, and/or the California Plumbing Code as applicable. Engineering staff perform design analysis and impacts to the collection system as part of any new project being developed on Camp Pendleton.

While enhancing capacity is not an issue for MCB CPEN, capacity maintenance issues are identified during sanitary sewer maintenance and cleaning activities. MCB CPEN contracts a Condition Assessment of its wastewater systems annually. When the condition assessment identifies the need to repair or replace a system component or line, a project is developed to accomplish the repair and/or replacement.

C) Prioritization of Corrective Action:

Corrective actions of the collection system will be prioritized based on severity of the deficiency found during a condition assessment and future planned projects. Repairs will be prioritized to portions of the collection system within five hundred feet of a surface water. Repairs will be scheduled to begin within one year of discovering a severely defective sewer line gravity segment if within 500 feet of a surface water and would pose a risk to human health or the environment, and received a structural grade of five based on the PACP rating system, or a structural grade of four and in WRD professional judgement will produce SSOs or discharge subsurface to a surface water because of the observed defective condition. Projects will be added to the capital improvement plans based on the severity and funding thresholds identified in the following section.

D) Capital Improvement Plan:

As a federal entity, MCB CPEN Capital Improvements are funded by Congressional Appropriations versus the rate payer, state grants and bond funding mechanisms utilized by a California Special District or City. This fact results in much less flexibility and much less local decision making capability. Project schedules are directly determined by the dollar values and defining characteristics of the project which put them into 1 of 3 categories. The more local control of project funding the less time it takes to execute the repair or replacement.

Category	Funding Limits	Control	Schedule
M1(Repair)/R1(Const)	$500k/$100k	Local Installation Commander	Within or next Fiscal Year
M2(Repair)/R2(Const)	$7.5M/$2M	Centrally Managed – HQ USMC	3-5 years (if approved)
MILCON(Repair/Const)	>$7.5M/>$2M	Congressional Appropriation	6+ years (if approved)

MCB CPEN WRD continuously develops, validates and executes a portfolio of M1/R1, M2/R2 and MILCON projects to maintain and enhance the capacity and capability of its wastewater systems. An updated list of ongoing projects is available on request. POC: Joel Heywood (joel.heywood@usmc.mil)

Section 9: Monitoring, Measurement, and Program Modification

Attachment D: Sewer System Management Plan Required Elements Order 2022-0103-DWQ
The collections system agency shall:
A) Maintain relevant information, including audit findings, that can be used to establish and prioritize appropriate SSMP activities;
B) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
C) Assess the success of the preventative maintenance program;
D) Update program elements, as appropriate, based on monitoring or performance evaluations; and
E) Identify and illustrate spill trends, including: frequency, location, and volume.

A) Maintain Relevant Information:

MCB CPEN has maintained a spreadsheet tracking the following SSO since 1994:

- Spill Location (latitude/longitude coordinates)
- Date and Time
- Cause
- Volume Spilled
- Volume Recovered
- Mitigation Actions

This data is used to analyze trends that are used to identify “hot-spots” and recurring failures and to develop measure of program effectiveness.

B) Monitor Implementation and Effectiveness:

As stated in Section 1, the PRIMARY goals of MCB Camp Pendleton’s Sewer System Management Program are:

1. Prevent SSOs.
2. Properly manage, operate, and maintain all portions of the MCB’s Collections System.
3. Ensure adequate sewer capacity to convey the peak wastewater flows.
4. Minimize the frequency of any SSO’s that do happen.
5. Mitigate the impacts associated with any SSO.

The accomplishment of these goals requires the integration of all aspects of the SSMP into a comprehensive “living” management program. To evaluate the effectiveness of our management efforts, MCB CPEN WRD utilizes the data above with industry standard Annual Performance Indicators to develop requirements-based risk portfolios and prioritize operations, maintenance and management activities according to funding and personnel limitations.

Annual Performance Indicators Used:

- Total number of SSOs per year, including the previous 3-5 years

- Number of SSOs by cause (e.g., roots, grease or FOG-related blockage, debris, line failure, capacity deficiency, storm flow exceeding design, lift station failure, or other)
- Total volume of SSOs and volume contained and returned to the system
- Number and percentage of SSOs that reached surface water
- Total volume and percentage of SSO volume that reached surface water
- Footage of main lines and percentage of system cleaned annually
- Footage of main lines and percentage of system inspected by CCTV or video annually

Based on these Annual Performance Indicators, WRD has developed the following Implementation Metrics:

- Clean and condition assess all gravity sewer mains and sewer manholes once every four years.
- Structurally condition assess all gravity sewers within a 4- year period using Closed Circuit Television (CCTV).
- Condition assess all sewer manholes (SMHs) once every four years.
- Inspect and perform preventative maintenance on all sewer lift stations (SLSs) semiannually.
- Perform monthly inspections of air relief valves.

C) Assess PM Program

The success of the Preventive Maintenance (PM) Program will be demonstrated by a reduction (or maintained low level) of non-force majeure spills and by the results of the annual CCTV condition assessment.

D) Update SSMP Elements Based on Performance Indicators

The following table is utilized to evaluate and track the performance of WRD's SSMP elements:

SSMP Element	Purpose of Element	Performance Indicator
Goals	Establish WRD Priorities and focus	Annual review of goals based upon results of performance evaluations.
Organization	Document WRD organization, staff and chain of command/communication for SSO response	Review of Organization Chart and all contact information, making any changes identified
Legal Authority	Ensure WRD has sufficient legal authority to properly maintain and protect the integrity of the wastewater system	Annual review of codes and/or ordinances for revisions, including schedule for identified updates.
O&M Program	Minimize blockages and SSOs by properly operating and maintaining the system	• Total number and volume of SSOs • Number of repeat SSOs (from same location as any previous SSO)

		• Number of main line SSOs • Total volume spilled • Total amount recovered • Total amount estimated to reach surface waters • Percent reaching surface water • Number of pipe failures • Total length of pipe CCTV'ed • Total length of pipe hydrocleaned • Total length of pipe repaired or replaced
Design and Performance Stds	Ensure new facilities are properly designed and constructed	Annual review of new technologies and materials for collection systems assets.
OERP	Provide timely and effective response to SSO emergencies and comply with regulatory reporting requirements	• Average response time from call to arrival • Average response time from arrival to SSO stoppage and cleanup • Percent of total SSO volume contained or returned to sewer
FOG Control	Minimize blockages and overflows due to FOG	• Number of blockages due to FOG • Number of SSOs due to FOG • Number of FOG-producing facilities inspected
System Eval and Capacity Assessment	Ensure any new facility or facility modification can be supported by existing capacity or the project includes necessary capacity enhancements	Quarterly review list of M1/R1, M2/R2 and MILCON facilities projects to ensure system capacity has been evaluated for each.
Monitoring, Measurement and Program Mod	Evaluate effectiveness of SSMP, keep SSMP up-to-date, and identify necessary changes to SSMP Elements	• Prepare and update performance results in Elements 4, 6 & 7. • Review and update callout forms as needed. Conduct annual review of CIWQS data.
Program Audits	Formally identify SSMP effectiveness, limitations, and necessary changes every 3 years	Date of completion of last annual audit
Communication Plan	Communicate with the public and satellite agencies.	Review of communication received from public/command

E) Identify and illustrate SSO trends, including: frequency, location, and volume

Spreadsheets and graphs available upon request. POC: Joel Heywood (joel.heywood@usmc.mil)

Section 10: SSMP Program Audits

Attachment D: Sewer System Management Plan Required Elements Order 2022-0103-DWQ
The collections system agency shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every three years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the agency's compliance with the SSMP requirements, including identification of any deficiencies in the SSMP and steps to correct them.

As of 2019, MCB CPEN WRD Director, Operations and Maintenance Manager, and Wastewater Section Supervisor are responsible for conducting the internal audit of the SSMP. This audit will be conducted every 3-years and will focus on evaluating the effectiveness of WRD's SSMP and compliance with the requirements established by the California State Water Resources Control Board for the plan. This audit will include identifying any deficiencies, steps being taken to correct them and timeline for completion of those steps.

The 3-year audit will include the following elements:

- Section by section review of the entire SSMP.
- Completion of any needed or recommended updates and revisions, including attachments.
- Distribution of changes to all WRD SSMP/Spill Response Reporting Instructions Workbook binders.
- Review and evaluation of the 3 most recent Annual Year-End Summaries of SSOs.
- Review and evaluation of the 3 most recent Annual Maintenance Reports.
- Implement any changes required as a result of the review and evaluation of the above listed reports.
- A brief written summary of any notable Audit results and findings, including comments on the effectiveness of the SSMP, WRD's compliance with SSMP requirements, and identification of any deficiencies and the recommended corrective steps.

A copy of the audit report will also be kept in each SSMP binder at the back of Section 10.

Section 11: Communications Program

Attachment D: Sewer System Management Plan Required Elements Order 2022-0103-DWQ
The collections system agency shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the collections system agency as the program is developed and implemented. The collections system agency shall also create a plan of communication with systems that are tributary and/or satellite to the collections system agency's sanitary sewer system.

WRD has its own webpage within Camp Pendleton's website. The webpage will contain a link to download this SSMP. WRD coordinates with Camp Pendleton's Office of Strategic Communications to update our webpage and to communicate updates to our webpage via the main Camp Pendleton Website, Camp Pendleton's Facebook page and Twitter.

WRD will continue to communicate with military units and commercial businesses via email, flyers and direct mailings. When appropriate, the WRD Director attends "town-halls" hosted by the MCIWEST-MCB Camp Pendleton Commanding General as his subject matter expert and Legally Responsible Official for the installation's wastewater and water systems.

The WRD Director and/or MCIWEST staff are the installation's main conduit to communicating with external agencies and organizations. Duty and responsibilities include members of numerous external groups, boards, and steering committees.

- Member of San Diego County Water Authority Board of Directors
- Member of the San Diego County Water Authority Member Agencies Managers Group
- Member of the San Diego County Integrated Regional Water Management Plan Advisory Committee
- Member of the Santa Margarita River Watermaster Executive Steering Committee
- Member of the Santa Margarita River Watermaster Technical Advisory Committee
- Member of the DOD Water Managers Working Group
- Member of the NOAA Southwest Drought Taskforce
- Member of the Metropolitan Water District of Southern California Water Dialogue Working Group
- Member of the Western Governor's Regional Panel working group

The WRD Director and staff also participate in numerous professional associations.

Appendix A: Spill Response and Reporting Instructions Handbook

SPILL RESPONSE AND REPORTING INSTRUCTIONS

NOTIFICATION:

During Work Hours (0700-1600) – Unity Room Operator notifies Wastewater Branch Supervisor and/or Work Leader.

After 1600 – Unity Room Operator notifies Wastewater Supervisor and/or on duty Collection System Operator.

If the on-duty Collection System Operator cannot be contacted, the following personnel will be contacted in the order shown below:

1. Rick Good 760-637-6732
2. Tony Velletto 760-587-3779
3. Josh Capito 760-846-2273
4. Joel Heywood 760-214-4553

WRD Wastewater Spill Response and Reporting Duties and Responsibilities:

1. Wastewater Work Leader or Supervisor assumes responsibility of Incident Commander
2. Incident Commander dispatches closest booster along with emergency team (Pumper truck / Mechanic / Electrician) to Survey emergency
3. First team member at the scene evaluates the situation and communicates with the Incident Commander
   - ☐ Determines cause of spill emergency
   - ☐ Evaluates the situation, determines if spill reaches surface waters, or channel to surface waters and reports information to Incident Commander
   - ☐ Commences preliminary steps to mitigate the spill
   - ☐ Completes Quick Report Form
4. Incident Commander executes plan of action calling for additional personnel and equipment as required (see detailed plans of action below developed for specific locations of spill)
   - ☐ Anytime a road closure or traffic control is required on main thoroughfare (over 35 mph) WRD WW calls PMO at 760-763-2077/2076
   - ☐ If on roadway in housing, or under 35 mph WRD WW performs traffic control “in- house”
   - ☐ Fire department is called for confined space entries, paramedics if anyone is injured: (760-725-4321)
5. Correct cause of sewer spill (e.g., blockage, pipe break, pump station failure, or power failure)
6. Commence spill recovery and clean-up:
   - ☐ Cleansing of site using fresh water wash down and removal of debris
   - ☐ Ensure that wash down water does not reach waters, dry riverbed, storm drain, etc.
   - ☐ If necessary, disinfection of site using lime
   - ☐ Determination of size of spill using methodology shown below
   - ☐ Posting of sign, as required, if potential for public contact exists
7. Incident Commander completes Sewer Overflow Report Form and submits to the Emergency Coordinator, within timeframe determined by Category of Spill

8. WRD leadership and staff consult Spill Reporting Instructions below and contact emergency and regulatory personnel via phone, email and CIWQS data base as directed for each Category of Spill

Sample Detailed Location-Specific Spill Response Actions

Lift Station and Force Main Emergency By-Pass Pumping Procedures

PROBLEM: Sewage Force-Main Break (residential neighborhood)

EMERGENCY PROCEDURES:

- ☐ Dispatch a sewer crew to the site to assess the immediate danger to the environment and to determine who and what might be affected.
- ☐ Refer to the sewer maps for location of sewers and determine the routing of the force main before responding to the call.
- ☐ Request additional manpower and equipment as needed based on initial damage assessment (e.g. excavating crew, bypass pumping equipment, Etc.)
- ☐ Bypass pumping from the pump station wet well to the force main discharge manhole may be required. If necessary, set up bypass pumping equipment.
- ☐ Call in additional crews to set up flotation booms across streams, brooks, sandbagging, etc., as necessary. Unless special conditions exist, bypassing the broken force main is a priority before containing the bypass.
- ☐ Gather and remove sewage related debris and organic matter from the affected area.
- ☐ If the waste water is in the streets/roads (public or private), then contain the waste water as best as possible with sand bags or other industry accepted alternatives to minimize any impact to public health or the environment.
- ☐ Sandbag nearby catch basin inlets or storm drains to prevent the waste water from entering the drainage system and causing potential contamination to the tributary receiving waters.
- ☐ If ponding should occur on the street or easement (public or private), cordon off the area.
- ☐ Remove as much of the sewage as possible.
- ☐ Disinfect the ponding areas with an industry standard disinfectant and post with appropriate signage.
- ☐ If the waste water should jeopardize a playground or park, cordon off the entire area. Close the park to the public until the issue has been remedied to the satisfaction of the local and state boards of health and the local school superintendent.
- ☐ After the bypass pumping equipment is at the site and in place, lock-out and tag-out (LOTO) the pumps in the pumping station.
- ☐ Draw down the wet well as much as possible and maintain low level.
- ☐ Drain the force-main by first closing down the gate valve on the upstream side of the discharge check valve in the pumping station.
- ☐ Open the check valve by hand and secure it in place.
- ☐ Slowly bleed the force-main back into the wet well by slowly opening the gate valve on the discharge side of the pump, but only to the point where the force-main stops leaking and there is enough room to make the repair. Constant communication must take place between the crew located at the break and the crew located at the pump station.

- ☐ Close the gate valve and return the check valve to its normal operating position and then fully open the gate valve.
- ☐ Repair force main break as per policy.
- ☐ After the repair is complete, remove LOTO and return the pumps to normal operating position.
- ☐ Run the pump in the hand position to fill the force-main. Once completed, observe several pumping cycles before completely backfilling the excavation.
- ☐ Upon confirmation of adequacy of the repair, backfill the excavation (if necessary) and restore surface conditions to match existing conditions.
- ☐ While the crew is restoring the excavation, the crew leader should conduct a preliminary assessment of damage to private and public property. The crew leader should take appropriate photographs and video footage; if possible, of the outdoor area of the sewer over flow and impacted area to thoroughly document the nature and extent of the impacts.
- ☐ Make out a report indicating; the time of the call, description of the problem, how the repair was made, personnel present and equipment used.
- ☐ If sewage bypassed the collection system, notify Environmental security and complete the appropriate spill report form.

Minimum Specialized Equipment

- Standard disinfectants
- Safety harness and lifeline if applicable
- Tripod and Harness
- Portable pumps
- Safety cones/barricades
- Gas meter-for oxygen deficient, explosive or toxic gases
- Confined space entry tri-pod and associated equipment
- Truck with hoist
- Vactor Truck
- Power saw (circular)
- Pipe cutter (hydraulic)
- Caution tape
- Sediment trap
- Flotation booms if necessary
- Self-Contained Breathing Apparatus (SCBA)

Summary of SSO Regulatory Requirements		
Category 1	Definition	*Discharges of untreated or partially treated wastewater of any volume that reaches or will likely reach surface water/drainage channel tributary or that reach a storm drain and are not fully captured.*
	Notification	• ≥1,000 gallons, notify Cal OES within 2 hours and obtain a notification control number; notify the San Diego Water Board within 24 hours.
	Reporting	In CIWQS, submit draft report within 3 business days of becoming aware of the SSO. Certify the report within 15 calendar days of SSO end date.
	Sampling	≥50,000 gallons, water quality sampling must be conducted within 18 hours after initial SSO notification and uploaded to CIWQS. An SSO Technical Report is required to be submitted within 45 days.
Category 2	Definition	*Discharges of untreated or partially treated wastewater of ≥1,000 gallons that do not reach surface water, drainage channel or municipal storm system.*
	Notification	• ≥1,000 gallons, notify Cal OES within 2 hours and obtain a notification control number
	Reporting	In CIWQS, submit draft report **within 3 business days** of becoming aware of the SSO. Certify the report **within 15 calendar days** of SSO end date.
Category 3	Definition	Discharges of untreated or partially treated wastewater ***≥50 gallons*** **and <1,000 gallons** that does not discharge to a surface water.
	Reporting	In CIWQS, submit certified report within 30 calendar days of the end of the month in which the SSO occurred.
Category 4	Definition	Discharges of untreated or partially treated wastewater of ***<50 gallons*** that does not discharge to a surface water.
	Reporting	In CIWQS, submit certified report within 30 calendar days of the end of the month in which the SSO occurred.
Owned and/or Operated Lateral	Definition	Discharges of untreated or partially treated wastewater ≥1,000 gallons and/or result in a discharge to a drainage channel and/or surface water; and/or discharge to a storm drain pipe that was not fully captured and returned to the sanitary sewer system resulting from blockages or other problems within MCB CPEN Public-Private Venture housing sewer lateral connected to the enrollee's sewer system.
	Notification	≥1,000 gallons, notify Cal OES within 2 hours and obtain a notification control number; notify the San Diego Water Board within 24 hours.
	Reporting	In CIWQS, submit certified report within 30 calendar days of the end of the month in which the SSO occurred.

Appendix B – SSORP

SANITARY SEWER OVERFLOW RESPONSE PLAN (SSORP)

MCB CAMP PENDLETON

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LIST OF KEY ACRONYMS AND ABBREVIATIONS

AC/S – Assistant Chief of Staff

DEH – San Diego County Department of Environmental Health

ES – Environmental Security

I/C – Incident Commander

ICS – Incident Command System

MCBCP – Marine Corps Base Camp Pendleton

MCICOM – Marine Corps Installation Command

Cal OES – California Office of Emergency Services

PPE – Personal Protective Equipment

PWO – Public Works Office

RWQCB – San Diego Regional Water Quality Control Board

SSORP – Sanitary Sewer Overflow Response Plan

SWRCB – State Water Resources Control Board

T/C – Technical Support Officer

UNITY – Facilities 24/7 operations center

WDR – Waste Discharge Recruitment

WRD – Water Resources Division

SSO RESPONSE INFORMATION

Summary of SSO Regulatory Requirements		
Internal Reporting of Possible SSO:		Contact UNITY Operator 24 hours at (760) 725-4324 UNITY will contact WRD spill response teams
Contacts:		Cal OES 800-852-7550 San Diego County DEH: 858-565-5262 RWQCB: 619-516-1990
Category 1	Definition	*Discharges of untreated or partially treated wastewater of **any volume** that **reaches or will likely reach surface water**/drainage channel tributary or that reach a storm drain and are not fully captured.*
	Notification	■ **≥1,000 gallons**, notify Cal OES and San Diego County DEH within **2 hours** and obtain a notification control number; notify the San Diego Water Board within 24 hours.
	Reporting	In CIWQS, submit draft report **within 3 business days** of becoming aware of the SSO. Certify the report **within 15 calendar days** of SSO end date.
	Sampling	≥50,000 gallons, water quality sampling must be conducted **within 18 hours** after initial SSO notification and uploaded to CIWQS. An SSO Technical Report is required to be submitted **within 45 days**.
Category 2	Definition	*Discharges of untreated or partially treated wastewater of **≥1,000 gallons** that **do not reach surface water**, drainage channel or municipal storm system.*
	Notification	■ **≥1,000 gallons**, notify Cal OES within **2 hours** and obtain a notification control number
	Reporting	In CIWQS, submit draft report **within 3 business days** of becoming aware of the SSO. Certify the report **within 15 calendar days** of SSO end date.
Category 3	Definition	Discharges of untreated or partially treated wastewater ***≥50 gallons*** **and <1,000 gallons** that does not discharge to a surface water.
	Reporting	In CIWQS, submit certified report **within 30 calendar days** of the end of the month in which the SSO occurred.
Category 4	Definition	Discharges of untreated or partially treated wastewater of ***<50 gallons*** that does not discharge to a surface water.
	Reporting	In CIWQS, submit certified report **within 30 calendar days** of the end of the month in which the SSO occurred.
Owned and/or Operated Lateral Spill	Definition	Discharges of untreated or partially treated wastewater ***≥1,000 gallons;*** *and/or result in a discharge to a drainage channel and/or surface water; and/or discharge to a storm drain pipe that was not fully captured and returned to the sanitary sewer system* resulting from blockages or other problems within MCB CPEN Public-Private Venture housing sewer lateral connected to the enrollee's sewer system.
	Notification	■ **≥1,000 gallons**, notify Cal OES within **2 hours** and obtain a notification control number; notify the San Diego Water Board within 24 hours.
	Reporting	In CIWQS, submit certified report **within 30 calendar days** of the end of the month in which the SSO occurred.

SANITARY SEWER OVERFLOW RESPONSE PLAN

1. REGULATORY COMPLIANCE

1.1 Introduction

This Sanitary Sewer Overflow Response Plan (SSORP) has been developed to provide guidelines to United States Marine Corps Base Camp Pendleton (MCBCP) staff to provide timely and effective responses to sewer overflows within Camp Pendleton. This SSORP establishes procedures for responding to SSOs in order to prevent or reduce the volume of sewage discharge from entering surface waters and reducing the adverse effects of sewer overflows on water quality and beneficial uses

1.1.1 Common SSO Definitions

Sanitary Sewer Overflow (SSO). An SSO includes any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundment, tanks, etc) are considered to be part of the sanitary sewer system, and discharges to these temporary storage facilities are not considered to be SSOs. For reporting purposes, SSOs are divided into five characteristic discharge categories:

Category 1 SSO. Discharges of untreated or partially treated wastewater of **any volume** that **reaches or will likely reach surface water**/drainage channel tributary or that reach a storm drain and are not fully captured.

Category 2 SSO. Discharges of untreated or partially treated wastewater of **≥1,000 gallons** that **do not reach surface water**, drainage channel or municipal storm system.

Category 3 SSO. Discharges of untreated or partially treated wastewater ***≥50 gallons*** **and <1,000 gallons** that does not discharge to a surface water.

Category 4 SSO. Discharges of untreated or partially treated wastewater of ***<50 gallons*** that does not discharge to a surface water.

Private Lateral Sewage Discharges. Discharges of untreated or partially treated wastewater **≥1,000 gallons;** and/or result in a discharge to a drainage channel and/or surface water; and/or discharge to a storm drain pipe that was not fully captured and returned to the sanitary sewer system resulting from blockages or other problems within MCB CPEN Public-Private Venture housing sewer lateral connected to the enrollee's sewer system.

1.2 Regulatory Orders

Regulatory orders applicable to MCBCP include Order WQ 2022-0103-DWQ Statewide Waste Discharge Requirements General Order for Sanitary Sewer Systems, Order No. R9-2007-0005 Waste Discharge Requirements for Sewage Collection Agencies in the San Diego Region, and Order No. R9-2019-0167 (NPDES No. CA0109347) Waste Discharge Requirements for the

Marine Corps Base, Camp Pendleton Southern Regional Tertiary Treatment Plant and Advanced Water Treatment Plant at Haybarn Canyon Discharge to the Pacific Ocean Through the Oceanside Ocean Outfall.

1.3 Goals

This document is intended to comply with applicable Federal and State of California environmental regulations, Executive Orders, and United States Marine Corps policy.

1.4 Summary of SSORP

- Roles and command structure for the response team.
- Standard operating procedure expected of for sanitary sewer overflow response
- A detailed discussion of the overflow containment and cleanup operations (including warning signs, sampling requirements, and site specific areas of concern).
- The minimum field documentation and analysis procedures to be recorded during an SSO event.
- Internal and external overflow notification and reporting information.

2. ROLES AND RESPONSIBILITIES

This Section describes the general SSORP response team roles and responsibilities; as well as identifying specific supervisory and line organizational positions. A more thorough explanation of the response procedures for handling a sanitary sewer overflow (SSO) is included within Section 3 – Overflow Response Procedures.

2.1 Incident Command System (ICS)

Overflow response teams are trained using an Incident Command System (ICS). The organization of the ICS begins to develop from the time the initial SSO is reported and continues to develop as the incident progresses. Depending on the requirements of the situation, certain positions within the ICS will be activated only when the corresponding functions are required by the incident. The specific organization structure established for any given incident will be based upon the management needs of the incident. The organizational hierarchy will remain in place until the requirement for incident management and operations no longer exists.

2.1.1 Chain of Command

Chain of Command defines the various lines of authority and common lines of communication. It is not intended for the transfer of information to be restricted.

Response Team Roles

The various roles of the MCBCP response staff include a Spill Response Team, Spill Compliance/Reporting Team, Cleanup, and Sampling Team and Communication Strategy & Operations depending on the severity of the SSO event. Several staff members will have responsibilities to perform within each identified team. A list of each response team member(s) duties and responsibilities is presented below.

Spill Response Team

- Assume primary management and coordination of all emergency action;
- Perform initial assessment of spill, to include volume and potential for spill to impact receiving waters, public health, and the environment;
- Request further assistance as required and delegate responsibilities;
- Request mutual aid from neighboring Cities (Oceanside, Fallbrook, and San Clemente), if necessary;
- Direct immediate spill control and containment measures;
- Oversee corrective actions and cleanup activities;

Spill Compliance/Reporting Team

- Notify all necessary regulatory agencies and provide immediate overflow information;
- Coordinate with responding Cities, if required;
- Document, by photos, overflow and abatement activities;
- Coordinate sampling event per permit requirements or DEH/RWQCB request;
- Communicate with the Communication Strategy & Operations Office;
- Submit the draft and final RWQCB Sanitary Sewer Overflow Report Form (Appendix E);
- Inform RWQCB and San Diego County Department of Environmental Health (DEH) of sampling program.
- Direct the posting of contaminated water warning signs;
- Approve and direct sampling program;

Cleanup and Sampling Team

- Secure overflow;
- Mobilize field crew and equipment for overflow abatement activities;
- Protect lift station and treatment plant equipment;
- Construct temporary containment, as required, to protect receiving waters; and
- Set-up and operate recovery pumping systems and make emergency lift station or plant repairs.
- Lab coordinator makes notifications to the contract lab to coordinate sampling efforts

Communication Strategy & Operations

- Coordinate all media and public information communications;
- Report to the Incident Commander for status reports on spill abatement activities; and
- Provide status reports, regarding media coverage and public information releases.

SANITARY SEWER OVERFLOW RESPONSE PLAN

3. OVERFLOW RESPONSE PROCEDURES

No matter when the SSO notification is received, UNITY will need the caller to identify any safety concerns, possible victims, land and/or water areas affected, and possible access issues. This information will be shared with the first responders in order to verify the possible sewer spill before dispatching a full response crew. UNITY shall also verify that the provided site address or spill area is part of the MCBCP's sewer system. If the spill is outside MCBCP jurisdiction, provide the caller with the phone number of the responsible agency and follow up by calling the agency and providing the caller details.

24 Hour Response Procedures

The following procedures are to be followed when reporting and responding to all sanitary sewer overflow emergencies.

1. An emergency sewage spill or overflow call is received by UNITY.
2. UNITY will notify appropriate WRD Supervisor/Operations staff of the emergency.
   - During Work Hours (0700-1600) – Unity Room Operator notifies Wastewater Branch Supervisor and/or Work Leader.
   - After 1600 – Unity Room Operator notifies Wastewater Supervisor and/or on duty Collection System Operator.
   - If the on-duty Collection System Operator cannot be contacted, the following personnel will be contacted in the order shown below:
     - Wastewater Collection System Supervisor 760-637-6732
     - Maintenance and Repair Supervisor 760-587-3779
     - Director 760-214-4553
3. Wastewater/Maintenance Work Leader or Supervisor assumes responsibility of Incident Commander.
4. Incident Commander dispatches closest booster along with emergency team (Pumper truck / Mechanic / Electrician) to Survey emergency.
5. First team member at the scene evaluates the situation and communicates with the Incident Commander. For initial reporting, he/she shall:
   - Confirm the presence of an SSO. Assess the situation for any hazardous conditions or material. Keep a safe distance from the spill site should a suspicious substance (e.g., oil sheen) be found on the ground surface, or should a suspicious odor (e.g., gasoline) not common to the sewer system be detected. Remember that vehicle engines, portable pumps, or open flames (e.g., cigarette lighters) can provide the ignition source for an explosion or fire should flammable vapors or fluids found to be present at the site.
   - Locate and determine the cause of overflow emergency. Observe caution under hazardous conditions.
   - Evaluate the situation: (1) Assess what resources and crew are needed to make corrective actions or cleanup of the affected area and report this information to WRD Supervisor or Work Leader. (2) Determine if spill is greater than 1,000 gallons (e.g., larger than a 32'

wide pool which is 2" deep; or a 40' by 40' square area of surface spill that soaked the ground; See Appendix C – Methods for Estimating Spill Volumes). (3) Determine if the spill reaches surface waters or an uncontained storm drain channel which will lead to surface waters.

- Inform UNITY of the situation.
- Commence preliminary steps to establish a safety perimeter and to mitigate the overflow.
- Complete the Spill Quick Report Form (Appendix D) **within 24 hour** of the sewage spill being reported.

6. Incident Commander executes plan of action calling for additional personnel and equipment as required.
   - Anytime a road closure or traffic control is required on main thoroughfare (over 35 mph) WRD WW calls PMO at 760-763-2077/2076.
   - If on roadway in housing, or under 35 mph WRD WW performs traffic control "in- house".
   - Fire department is called for confined space entries, paramedics if anyone is injured: (760-725-4321).
7. Incident Commander or first team member on the scene notifies regulatory agencies of spill per reporting requirements.
8. As part of the preliminary steps, the responding shops shall correct cause of the sewer overflow (e.g., screen/grinder blockage, pipeline break, pump station failure, sewage treatment plant process failure, or power failure). See Chapter 4 – Overflow Containment and Cleanup for an in-depth explanation of cleanup procedures and site-specific areas of concern.
9. WRD Supervisor initiates the internal notifications within its division leading to the Public Works Officer as dictated by Chapter 6.1 –Internal SSO Reporting procedures.
10. Immediately following the internal notifications, WRD will initiate preliminary external notifications as dictated by the front sheet "Critical Response Information" or by the following directions detailed in Chapter 6.2 – External SSO reporting procedures.
11. Response staff shall begin filling out the Sewage Overflow Report form (Appendix E) after the spill has been contained and/or eliminated. A preliminary completed Sewage Overflow Report form shall be provided to WRD Compliance personnel **within 24 hour** of sewage spill.

SANITARY SEWER OVERFLOW RESPONSE PLAN

4. OVERFLOW CONTAINMENT AND CLEANUP

The most critical aspect of resolving an overflow is to effectively, efficiently, and safely perform the corrective actions necessary. The following corrective actions are to be held upon failure of the sanitary sewer system resulting in a sanitary sewer overflow. **See Section 4.9 – Site Specific Areas of Concern** for a more in-depth procedure based on known Hot Spots.

Assessment Goals

- If applicable, coordinate with the Hazardous Material Response;
- Follow safe work practices. **See Section 4.1– Safety**;
- Assess the situation and promptly inform UNITY;
- Establish the equipment and response team necessary for an appropriate first response.

Preliminary Goals

The preliminary response goals and activities should begin immediately after initial notification of the spill. These preliminary goals should be accomplished concurrently:

- Assign a WRD shop crew member as Incident Commander;
- Continuous sewage flows should be contained (e.g., berm or vacuum truck) or diverted to the nearest sanitary sewer entry point **(See Section 4.3 – Overflow Containment)**
- Terminate the source of the sewage discharge as rapidly as possible;
- Post warning signs on-Base, or off-Base in coordination with DEH, if required. **(See Section 4.4 – Warning Signs and Sampling) Clean-Up Goals**
- Recover as much of the sewage discharge as possible for proper disposal.
- Sampling may be required at this time. **(See Section 4.4 – Warning Signs and Sampling)**
- Once enough of the sewage solids have been removed, the impacted area should be washed with clean water (no disinfectants). All wash down water should be contained and subsequently removed to the sanitary sewer system by pump or vacuum truck;
- When needed to ensure public safety, properly disinfect the site. **Disinfectants should not be casually used, as they are toxic to fish and wildlife. (See Section 4.6 – Overflow Disinfection)**

Post Clean-up Activities

- Remove warning signs.

4.1 Safety

The WRD Supervisor/Leader shall assume responsibility as Spill Response Incident Commander. The Leader is responsible for evaluating hazards anticipated at the site and following appropriate health and safety procedures at all times (e.g., Hazard communication, Injury and Illness Prevention and Personal Protective Equipment). Minimize pedestrian and vehicle access to and/or contact with the spilled sewage thru the use of physical barriers or warning signs. When applicable, the Leader shall coordinate with compliance/hazmat in order to maintain a safe working environment for clean-up personnel.

4.1.1 Injury and Illness Prevention – Known Victim Situation

The WRD Spill Response Leader needs to survey the situation and not endanger his or her own life. Do not enter a confined space to rescue someone who has been overcome.

Call 911 (if available) or the fire department **IMMEDIATELY**. Explain the physical injury, chemical exposure, fire, or release. Follow further instructions.

4.1.2 Personal Protective Equipment (PPE)

Proper PPE for employees involved in the cleanup of sewage spills includes rubber boots, nitrile gloves and work clothes. Respiratory protection will be used, if required, because of confined space, or any other circumstance that will require such. PPE will be sanitized, or disposed, properly after use.

Employees will wash with soap and water immediately after the incident is over. **Absolutely no eating, drinking, or smoking in the spill area**. When an employee leaves the spill area for a break, or refreshment, he will remove contaminated PPE at the boundary of the site and wash his hands prior to drinking, eating, or smoking.

4.1.3 Confined Space

If the spill is in an area that might be definable as a confined space, the employee will first notify a supervisor to evaluate the area and prepare a confined space permit. Air monitoring, ventilation, rescue capabilities, and respiratory support systems will all be established, as needed, by the supervisor, before any further cleanup operation within a confined space.

4.2 Wet Weather

The presence of a large storm event producing heavy runoff can frustrate or even completely overwhelm any recovery or disinfection efforts. During such times, it becomes imperative to terminate the source of the sewer discharge as rapidly as possible. Any containment measures which would divert the sewage discharge to the sanitary sewer system (i.e., opening a manhole) should be strictly avoided so as not to overwhelm the sewer system capacity and cause further problems elsewhere.

4.3 Overflow Containment

During normal dry weather conditions, the response team should attempt to contain, or at least minimize, as much of the spilled sewage as possible. Commence the preliminary steps outlined below to mitigate the overflow.

- When necessary, assign an WRD shop crew member to assist with direction and communication efforts.
- Determine the immediate destination of the overflowing sewage. Try to contain/direct the sewage overflow to areas that can be localized. A suitable localized area is any bowl shaped topography (low lying elevation surrounded by two or more higher elevated areas) that is already present or one can be created using a dike/dam with the use of sandbags. While it is preferred that the localized area be kept away from either the residential or commercial neighborhoods, containment of the sewage is of greater importance. Avoid depositing the discharge into dry river bed or known flood plain.

- A common occurrence is for spilled sewage to make contact with the storm drainage system which is purposely designed to collect surface flow; however, it is preferred that the response team not attempt to contain a large quantity and/or a continuous flow of sewage overflow using the storm drainage system. If the overflow has already reached the storm drainage system, the team should attempt to contain the spilled sewage by plugging the downstream storm drainage facilities and drains using available equipment and materials to not only contain the spill, but also to prevent the spill from discharging to a body of water.
- Not all pump stations are equipped with overflow containment facilities. Pump stations with containment facilities may be able to contain a minor overflow; however it is unlikely that this containment is sufficient for a major overflow. Pump around the blockage/pipe failure/pump station or vacuum flow from upstream of the blockage and dispose of downstream of the blockage to prevent further overflow.
- If an SSO reaches a water body, see the following section for posting warning signs and possible sampling requirements.

4.4 Warning Signs and Sampling

In the event of an overflow, posting of warning signs and sampling activities is determined by Base staff for on-Base locations, and coordinated with the DEH/local health agencies for off-Base locations. DEH/local health agencies will report/require/mandate/designate what actions are necessary to protect public health, aquatic life, and surface waters based on the specific overflow event. WRD staff shall post signs to prevent the public from coming into contact with wastewater at the spill locations and work with additional Base staff (ES, MCCS, COMMSTRAT) if additional notifications/signs are required at receiving waters to protect the safety of downstream users.

Contaminated water signs are to be posted at the overflow and the quarantine site as reasonably necessary to warn the public. Signs shall be posted and maintained by the WRD. The DEH shall be notified daily on progress until the problem is corrected. An inventory of overflow warning signs, wood stakes, and caution tape will be maintained at WRD. The supplies will be maintained at a sufficient level to ensure proper posting of an area in the event of a major overflow. Sampling is coordinated by the WRD compliance staff designee and conducted by a contracted laboratory under contract.

If a sewage spill is estimated to be equal to or greater than 50,000 gallons discharged into a surface water, water quality sampling shall be conducted no later than 18 hours after knowledge of a potential discharge to a surface water in compliance with Order 2022-0103-DWQ. One water sample each day shall be collected for the duration of the spill at:

- A point in a drainage conveyance system before the drainage conveyance system flow discharges into a receiving water, if sewage discharges to a surface water via a drainage conveyance system; and/or
- Each of the three receiving water sampling locations identified:
    - A point in the receiving water where sewage initially enters the receiving water
    - A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts
    - A point in the receiving water, downstream of the point of sewage discharge, where

the spill material is fully mixed with the receiving water

- If the receiving water has no flow during the duration of the spill, a report of "No Sampling Due To No Flow" will be reported for the receiving water sampling locations.

Sample will be analyzed for the following constituents:

- Ammonia, and
- Appropriate bacterial indicator(s) per the applicable Basin Plan water quality objectives, including one or more of the following, unless directed otherwise by the RWQCB:
  - Total Coliform Bacteria
  - Fecal Coliform Bacteria
  - E-coli
  - Enterococcus

Dependent on the receiving water(s), sampling of bacterial indicators shall be sufficient to determine post-spill (after the spill) compliance with the water quality objectives and bacterial standards of the California Ocean Plan or the California Inland Surface Water Enclosed Bays, and Estuaries Plan, including the frequency and/or number of post-spill receiving water samples as may be specified in the applicable plans. Additional sampling may be required by the RWQCB.

4.5 Overflow Recovery

All necessary corrective action should be taken to recover as much of the sewage discharge and wash down water as possible for proper disposal. Clean-up of the sewage discharge begins when both (1) the sewage flow has been confirmed to stop and (2) the existing sewage discharge has been contained.

Effective recovery of sanitary sewer overflows requires immediate response and sufficient pumping equipment. The Incident Commander should determine the number and size of the pump(s) required for spill recovery. Bypass/portable pumps should be obtained from WRD. The Incident Commander shall determine the recovery volume allowed by the sewer conveyance system. The capacity of the system limits the total volume of recovery. The recovery shall not exceed the capacity of downstream sewer conveyance pipelines, pump stations, or STP facilities. A successful and effective recovery shall remain within the limits of the system. Disinfection of overflow areas may be necessary at the direction of the Incident Commander as discussed in the following section.

Furthermore, the location of the recovery pumping equipment will be determined by the Incident Commander. MCBCP shall cooperate with all regulatory agencies to comply with Order R9-2007-0005, Order 2022-0103-DWQ, and Order R9-2019-0167.

4.6 Overflow Disinfection

The Incident Commander will determine if disinfection is necessary. In most cases, natural disinfection can be accomplished using sunlight and allowing the area to dry thoroughly after liquid and solids removal. Natural disinfection is recommended for most sewer overflows

where there is no public contact. Lime has been recommended as the disinfectant used in areas of potential public contact.

4.7 Portable Aerator

If an SSO has reached surface waters and a complete recovery is not practicable, the application of portable aerators shall be utilized as a last resort option. A large SSO can deplete oxygen levels within existing surface waters which can severely damage the surrounding ecosystem. The placement and power of the applied aerator must be carefully done so as not to further spread the SSO into a wider spill area. A response crew member should remain with the portable aerator for at least 15 minutes and until he/she is reasonably sure the aerator is working correctly. A single portable aerator with a high standard oxygen transfer rate (SOTR) is adequate for large ponds. Utilize a dissolved oxygen (DO) sensor to measure the effective oxygen concentration, in parts per million (ppm), of the impacted water body. For large ponds, sample measurements should be obtained from multiple points at least four feet from shoreline and several inches below water surface through us of a sampling pole.

4.7.1 Aeration Requirements

Oxygen requirements in water bodies can vary greatly. A commonly used rule of thumb is to use 1 horsepower/surface acre with an aerator rated at least 2.5 lbs O2/hp per hour. This assumes maintenance of minimum oxygen levels above 2 to 3 ppm for healthy fish. Bankwasher aerators are effective in aerating along the shoreline so that relief is quickly provided to fish near shore.

4.7.2 Placement of Aerator

The effective placement for a fixed electric paddlewheel aerator is midway along the longest side of a water body with the discharge of the aerator directed toward the middle of the water body. In this position, the aerator directs water perpendicular to the long side, developing circulation that reaches most areas of the water body. Placement of this type aerator in a corner of a water body and directing water diagonally across the pond provides poor circulation. Unfortunately, a middle site placement may be infeasible during a SSO spill for health and safety reasons, in which case the placement should remain closer to shore. Portable aerators should be used before fish are stressed to the point that they cannot reach the aerated area. The best location to place an aerator before they are seriously stressed will usually be in the part of the pond with the highest oxygen concentration because that is where the fish will be found. If two aerators are needed to keep fish alive, then they should be operated alongside each other so that if one aerator cuts off, the other aerator can hold fish until the problem is remedied.

4.7.3 Maintenance and Safety

All types of equipment require occasional maintenance and repair to ensure longer life and dependability. Information and instructions for recommended maintenance should be obtained from the manufacturer or dealer when an aerator is purchased.

Safety is another important consideration. The main hazards include is the use of electricity near areas of activity and water. Make certain all safety guards are in good condition. Perform any inspection or service only after equipment is shut down. Do not drive over live wires.

4.8 Site-Specific Areas of Concern

MCBCP has identified areas where sewer overflows could cause contamination to adjacent surface waters and environmentally sensitive habitats. Site-specific response and cleanup procedures have been developed for these areas of concern and are listed below. Additionally, "Emergency Procedures" for each pump station are included in their respective Operation and Maintenance (O&M) manuals.

Stuart Mesa Housing and New Edson Lagoon Pump Stations (31228 and 31220)

At the Stuart Mesa Housing and New Edson Lagoon Pump Stations, the pumps are located in below ground, dry wells and could be submerged due to a mechanical pump failure. Emergency standby generators, which automatically transfer power to prevent overflow due to power outage, are located at each of the pump stations. If the pump stations become submerged, there is potential for the overflow to reach the Santa Margarita River, which flows directly into the Pacific Ocean. In order to protect the Santa Margarita River, as well as protect existing equipment, the following overflow containment and corrective action measures shall be performed:

- Construct temporary dikes or place sandbags to prevent floodwaters from inundating the station. Pump water from the dry well using a portable pump or vacuum tank truck. The pumper tank truck will transport the collected flow to an upstream manhole at old Sewage Treatment Plant (STP) 13;
- If the station has flooded, or if it cannot be protected from flooding, turn off electrical power and emergency power to the lift station to protect personnel;
- When floodwaters recede, inspect, and assess any damage to equipment, with special attention to electrical equipment damage. Have electrician clean and dry electrical equipment as required;
- Clean up residual floodwater debris from pump station dry well as needed. Swab and wipe floors, piping, and valves with household liquid bleach solution; and
- Follow O&M manual for pump station "Start-up Procedures".
- During pump station flooding, construct temporary dikes or place sandbags to prevent floodwater from inundating the lift station electrical equipment. Use a pumper truck until repairs are completed and the pump station is operational;
- If the wet well level has the potential of rising to the level of electrical disconnect switch, immediately turn off electrical power to the station; and
- When floodwaters recede, inspect and assess any damage to equipment, with special attention to electrical equipment damage. Have electrician clean and dry electrical equipment as required.

Del Mar Pump Station 21537

The Del Mar Pump Station pumps are located in a below grade dry well. However, these pumps have motors located at grade inside the pump station building, which prevent the motors from

being submerged. If an overflow is not curtailed, the motors along with other electrical equipment may potentially be damaged. Curtailing flow into the dry well can be accomplished by either isolating the failed system using the isolation valves in the drywell, or by securing flow into the pump station by closing the station influent and effluent valves and pumping down the dry well using portable pumps. If corrective action to repair mechanical failure in the dry well is not accomplished swiftly, sewage will flood the pump station and will overflow into the Del Mar Boat Basin, which is connected to Oceanside harbor and the Pacific Ocean. The following corrective actions shall be performed to contain the spill:

- Construct temporary dikes or place sandbags to prevent floodwaters from inundating the pump station;
- If the pump station is flooded, or if it cannot be protected from flooding, turn off electrical power to the station;
- Pump sewage from the dry well using a portable pump or vacuum tank truck; and
- Assess the damage to the equipment and clean up residual floodwater and debris from station dry well as needed. Swab and wipe floors, piping, and valves with household bleach solution.

San Onofre PX Complex Pump Stations 510092

At the San Onofre PX Complex Pump Station, a mechanical pump failure would cause the wet well to overflow, endangering the health and safety of personnel and the patrons. Curtailing the flow can be accomplished by the following:

- Sandbagging the perimeter of the station to secure the flow away from the PX Complex and bypass pumping the wet well to the nearest downstream manhole; and
- If the pump station has flooded, or cannot be protected from flooding, turn off electrical power to the station.

SANITARY SEWER OVERFLOW RESPONSE PLAN

5. SSO FIELD DOCUMENTATION

Monitoring and Reporting Program (MRP) establishes monitoring, record keeping, reporting and public notification requirements for with Order R9-2007-0005, Order 2022-0103-DWQ, and Order R9-2019-0167.

As a reminder, the category classification of an SSO is as follows:

- **Category 1 SSO.** Discharges of untreated or partially treated wastewater of **any volume** that **reaches or will likely reach surface water**/drainage channel tributary or that reach a storm drain and are not fully captured.

- **Category 2 SSO.** Discharges of untreated or partially treated wastewater of **≥1,000 gallons** that **do not reach surface water**, drainage channel or municipal storm system.

- **Category 3 SSO.** Discharges of untreated or partially treated wastewater ***≥50 gallons*** **and <1,000 gallons** that does not discharge to a surface water.

- **Category 4 SSO.** Discharges of untreated or partially treated wastewater of ***<50 gallons*** that does not discharge to a surface water.

- **Private Lateral Sewage Discharges.** Discharges of untreated or partially treated wastewater **≥1,000 gallons;** and/or result in a discharge to a drainage channel and/or surface water; and/or discharge to a storm drain pipe that was not fully captured and returned to the sanitary sewer system resulting from blockages or other problems within MCB CPEN Public-Private Venture housing sewer lateral connected to the enrollee's sewer system.

5.1 Minimum Field Documentation for SSO Reporting

Reporting requirements for draft and certified spill reports are included in Order 2022-0103-DWQ. At a minimum, the following mandatory information must be included prior to finalizing and certifying the Sewage Overflow Report (See Section 6 – SSO Reporting) for each category of SSO:

5.1.1 Category 1,2,3,4 SSO

- Location of SSO by entering GPS coordinates;
- Whether or not the SSO entered a drainage channel and/or surface water;
- Whether or not the SSO was discharged to a storm drain pipe that was not fully captured and returned to the sanitary sewer system;
- Estimated SSO volume in gallons;
- SSO source (manhole, cleanout, etc.);
- SSO cause (mainline blockage, roots, etc.);

- Time of SSO notification or discovery to UNITY;
- Estimated I/C arrival time;
- SSO destination;
- Estimated end time of cleanup of SSO; and
- SSO Certification. Upon SSO Certification, the SSO Database will issue a Final SSO Identification (ID) Number.

5.1.2 Private Lateral Sewage Discharge

- All information listed under Category 2 SSO (if applicable and known), as well as;
- Identification of sewage discharge as a private lateral sewage discharge; and
- Responsible party contact information (if known).

5.1.3 Category 1 SSO

- All information listed under Category 1 SSO (if applicable and known), as well as;
- Estimated SSO volume that reached surface water, drainage channel, or not recovered from a storm drain;
- Estimated SSO amount recovered;
- Response and corrective action taken;
- If samples were taken, identify which regulatory agencies received sample results (if applicable). **If no samples were taken, NA must be selected;**
- Parameters that samples were analyzed for (if applicable);
- Identification of whether or not health warning signs were posted;
- Beaches impacted (if applicable). **If no beach was impacted, NA must be selected**;
- Whether or not there is an ongoing investigation;
- Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the overflow and a schedule of major milestones for those steps;
- Cal OES control number;
- Date and time Cal OES was called; and
- Include the date and time San Diego County DEH was called.

5.2 Cause Analysis and Volume Estimation

The most important, initial items to determine are (1) the potential to reach surface waters and (2) the volume estimation as regulatory notification is dependent on these. Both characteristics are to be noted in the Overflow Quick Report (Appendix D). When feasible, the analysis of the cause and volume of the SSO should be done by an overflow investigation team independent of the response personnel working to mitigate the overflow.

The cause of the overflow is determined using a combination of factors such as location, duration, overflow incident witnesses, historical data in the area, and Supervisory Control and Data Acquisition Data (SCADA) information. The most common causes of overflows in the MCBCP collection system are blockage, failure, and error.

Initial volume estimation is provided by the Incident Commander, however verification by the investigation team is required after the overflow has been properly managed and contained. During volume estimation verification factors such as location, area, duration, and seepage potential should be considered. The USA Blue Book Operator's Companion, which should be provided by WRD, is useful in determining flow in various pipe scenarios. The California Water Environmental Association also provides volume estimation photos portraying a range of overflow sizes on their website, www.cwea.com. These photos and a common volume estimation method by geometry are included in Appendix C – Methods for Estimating Spill Volumes.

SANITARY SEWER OVERFLOW RESPONSE PLAN

6. SSO REPORTING

6.1 Internal SSO Reporting Procedures

Information of the SSO will be recorded using two reports: the initial Quick Spill Form, and the final Sewage Overflow Report form. These forms will be the main source of communication between and within the various internal MCBCP department divisions.

6.1.1 Quick Spill Form

Following the occurrence of an overflow, the Incident Commander will complete a Spill Quick Report Form (Appendix D), which identifies:

- Person reporting overflow, and phone number;
- Date, time and location of the spill
- Estimated volume of spill/amount recovered
- Final destination of overflow (e.g., received waters, dry riverbed, storm drain, etc.)
- Potential for public contact
- Suspect Cause
- Response and action taken;
- Report processing signatures;

Inspection findings shall include the name of the person responding, time arrived, estimated start and end of overflow, estimated volume of overflow (gallons), estimated volume recovered (gallons), and a detailed description of probable cause. The disposition of the report will include the location and distance of the overflow, final location of soil drainage, identifying surface waters received, identifying if overflow entered a storm drain, observing the overflow to be ponding and/or percolating, identifying the areas of potential public contact, and the response action taken will for containment and clean up.

6.1.2 Sewage Overflow Report (Long Form)

Once the overflow has been contained and/or eliminated, the Incident Commander and compliance staff will complete a Sewage Overflow Report (Appendix E). The report shall confirm all of the initially inspection findings detailed in the Quick Spill form, as well as:

- Inspection findings;
- Disposition;
- Time and date of OES notification.
- Time and date of RWQCB notification;
- Time and date of DEH notification; and
- If signs were posted, numbers of days the signs were posted, any areas quarantined, and a description of all preventative and corrective measures taken or planned.

WRD shall complete a draft Sanitary Sewage Overflow Report form after the spill has been contained and eliminated. The draft Sewage Overflow Report form shall be provided to WRD compliance personnel within 48 hours of the sewage spill being reported.

Compliance staff enters sewer spill data, including GIS coordinates (obtained with a handheld GPS device) photos, and graphical representation of sewer spill, into CIWQS and the MCICOM Environmental Management and Compliance System (EMCS).

6.2 External SSO Reporting Procedures

MCBCP is required to notify the Cal OES, RWQCB, and DEH in the event of an overflow. Immediately following the internal notifications, compliance staff will initiate preliminary External notifications as dictated by the front sheet "Critical Response Information" or by the following directions:

Category 1 SSOs are spills 1,000 gallons or greater, discharging or threatening to discharge to surface waters. Notification to Cal OES and DEH within 2 hours of knowledge of spill to obtain a control number. Notification to RWQCB within 24 hours. Submit Draft spill Report within 3 business days. Submit certified spill report within 15 calendar days. Submit Technical Report within 45 calendar days after spill ends if 50,000 gallons or greater discharging to surface waters to CIWQS.

Category 2 SSOs are Spills 1,000 gallons or greater that do not discharge to surface waters. Notification to Cal OES within 2 hours of knowledge of spill to obtain a control number. Submit draft spill report within 3 business days. Submit certified spill report within 15 calendar days of the spill end date to CIWQS.

Category 3 SSO are spills equal or greater than 50 gallons and less than 1,000 Gallons that does not discharge to surface waters. Submit monthly certified report within 30 calendar days at the end of each month to CIWQS.

Category 4 SSO are spills less than 50 gallons that does not discharge to surface waters. Submit certified report within 30 calendar days of the end of the month in which the SSO occurred to CIWQS.

Annually upload and certify a report of all Category 4 and/or lateral recordkeeping of spills by February 1st after the end of the calendar year in which the spills occurred.

Submit monthly no spill or Category 4 spills certification within 30 calendar days after the end of a calendar month if either no spills occur during a calendar month or only Category 4 and/or owned and/or operated lateral spills occurred.

6.2.1 Reporting Time Frame

MCBCP must notify the Cal OES and DEH within 2 hours from the time that MCBCP has knowledge of the overflow in accordance with Order WQ 2022-0103-DWQ, Order No. R9-2007-0005, and Order No. R9-2019-0167. Notification of a Category 1 spill to RWQCB must be made within 24 hours in accordance with Order No. R9-2007-005. Notification can be conducted without substantially impeding mitigation, containment, cleanup, or other emergency measures. Category 1 and 2 draft spill reports must be submitted to CIWQS within 3 business days of knowledge of the spill and certify the report within 15 calendar days of the spill end

date. Category 3 spills must be certified in CIWQS within 30 calendar days after the end of the month in which the spill occurred. The total spill volume and total number of Category 4 spills must be certified in CIWQS within 30 calendar days after the end of the month in which the spill occurred.

6.2.2 CIWQS

MCBCP has created an SSO Database account with the RWQCB through the online California Integrated Water Quality System (CIWQS). This online account can be accessed with a set "Username" and "Password" to allow controlled and secure entry into the SSO Database. Staff responsible for submitting data and/or designated as the Legally Responsible Officer will have appropriate user accounts established.

6.2.3 Record Keeping

All records of SSO events must be retained for a period of at least 5 years from the date of the SSO.

SANITARY SEWER OVERFLOW RESPONSE PLAN

7. SSO RESPONSE TRAINING

7.1 Field Drills

Periodic field drills of the overflow response procedures should be addressed. Such drills could be executed in conjunction with other periodic emergency preparedness drills associated with manmade (e.g., fires, explosions) and natural disasters (e.g., flooding, severe weather).

Field drill training is performed on an annual basis or as required. The annual training consists of review of the Emergency Response Plan procedures including hands-on training, estimating spill volume, and overview of the applicable permit.

APPENDIX A

State and Regional Regulatory Orders

STATE WATER RESOURCES CONTROL BOARD
1001 I Street, Sacramento, California 95814
ORDER WQ 2022-0103-DWQ

STATEWIDE WASTE DISCHARGE REQUIREMENTS

GENERAL ORDER FOR SANITARY SEWER SYSTEMS

This Order was adopted by the State Water Resources Control Board on December 6, 2022.
This Order shall become effective **180 days after the Adoption Date of this General Order,** on June 5, 2023. The Enrollee shall comply with the requirements of this Order upon the Effective Date of this General Order.

This General Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, protect the Enrollee from liability under federal, state, or local laws, nor create a vested right for the Enrollee to continue the discharge of waste.

CERTIFICATION

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the State Water Board on December 6, 2022.

AYE:	Chair E. Joaquin Esquivel Vice Chair Dorene D'Adamo Board Member Sean Maguire Board Member Laurel Firestone Board Member Nichole Morgan
NAY:	None
ABSENT:	None
ABSTAIN:	None

Courtney Tyler for
Jeanine Townsend
Clerk to the Board

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Table of Attachments

1. INTRODUCTION

This General Order regulates sanitary sewer systems designed to convey sewage. For the purpose of this Order, a sanitary sewer system includes, but is not limited to, pipes, valves, pump stations, manholes, siphons, wet wells, diversion structures and/or other pertinent infrastructure, upstream of a wastewater treatment plant headworks. A sanitary sewer system includes:

- Laterals owned and/or operated by the Enrollee;
- Satellite sewer systems; and/or
- Temporary conveyance and storage facilities, including but not limited to temporary piping, vaults, construction trenches, wet wells, impoundments, tanks and diversion structures.

Sewage is untreated or partially treated domestic, municipal, commercial and/or industrial waste (including sewage sludge), and any mixture of these wastes with inflow or infiltration of stormwater or groundwater, conveyed in a sanitary sewer system. Sewage contains high levels of suspended solids, non-digested organic waste, pathogenic bacteria, viruses, toxic pollutants, nutrients, oxygen-demanding organic compounds, oils, grease, pharmaceuticals, and other harmful pollutants.

For the purpose of this General Order, a spill is a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure. Sewage and its associated wastewater spilled from a sanitary sewer system may threaten public health, beneficial uses of waters of the State, and the environment.

This General Order serves as statewide waste discharge requirements and supersedes the previous State Water Resources Control Board (State Water Board) Order 2006-0003-DWQ and amendments thereafter. All sections and attachments of this General Order are enforceable by the State Water Board and Regional Water Quality Control Boards (Regional Water Boards). Through this General Order, the State Water Board requires an Enrollee to:

- Comply with federal and state prohibitions of discharge of sewage to waters of the State, including federal waters of the United States;
- Comply with specifications, and notification, monitoring, reporting and recordkeeping requirements in this General Order that implement the federal Clean Water Act, the California Water Code (Water Code), water quality control plans (including Regional Water Board Basin Plans) and policies;
- Proactively operate and maintain resilient sanitary sewer systems to prevent spills;
- Eliminate discharges of sewage to waters of the State through effective implementation of a Sewer System Management Plan;
- Monitor, track, and analyze spills for ongoing system-specific performance improvements; and
- Report noncompliance with this General Order per reporting requirements.

An Enrollee is a public, private, or other non-governmental entity that has obtained approval for regulatory coverage under this General Order, including:

- A state agency, municipality, special district, or other public entity that owns and/or operates one or more sanitary sewer systems:
  - greater than one (1) mile in length (each individual sanitary sewer system);
  - one (1) mile or less in length where the State Water Board or a Regional Water Board requires regulatory coverage under this Order; or
- A federal agency, private company, or other non-governmental entity that owns and/or operates a sanitary sewer system of any size where the State Water Board or a Regional Water Board requires regulatory coverage under this Order in response to a history of spills, proximity to surface water, or other factors supporting regulatory coverage.

For the purpose of this Order, a sanitary sewer system includes only systems owned and/or operated by the Enrollee.

2. REGULATORY COVERAGE AND APPLICATION REQUIREMENTS

2.1. Requirements for Continuation of Existing Regulatory Coverage

To continue regulatory coverage from previous Order 2006-0003-DWQ under this General Order, **within the 60-days-prior-to the Effective Date of this General Order**, the Legally Responsible Official of an existing Enrollee shall electronically certify the Continuation of Existing Regulatory Coverage form in the online California Integrated Water Quality System (CIWQS) Sanitary Sewer System Database. The Legally Responsible Official will receive an automated CIWQS-issued Notice of Applicability email, confirming continuation of regulatory coverage under this General Order. All regulatory coverage under previous Order 2006-0003-DWQ will cease on the Effective Date of this Order.

An Enrollee continuing existing regulatory coverage is not required to submit a new application package or pay an application fee for enrollment under this General Order. The annual fee due date for continued regulatory coverage from previous Order 2006-0003-DWQ to this General Order remains unchanged.

A previous Enrollee of Order 2006-0003-DWQ that fails to certify the Continuation of Existing Regulatory Coverage form in the online CIWQS database by the Effective Date of this Order is considered a New Applicant, and will not have regulatory coverage for its sanitary sewer system(s) until:

- A new application package for system(s) enrollment is submitted per section 2.2 (Requirements for New Regulatory Coverage) below; and
- The new application package is approved per section 2.2.2 (Approval of Application Package (For New Applicants Only)).

2.2. Requirements for New Regulatory Coverage

No later than 60 days prior to commencing and/or assuming operation and maintenance responsibilities of a sanitary sewer system, a duly authorized representative that

maintains legal authority over the public or private sanitary sewer system is required to enroll under this General Order by submitting a complete application package as specified below and as provided in Attachment B (Application for Enrollment Form) of this General Order.

Unless required by a Regional Water Board, a public agency that owns a combined sewer system subject to the Combined Sewer Overflow Control Policy (33 U.S. Code § 1342(q)), is not required to enroll, under this Order, the portions of its sanitary sewer system(s) that collects combined sanitary wastewater and stormwater.

2.2.1. Application Package Requirements

The Application for Enrollment package for new applicants must include the following items:

- **Application for Enrollment Form**. The form in Attachment B of this General Order must be completed, signed, and certified by a Legally Responsible Official, in accordance with section 5.1 (Designation of a Legally Responsible Official) of this General Order. If an electronic Application for Enrollment form is available at the time of application, a new applicant shall submit its application form electronically; and
- **Application Fee**. A fee payable to the "State Water Resources Control Board" in accordance with the Fee Schedule in the California Code of Regulations, Title 23, section 2200, or subsequent fee regulations updates.

  The application fee for this General Order is based on the sanitary sewer system's threat to water quality and complexity designations of category 2C or 3C, which is assigned based on the population served by the system. The current Fee Schedule for sanitary sewer systems is listed under subdivision (a)(2) at the following website: Fee Schedule (https://www.waterboards.ca.gov/resources/fees/water_quality/).

2.2.2. Approval of Application Package (For New Applicants Only)

The Deputy Director of the State Water Board, Division of Water Quality (Deputy Director) will consider approval of each complete Application for Enrollment package. The Deputy Director will issue a Notice of Applicability letter which serves as approved regulatory coverage for the new Enrollee.

If the submitted application package is not complete in accordance with section 2.2.1 (Application Package Requirements) of this General Order, the Deputy Director will send a response letter to the applicant outlining the application deficiencies. The applicant will have 60 days from the date of the response letter to correct the application deficiencies and submit the identified items necessary to complete the application package to the State Water Board.

2.2.3. Electronic Reporting Account for New Enrollee

Within 30 days after the date of the Approval of Complete Application Package for System Enrollment, a duly authorized representative for the Enrollee shall obtain a CIWQS Sanitary Sewer System Database user account by clicking the "User Registration" button and following the directions on the CIWQS Login Page

(https://ciwqs.waterboards.ca.gov). If additional assistance is needed to establish an online CIWQS user account, contact State Water Board staff by email at CIWQS@waterboards.ca.gov. The online user account will provide the Enrollee secure access to the online CIWQS database for electronic reporting.

2.3. Regulatory Coverage Transfer

Regulatory coverage under this General Order is not transferable to any person or party except after an existing Enrollee submits a written request for a regulatory coverage transfer to the Deputy Director, at least 60 days in advance of any proposed system ownership transfer. The written request must include a written agreement between the existing Enrollee and the new Enrollee containing:

- Acknowledgement that the transfer of ownership is solely of an existing system with an existing waste discharge identification (WDID) number;
- The specific ownership transfer date in which the responsibility and regulatory coverage transfer between the existing Enrollee and the new Enrollee becomes effective; and
- Acknowledgement that the existing Enrollee is liable for violations occurring up to the ownership transfer date and that the new Enrollee is liable for violations occurring on and after the ownership transfer date.

The Deputy Director will consider approval of the written request. If approved, the Deputy Director will issue a Notice of Applicability letter which serves as an approved transfer of regulatory coverage to the new Enrollee.

3. FINDINGS

3.1. Legal Authorities

3.1.1. Federal and State Regulatory Authority

The objective of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States (33 U.S.C. 1251). The Water Code authorizes the State Water Board to implement the Clean Water Act in the State and to protect the quality of all waters of the State (Water Code sections 13000 and 13160).

3.1.2. Discharge of Sewage

A discharge of untreated or partially treated sewage is a discharge of waste as defined in Water Code section 13050(d) that could affect the quality of waters of the State and is subject to regulation by waste discharge requirements issued pursuant to Water Code section 13263 and Chapter 9, Division 3, Title 23 of the California Code of Regulations. A discharge of sewage may pollute and alter the quality of the waters of the State to a degree that unreasonably affects the beneficial uses of the receiving water body or facilities that serve those beneficial uses (Water Code section 13050(l)(1)).

3.1.3 Water Boards Authority to Require Technical Reports, Monitoring, and Reporting

Water Code sections 13267 and 13383 authorize the Regional Water Boards and the State Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. Water Code section 13267(b), authorizes the Regional Water Boards to "require any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region… or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of water within its region shall furnish, under penalty of perjury, technical or monitoring reports which the regional board requires…In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports." Water Code section 13267(f) authorizes the State Water Board to require this information if it consults with the Regional Water Boards and determines that it will not duplicate the efforts of the Regional Water Boards. The State Water Board has consulted with the Regional Water Boards and made this determination.

The technical and monitoring reports required by this General Order and Attachment E (Notification, Monitoring, Reporting and Recordkeeping Requirements) are necessary to evaluate and ensure compliance with this General Order. The effort to develop required technical reports will vary depending on the system size and complexity and the needs of the specific technical report. The burden and cost of these reports are reasonable and consistent with the interest of the state in protecting water quality, which is the primary purpose of requiring the reports.

Water Code section 13383(a) authorizes the Water Boards to "establish monitoring, inspection, entry, reporting, and recordkeeping requirements… for any person who discharges, or proposes to discharge, to navigable waters, any person who introduces pollutants into a publicly owned treatment works, any person who owns or operates, or proposes to own or operate, a publicly owned treatment works or other treatment works treating domestic sewage, or any person who uses or disposes, or proposes to use or dispose, of sewage sludge." Section 13383(b) continues, "the state board or the regional boards may require any person subject to this section to establish and maintain monitoring equipment or methods, including, where appropriate, biological monitoring methods, sample effluent as prescribed, and provide other information as may be reasonably required."

Reporting of spills from privately owned sewer laterals and systems pursuant to section 5.15 (Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems) of this General Order is authorized by Water Code section 13225(c) and encouraged by the State Water Board, wherein a local agency may investigate and report on any technical factors involved in water quality control provided the burden including costs of such reports bears a reasonable relationship to the need for the report and the benefits to be obtained therefrom. The burden of reporting private spills under section 5.15 (Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems) is minimal and is outweighed by the benefit of providing Regional Water Boards an opportunity to respond to these spills

when an Enrollee, which in many cases has a contractual relationship with the owner of the private system, has knowledge of the spills.

3.1.4. Water Board Authority to Prescribe General Waste Discharge Requirements

Water Code section 13263(i) provides that the State Water Board may prescribe general waste discharge requirements for a category of discharges if the State Water Board finds or determines that:

- The discharges are produced by the same or similar operations;
- The discharges involve the same or similar types of waste;
- The discharges require the same or similar treatment standards; and
- The discharges are more appropriately regulated under general waste discharge requirements than individual waste discharge requirements.

Since 2006, the State Water Board has been regulating over 1,100 publicly owned sanitary sewer systems (See section 3.1.5 (Previous Statewide General Waste Discharge Requirements) of this General Order). California also has a large unknown number of unregulated privately owned sanitary sewer systems. All waste conveyed in publicly owned and privately owned sanitary sewer systems (as defined in this General Order) is comprised of untreated or partially treated domestic waste and/or industrial waste. Generally, sanitary sewer systems are designed and operated to convey waste by gravity or under pressure; system-specific design elements and system-specific operations do not change the common nature of the waste, the common threat to public health, or the common impacts on water quality. Spills of waste from a sanitary sewer system prior to reaching the ultimate downstream treatment facility are unauthorized and enforceable by the State Water Board and/or a Regional Water Board. Therefore, spills from sanitary sewer systems are more appropriately regulated under general waste discharge requirements.

As specified in Water Code sections 13263(a) and 13241, the implementation of requirements set forth in this Order is for the reasonable protection of past, present, and probable future beneficial uses of water and the prevention of nuisance. The requirements implement the water quality control plans (Basin Plans) for each Regional Water Board and take into account the environmental characteristics of sewer service areas and hydrographic units within the state. Additionally, the State Water Board has considered water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality, costs associated with compliance with these requirements, the need for developing housing within California, and the need to protect sources of drinking water and other water supplies.

3.1.5. Previous Statewide General Waste Discharge Requirements

On May 2, 2006, the State Water Board adopted Order 2006-0003-DWQ serving as Waste Discharge Requirements pursuant to Article 4, Chapter 4, Division 7 of the Water Code (commencing with section 13260) for inadvertent discharges to waters of the State. Order 2006-0003-DWQ prohibited discharges of untreated or partially treated sewage. Order 2006-0003-DWQ also required system-specific management, operation, and maintenance of publicly owned sewer systems greater than one mile in length.

To decrease the impacts on human health and the environment caused by sewage spills, the previous Order required enrollees to develop a rehabilitation and replacement plan that identifies system deficiencies and prioritizes short-term and long-term rehabilitation actions. The previous Order also required enrollees to:

1. Maintain information that can be used to establish and prioritize appropriate Sewer System Management Plan activities; and
2. Implement a proactive approach to reduce spills.

The previous Order required Sewer System Management Plan elements for "the proper and efficient management, operation, and maintenance of sanitary sewer systems, while taking into consideration risk management."

On July 30, 2013, the State Water Board amended General Order 2006-0003-DWQ with Order WQ 2013-0058-EXEC, Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

Many enrollees of Order 2006-0003-DWQ have already implemented proactive measures to reduce sewage spills. Other enrollees, however, still need technical assistance and funding to improve sanitary sewer system operation and maintenance for the reduction of sewage spills.

3.1.6. Existing Memorandum of Agreement with California Water Environment Association

The California Water Environment Association is a nonprofit organization dedicated to providing water industry certifications, training, and networking opportunities. The Association's Technical Certification Program provides accredited sanitary sewer system operator certification for collection system operators and maintenance workers.

On February 10, 2016, the State Water Board entered into a collaborative agreement with the Association titled *Memorandum of Agreement Between the California State Water Resources Control Board and the California Water Environment Association - Training Regarding Requirements Set Forth in Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*. The Memorandum sets forth collaborative training necessary for regulated sanitary sewer system personnel to operate and maintain a well operating system and ensure full compliance with statewide sewer system regulations.

On March 15, 2018, the State Water Board and the California Water Environment Association amended the existing Memorandum of Agreement to include collaborative outreach and expand training needs associated with further updates to Water Board regulations for sanitary sewer systems. The State Water Board encourages further Agreement updates as necessary to support improved sewer system operations and the professionalism of collection system operators.

3.2. General

3.2.1. Waters of the State

Waters of the State include any surface water or groundwater, including saline waters, within the boundaries of the state as defined in Water Code section 13050(e), and are inclusive of waters of the United States.

3.2.2. Sanitary Sewer System Spill Threats to Public Health and Beneficial Uses

Sewage contains high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen-demanding organic compounds, oil and grease and other pollutants. Sewage spills may cause a public nuisance, particularly when sewage is discharged to areas with high public exposure such as streets and surface waters used for drinking, irrigation, fishing, recreation, or other public consumption or contact uses.

More specifically, sanitary sewer spills may:

- Adversely affect aquatic life and/or threaten water quality when reaching receiving waters;
- Inadvertently release trash, including plastics;
- Impair the recreational use and aesthetic enjoyment of surface waters by polluting surface water or groundwater;
- Threaten public health through direct public exposure to bacteria, viruses, intestinal parasites, and other microorganisms that can cause serious illness such as gastroenteritis, hepatitis, cryptosporidiosis, and giardiasis;
- Negatively impact ecological receptors and biota within surface waters; and
- Cause nuisance including odors, closure of beaches and recreational areas, and property damage.

Sanitary sewer system spills may pollute receiving waters and threaten beneficial uses of surface water and groundwater. Potentially threatened beneficial uses include, but are not limited to the following (with associated acronym representations as included in statewide water quality control plans and Regional Water Boards' Basin Plans):

- Municipal and Domestic Supply (MUN)
- Water Contact Recreation (REC-1) and Non-Contact Water Recreation (REC-2)
- Cold Freshwater Habitat (COLD)
- Warm Freshwater Habitat (WARM)
- Native American Culture (CUL)
- Wildlife Habitat (WILD)
- Rare, Threatened, or Endangered Species (RARE)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Wetland Habitat (WET)
- Agricultural Supply (AGR)
- Estuarine Habitat (EST)

- Commercial and Sport Fishing (COMM)
- Subsistence Fishing (SUB)
- Tribal Tradition and Culture (CUL)
- Tribal Subsistence Fishing (T-SUB)
- Aquaculture (AQUA)
- Marine Habitat (MAR)
- Preservation of Biological Habitats of Special Significance (BIOL)
- Migration of Aquatic Organisms (MIGR)
- Shellfish Harvesting (SHELL)
- Industrial Process Supply (PROC)
- Industrial Service Supply (IND)
- Hydropower Generation (POW)
- Navigation (NAV)
- Flood Peak Attenuation/Flood Water Storage (FLD)
- Water Quality Enhancement (WQE)
- Fresh Water Replenishment (FRSH)
- Groundwater Recharge (GWR)
- Inland Saline Water Habitat (SAL)

3.2.3. Proactive Sanitary Sewer System Management to Eliminate Spill Causes

Finding 3 of the previous Order, 2006-0003-DWQ, states: “Sanitary sewer systems experience periodic failures resulting in discharges that may affect waters of the state. There are many factors (including factors related to geology, design, construction methods and materials, age of the system, population growth, and system operation and maintenance), which affect the likelihood of an SSO [sanitary sewer overflow]. A proactive approach that requires Enrollees to ensure a system-wide operation, maintenance, and management plan is in place will reduce the number and frequency of SSOs within the state. This approach will in turn decrease the risk to human health and the environment caused by SSOs.”

Many spills are preventable through proactive attention on sanitary sewer system management using the best practices and technologies available to address major causes of spills, including but not limited to:

- Blockages from sources including but not limited to:
  - Fats, oils and grease;
  - Tree roots;
  - Rags, wipes and other paper, cloth and plastic products; and
  - Sediment and debris.
- Sewer system damage and exceedance of sewer system hydraulic capacity from identified system-specific environmental, and climate-change impacts, including but not limited to:

- Sea level rise impacts including flooding, coastal erosion, seawater intrusion, tidal inundation and submerged lands;
- Increased surface water flows due to higher intensity rain events;
- Flooding;
- Wildfires and wildfire induced impacts;
- Earthquake induced damage;
- Landslides; and
- Subsidence.

- Infrastructure deficiencies and failures, including but not limited to:
  - Pump station mechanical failures;
  - System age;
  - Construction material failures;
  - Manhole cover failures;
  - Structural failures; and
  - Lack of proper operation and maintenance.
- Insufficient system capacity (temporary or sustained), due to factors including but not limited to:
  - Excessive and/or increased storm or groundwater inflow/infiltration;
  - Insufficient capacity due to population increase and/or new connections from industrial, commercial and other system users; and
  - Stormwater capture projects utilizing a sanitary sewer system to convey stormwater to treatment facilities for reuse.
- Community impacts, including but not limited to:
  - Power outages;
  - Vandalism; and
  - Contractor-caused or other third party-caused damages.

3.2.4. Underground Sanitary Sewer System Leakage

Portions of some sanitary sewer systems may leak, causing underground exfiltration (exiting) of sewage from the system. Exfiltrated sewage that remains in the underground infrastructure trench and/or the soil matrix, and that does not discharge into waters of the State (surface water or groundwater) may not threaten beneficial uses.

Underground exfiltrated sewage may threaten beneficial uses if discharged to waters of the State. Exfiltrated sewage that discharges to groundwater may impact beneficial uses of groundwater and pollute groundwater supply. Additionally, if in close proximity, exfiltrated sewage may enter into a compromised underground drainage conveyance system that discharges into a water of the United States, or into groundwater that is hydrologically connected to (feeds into) a water of the United States, thus potentially causing: (1) a Clean Water Act violation, (2) threat and impact to beneficial uses, and/or (3) surface water pollution.

3.2.5. Proactive Sanitary Sewer System Management to Reduce Inflow and Infiltration

Excessive inflow (stormwater entering) and infiltration (groundwater seepage entering) to sanitary sewer systems is preventable through proactive sewer system management using the best practices and technologies available. The efficiency of the downstream wastewater treatment processes is dependent on the performance of the sanitary sewer system. When the structural integrity of a sanitary sewer system deteriorates, high volumes of inflow and infiltration can enter the sewer system. High levels of inflow and infiltration increase the hydraulic load on the downstream treatment plant, which can reduce treatment efficiency, lead to bypassing a portion of the treatment process, cause illegal discharge of partially treated effluent, or in extreme situations make biological treatment facilities inoperable (e.g., wash out the biological organisms that treat the waste).

3.3. Water Quality Control Plans, Policies and Resolutions

The nine Regional Water Boards have adopted region-specific water quality control plans (commonly referred to as Basin Plans) that designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives. The State Water Board has adopted statewide water quality control plans, policies and resolutions establishing statewide water quality objectives, implementation programs and initiatives.

3.3.1. State Water Board Antidegradation Policy

On October 28, 1968, the State Water Board adopted Resolution 68-16, titled Statement of Policy with Respect to Maintaining High Quality of Waters in California, which incorporates the federal antidegradation policy. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings.

The continued prohibition of sewage discharges from sanitary sewer systems into waters of the State aligns with Resolution 68-16. A sewage discharge from sanitary sewers to waters of the State is prohibited by this Order. Therefore, this Order does not allow degradation of waters of the State. In addition, this Order: (1) further expands the existing prohibition of sewage discharges to include waters of the State, in addition to waters of the United States as provided in previous Order 2006-0003-DWQ, and (2) enhances the ability for Water Board enforcement of violations of the established prohibitions.

3.3.2. State Water Board Sources of Drinking Water Policy

On May 19,1988, the State Water Board adopted Resolution 88-63 (amended on February 1, 2006), titled Sources of Drinking Water, establishing state policy that all waters of the State, with certain exceptions, are suitable or potentially suitable for municipal or domestic supply.

3.3.3. State Water Board Cost of Compliance Resolution

On September 24, 2013, the State Water Board adopted Resolution 2013-0029, titled Directing Actions in Response to Efforts by Stakeholders on Reducing Costs of

Compliance While Maintaining Water Quality Protection. Through this resolution, the State Water Board committed to continued stakeholder engagement in identifying and implementing measures to reduce costs of compliance with regulatory orders while maintaining water quality protection and improving regulatory program outcomes.

3.3.4. State Water Board Human Right to Water Resolution

On February 16, 2016, the State Water Board adopted Resolution 2016-0010, titled Adopting the Human Right to Water as a Core Value and Directing its Implementation in Water Board Programs and Activities, addressing the human right to water as a core value and directing Water Board programs to implement requirements to support safe drinking water for all Californians.

On November 16, 2021, the State Water Board adopted Resolution 2021-0050 titled Condemning Racism, Xenophobia, Bigotry, and Racial Injustice, and Strengthening Commitment to Racial Equity, Diversity, Inclusion, Access, and Anti-racism. Among other actions, through Resolution 2021-0050, the State Water Board, in summary as corresponding to this General Order, reaffirms its commitment to its Human Right to Water resolution, upholding that every human being in California deserves safe, clean, affordable, and accessible water for human consumption, cooking, and sanitation purposes. Resolution 2021-0050 provides the State Water Board commitment to:

- Protect public health and beneficial uses of waterbodies in all communities, including communities disproportionately burdened by wastes discharge of waste to land and surface water;
- Restore impaired surface waterbodies and degraded aquifers; and
- Promote multi-benefit water quality projects.

Through Resolution 2021-0050, the State Water Board also commits to expanding implementation of its Climate Change Resolution to address the disproportionate effects of extreme hydrologic conditions and sea-level rise on Black, Indigenous, and people of color communities, prioritizing:

- The right to safe, clean, affordable, and accessible drinking water and sanitation;
- Sustainable management and protection of local groundwater resources;
- Healthy watersheds; and
- Access to surface waterbodies that support subsistence fishing.

On June 7, 2022, the State Water Board adopted a Resolution, titled Authorizing the Executive Director or Designee to Enter into One or More Multi-Year Contracts Up to a Combined Sum of $4,000,000 for a Statewide Wastewater Needs Assessment, supporting the equitable access to sanitation for all Californians and implementation of Resolutions 2016-0010 and 2021-0050.

This General Order supports the State Water Board priority in collecting a comprehensive set of data for California's wastewater systems, including sanitary sewer systems. Data reported per the requirements of this Order will be used with data from other Water Boards' programs, to further develop criteria and create a statewide risk

framework to prioritize critical funding and infrastructure investments for California's most vulnerable populations, including disadvantaged or severely disadvantaged communities with inadequate or failing sanitation systems and threatened access to healthy drinking water supplies.

3.3.5. State Water Board Open Data Resolution

On July 10, 2018, the State Water Board adopted Resolution 2018-0032, titled Adopting Principles of Open Data as a Core Value and Directing Programs and Activities to Implement Strategic Actions to Improve Data Accessibility and Associated Innovation, directing regulatory programs to assure all monitoring and reporting requirements support the State Water Boards' Open Data Initiative.

3.3.6. State Water Board Response to Climate Change

On March 7, 2017, the State Water Board adopted Resolution 2017-0012, titled Comprehensive Response to Climate Change, requiring a proactive response to climate change in all California Water Board actions, with the intent to embed climate change consideration into all programs and activities.

3.4. California Environmental Quality Act

The adoption of this Order is an action to reissue general waste discharge requirements that is exempt from the California Environmental Quality Act (Public Resources Code section 21000 et seq.) because it is an action taken by a regulatory agency to assure the protection of the environment and the regulatory process involves procedures for protection of the environment (Cal. Code Regs., Title 14, section 15308). In addition, the action to adopt this Order is exempt from CEQA pursuant to Cal. Code Regs., Title 14, section 15301, to the extent that it applies to existing sanitary sewer collection systems that constitute "existing facilities" as that term is used in sections 15301 and 15302, to the extent that it results in the repair or replacement of existing systems involving negligible or no expansion of capacity.

3.5. State Water Board Funding Assistance for Compliance with Water Board Water Quality Orders

The State Water Board, Division of Financial Assistance administers the implementation of the State Water Board financial assistance programs, per Board-adopted funding policies. Among other funding areas, the Division administers loan and grant funding for the planning and construction of wastewater and water recycling facilities per funding program-specific policies and guidelines. Applicants may apply for Clean Water State Revolving Fund low-interest loan, Small Community Wastewater grant funding assistance, and other funding available at the time of application, for some of the costs associated with complying with this General Order.

Funding applicants may obtain further information regarding current funding opportunities, and Division of Financial Assistance staff contact information at the following website: Financial Assistance Funding - Grants and Loans | California State Water Resources Control Board.
(https://www.waterboards.ca.gov/water_issues/programs/grants_loans/)

Section 13477.6 of the Water Code authorizes the Small Community Grant Fund. The Small Community Grant Fund allows the State Water Board to provide grant funding assistance to small, disadvantaged communities and small severely disadvantaged communities that may not otherwise be able to afford a loan or similar financing for projects to comply with requirements of this General Order. The State Water Board also considers loan forgiveness on a disadvantaged community-specific basis.

For disadvantaged communities' wastewater needs, the State Water Board places priority on the funding of projects that address:

- Public health;
- Violations of waste discharge requirements and National Pollutant Discharge Elimination System (NPDES) permits;
- Providing sewer system service to existing septic tank owners; and
- High priority public health and water quality concerns identified by a Regional Water Board.

3.6. Notification to Interested Parties

On January 31, 2022, the State Water Board notified interested parties and persons of its intent to reissue Sanitary Sewer Systems General Order 2006-0003-DWQ by issuing a draft General Order for a 60-day public comment period. State Water Board staff conducted extensive stakeholder outreach and encouraged public participation in the adoption process for this General Order. On March 15, 2022, the State Water Board held a public meeting to hear and consider oral public comments. The State Water Board considered all public comments prior to adopting this General Order.

THEREFORE, IT IS HEREBY ORDERED, that pursuant to Water Code sections 13263, 13267, and 13383 this General Order supersedes Order 2006-0003-DWQ, Order WQ 2013-0058-EXEC, and any amendments made to these Orders thereafter, except for enforcement purposes and to meet the provisions contained in Division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, the Enrollee shall comply with the requirements in this Order.

4. PROHIBITIONS

4.1 Discharge of Sewage from a Sanitary Sewer System

Any discharge from a sanitary sewer system that has the potential to discharge to surface waters of the State is prohibited unless it is promptly cleaned up and reported as required in this General Order.

4.2. Discharge of Sewage to Waters of the State

Any discharge from a sanitary sewer system, discharged directly or indirectly through a drainage conveyance system or other route, to waters of the State is prohibited.

4.3. Discharge of Sewage Creating a Nuisance

Any discharge from a sanitary sewer system that creates a nuisance or condition of pollution as defined in Water Code section 13050(m) is prohibited.

5. SPECIFICATIONS

5.1. Designation of a Legally Responsible Official

The Enrollee shall designate a Legally Responsible Official that has authority to ensure the enrolled sanitary sewer system(s) complies with this Order, and is authorized to serve as a duly authorized representative. The Legally Responsible Official must have responsibility over management of the Enrollee's entire sanitary sewer system, and must be authorized to make managerial decisions that govern the operation of the sanitary sewer system, including having the explicit or implicit duty of making major capital improvement recommendations to ensure long-term environmental compliance. The Legally Responsible Official must have or have direct authority over individuals that:

- Possess a recognized degree or certificate related to operations and maintenance of sanitary sewer systems, and/or
- Have professional training and experience related to the management of sanitary sewer systems, demonstrated through extensive knowledge, training and experience.

For example, a sewer system superintendent or manager, an operations manager, a public utilities manager or director, or a district engineer may be designated as a Legally Responsible Official.

The Legally Responsible Official shall complete the electronic CIWQS "User Registration" form (https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp). A Legally Responsible Official that represents multiple enrolled systems shall complete the electronic CIWQS "User Registration" form for each system.

The Enrollee shall submit any change to its Legally Responsible Official, and/or change in contact information, to the State Water Board within 30 calendar days of the change by emailing ciwqs@waterboards.ca.gov and copying the appropriate Regional Water Board as provided in Attachment F (Regional Water Quality Control Board Contact Information) of this General Order.

5.2. Sewer System Management Plan Development and Implementation

To facilitate adequate local funding and management of its sanitary sewer system(s), the Enrollee shall develop and implement an updated Sewer System Management Plan. The scale and complexity of the Sewer System Management Plan, and specific elements of the Plan, must match the size, scale and complexity of the Enrollee's sanitary sewer system(s). The Sewer System Management Plan must address, at minimum, the required Plan elements in Attachment D (Sewer System Management Plan – Required Elements) of this General Order. To be effective, the Sewer System Management Plan must include procedures for the management, operation, and maintenance of the sanitary sewer system(s). The procedures must: (1) incorporate the

prioritization of system repairs and maintenance to proactively prevent spills, and (2) address the implementation of current standard industry practices through available equipment, technologies, and strategies.

For an existing Enrollee under Order 2006-0003-DWQ that has certified its Continuation of Existing Regulatory Coverage, per section 2.1 (Requirements for Continuation of Existing Regulatory Coverage) of this General Order:

Within six (6) months of the Adoption Date of this General Order:

- The Legally Responsible Official shall upload the Enrollee's existing Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database.

For a new Enrollee:

Within twelve (12) months of the Application for Enrollment approval date:

- The governing entity of the new Enrollee shall approve its Sewer System Management Plan; and
- The Legally Responsible Official shall certify and upload its Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database.

5.3. Certification of Sewer System Management Plan and Plan Updates

The Legally Responsible Official shall certify and upload its Sewer System Management Plan and all subsequent updates to the online CIWQS Sanitary Sewer System Database.

5.4. Sewer System Management Plan Audits

The Enrollee shall conduct an internal audit of its Sewer System Management Plan, and implementation of its Plan, at a minimum frequency of once every three years. The audit must be conducted for the period after the end of the Enrollee's last required audit period. **Within six months after the end of the required 3-year audit period**, the Legally Responsible Official shall submit an audit report into the online CIWQS Sanitary Sewer System Database per the requirements in section 3.10 (Sewer System Management Plan Audit Reporting Requirements) of Attachment E1 of this General Order.

Audit reports submitted to the CIWQS Sanitary Sewer System Database will be viewable only to Water Boards staff.

The internal audit shall be appropriately scaled to the size of the system(s) and the number of spills. The Enrollee's sewer system operators must be involved in completing the audit. At minimum, the audit must:

- Evaluate the implementation and effectiveness of the Enrollee's Sewer System Management Plan in preventing spills;
- Evaluate the Enrollee's compliance with this General Order;
- Identify Sewer System Management Plan deficiencies in addressing ongoing spills and discharges to waters of the State; and

- Identify necessary modifications to the Sewer System Management Plan to correct deficiencies.

The Enrollee shall submit a complete audit report that includes:

- Audit findings and recommended corrective actions;
- A statement that sewer system operators' input on the audit findings has been considered; and
- A proposed schedule for the Enrollee to address the identified deficiencies.

A new Enrollee of this General Order (that did not have a sanitary sewer system enrolled in the previous State Water Board Order 2006-0003-DWQ) shall conduct its first internal Sewer System Management Plan audit for the time period between the date of submittal of its certified Sewer System Management Plan and the third subsequent December 31st date. The audit report must be submitted into the online CIWQS Sanitary Sewer System Database **by July 1 of the following calendar year**.

See the following tables for clarification:

Initial Audit Period and Audit Due Date for New Enrollees

	Audit Period	Audit Due Date
New Enrollee	Certified Sewer System Management Plan Submittal Date through the third subsequent December 31st date	July 1st date after audit period
Example	*Certified Sewer System Management Plan Submittal Date of August 2, 2025* *Audit Period of August 2, 2025 through December 31, 2027*	*July 1, 2028*

Initial Audit Period for Transition from 2-Year Audit Required in Previous Order 2006-0003-DWQ to 3-Year Audit Required in this General Order

	Audit Period	Audit Due Date
An Enrollee previously regulated by Order 2006-003-DWQ	A 3-year period starting from the end of last required 2-year Audit Period	Within six months after end of 3-year Audit Period
Example	*Last required Audit Period start date of August 2, 2021;* *Audit Period of August 2, 2021 through August 1, 2024*	*February 1, 2025*

Three-Year Ongoing Audit Period

	Audit Period	Audit Due Date
Each Enrollee	A 3-year period starting from the end of last required Audit Period	Within six months after end of 3-year Audit Period

5.5. Six-Year Sewer System Management Plan Update

At a minimum, the Enrollee shall update its Sewer System Management Plan every six (6) years after the date of its last Plan Update due date. (For an Enrollee previously regulated by Order 2006-0003-DWQ, the six-year period shall commence on the due date identified in section 3.11 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this Order. The Updated Sewer System Management Plan must include:

- Elements required in Attachment D (Sewer System Management Plan – Required Elements) of this Order;
- Summary of revisions included in the Plan update based on internal audit findings; and
- Other sewer system management-related changes.

The Enrollee's governing entity shall approve the updated Plan. The Legally Responsible Official shall upload and certify the approved updated Plan in the online CIWQS Sanitary Sewer System Database in accordance with section 3.11 (Sewer System Management Plan Reporting Requirements) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order. During the time period in between Plan updates, the Enrollee shall continuously document changes to its Sewer System Management Plan in a change log attached to the Plan.

5.6. System Resilience

The Enrollee shall include and implement system-specific procedures in its Sewer System Management Plan to proactively prioritize: (1) operation and maintenance, (2) condition assessments, and (3) repair and rehabilitation, to address ongoing system resilience, as specified in Attachment D (Sewer System Management Plan – Required Elements) of this General Order.

5.7. Allocation of Resources

The Enrollee shall:

- Establish and maintain a means to manage all necessary revenues and expenditures related to the sanitary sewer system; and
- Allocate the necessary resources to its sewer system management program for:
  - Compliance with this General Order,
  - Full implementation of its updated Sewer System Management Plan,
  - System operation, maintenance, and repair, and
  - Spill responses.

5.8. Designation of Data Submitters

The Legally Responsible Official may designate one or more individuals as a Data Submitter for reporting of spill data. The Legally Responsible Official shall authorize the designation of Data Submitter(s) through the online CIWQS database (https://ciwqs.waterboards.ca.gov) prior to the individuals establishing a CIWQS user account (https://ciwqs.waterboards.ca.gov/ciwqs/newUser.jsp) and entering spill data into the online CIWQS Sanitary Sewer System Database.

The Legally Responsible Official shall submit any change to its Data Submitter(s), and/or change in Data Submitter contact information, to the State Water Board within 30 calendar days of the change, by emailing ciwqs@waterboards.ca.gov and copying the appropriate Regional Water Board as provided in Attachment F (Regional Water Quality Control Board Contact Information) of this General Order.

5.9. Reporting Certification

The Legally Responsible Official shall electronically certify, on the Enrollee's behalf, all applications, reports, the Sewer System Management Plan(s) and corresponding updates, and other information submitted electronically into the online CIWQS Sanitary Sewer System Database, as follows:

"I certify under penalty of perjury under the laws of the State of California that the electronically submitted information was prepared under my direction or supervision. Based on my inquiry of the person(s) directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete, and complies with the Statewide Sanitary Sewer Systems General Order. I am aware that there are significant penalties for submitting false information."

Hardcopy submittals to the State Water Board must be accompanied by the above certification statement.

5.10. System Capacity

The Enrollee shall maintain the system capacity necessary to convey: (1) base flows during dry weather conditions, and (2) wet weather peak flows consistent with designated local historic storms. Design storms must take into account system-specific stormwater contributions via inflow and infiltration, and location-specific depth of groundwater and storm frequencies. The Enrollee shall implement capital improvements to provide adequate hydraulic capacity to:

- Meet or exceed the design criteria as defined in the Enrollee's System Evaluation and Capacity Assurance element of its Sewer System Management Plan; and
- Prevent system capacity-related spills, and adverse impacts to the treatment efficiency of downstream wastewater treatment facilities.

5.11. System Performance Analysis

The Enrollee shall include a running 10-year system performance analysis in its Annual Report. The analysis must include two CIWQS-generated graphs presenting the following information:

Graph 1 – Total Spill Volume per Year:

X axis: A 10-year period which includes the current calendar year and the nine previous calendar years;

Y axis: The total spill volume, per Spill Category, for each calendar year.

Graph 2 – Total Number of Spills per Year:

X axis: A 10-year period which includes the current calendar year and the nine previous calendar years;

Y axis: The total number of spills, per Spill Category, for each calendar year.

The current calendar year is the calendar year covered in the Annual Report.

The Enrollee shall generate the graphs in CIWQS, using the existing data in the online CIWQS Sanitary Sewer System Database at the following graph generation link: (https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportSSOServlet?reportAction=criteria&reportId=sso_operation_report).

5.12. Spill Emergency Response Plan and Remedial Actions

For Existing Enrollees (with regulatory coverage under Order 2006-0003-DWQ):

Within six (6) months of the Adoption Date of this General Order, the Enrollee shall update and implement its Spill Emergency Response Plan, per Attachment D, section 6 (Spill Emergency Response Plan) of this General Order.

For New Enrollees:

Within six (6) months of the Application for Enrollment approval date, the Enrollee shall develop and implement a Spill Emergency Response Plan, per Attachment D, section 6 (Spill Emergency Response Plan) of this General Order.

The Enrollee shall certify, in its Annual Report, that its Spill Emergency Response Plan is up to date.

The Spill Emergency Response Plan shall include measures to protect public health and the environment. The Enrollee shall respond to spills from its system(s) in a timely manner that minimizes water quality impacts and nuisance by:

- Immediately stopping the spill and preventing/minimizing a discharge to waters of the State;
- Intercepting sewage flows to prevent/minimize spill volume discharged into waters of the State;
- Thoroughly recovering, cleaning up and disposing of sewage and wash down water; and
- Cleaning publicly accessible areas while preventing toxic discharges to waters of the State.

5.13. Notification, Monitoring, Reporting and Recordkeeping Requirements

The Enrollee shall comply with notification, monitoring, reporting, and recordkeeping requirements in Attachment E1 of this General Order.

5.13.1. Spill Categories

Individual spill notification, monitoring and reporting must be in accordance with the following spill categories:

- **Category 1 Spill**

  A Category 1 spill is a spill of any volume of sewage from or caused by a sanitary sewer system regulated under this General Order that results in a discharge to:

  - A surface water, including a surface water body that contains no flow or volume of water; or
  - A drainage conveyance system that discharges to surface waters when the sewage is not fully captured and returned to the sanitary sewer system or disposed of properly.

    Any spill volume not recovered from a drainage conveyance system is considered a discharge to surface water, unless the drainage conveyance system discharges to a dedicated stormwater infiltration basin or facility.

A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

- **Category 2 Spill**

  A Category 2 spill is a spill of 1,000 gallons or greater, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

  A spill of 1,000 gallons or greater that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system, is a Category 2 spill.

- **Category 3 Spill**

  A Category 3 spill is a spill of equal to or greater than 50 gallons and less than 1,000 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

  A spill of equal to or greater than 50 gallons and less than 1,000 gallons, that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 3 spill.

- **Category 4 Spill**

  A Category 4 spill is a spill of less than 50 gallons, from or caused by a sanitary sewer system regulated under this General Order that does not discharge to a surface water.

  A spill of less than 50 gallons that spills out of a lateral and is caused by a failure or blockage in the sanitary sewer system is a Category 4 spill.

5.13.2. Annual Report

The Enrollee shall submit an Annual Report (previously termed as Collection System Questionnaire in Order 2006-0003-DWQ) as specified in section 3.9 (Annual Report) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

For new Enrollees: Within 30 days of obtaining a CIWQS account, a new Enrollee shall submit its initial Annual Report, as specified in section 3.9 (Annual Report) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

5.14. Electronic Sanitary Sewer System Service Area Boundary Map

For continuing enrollees, starting on July 1, 2025, and no later than December 31, 2025:

For new enrollees – no earlier than July 1, 2025, or within 12 months of the Application for Enrollment approval date, whichever date is later:

The Legally Responsible Official shall submit, to the State Water Board, geospatial data detailing the locations of the Enrollee's sanitary sewer system service area boundary, per the required content and specifications in section 3.8 (Electronic Sanitary Sewer System Service Area Boundary Map) of Attachment E1 of this General Order, for each system identified by a WDID number.

An Enrollee of a disadvantaged community that may need assistance developing an electronic map to comply with this requirement, may contact State Water Board staff for assistance at SanitarySewer@waterboards.ca.gov.

5.15. Voluntary Reporting of Spills from Privately-Owned Sewer Laterals and/or Private Sanitary Sewer Systems

Within 24 hours of becoming aware of a spill (as described below) from a private sewer lateral or private sanitary sewer system that is not owned/operated by the Enrollee, the Enrollee is encouraged to report the following observations to the online CIWQS Sanitary Sewer System Database at the following link: https://ciwqs.waterboards.ca.gov:

- A spill equal or greater than 1,000 gallons that discharges (or has a potential to discharge) to a water of the State, or a drainage conveyance system that discharges to waters of the State; **or**
- Any volume of sewage that discharges (or has a potential to discharge) to surface waters.

In the CIWQS module, the Enrollee is encouraged to identify:

- Time of observation;
- Description of general spill location (for example, street name and cross street names);
- Estimated volume of spill;
- If known, general description of spill destination (for example, flowing into drainage channel, flowing directly into a creek, etc.); and
- If known, name of private system owner/operator.

The CIWQS database will make the name and contact information of the entity voluntarily reporting a private spill, accessible to State and Regional Water Board staff only. The CIWQS database will only make information regarding the actual spill, accessible to the public.

5.16. Voluntary Notification of Spills from Privately-Owned Laterals and/or Systems to the California Office of Emergency Services

Upon observing or acquiring knowledge of any of the following from a private sewer lateral or private sanitary sewer system that is not owned/operated by the Enrollee, the Enrollee is encouraged to notify the California Office of Emergency Services (as provided by Health and Safety Code section 5410 et. seq. and Water Code section 13271), or inform the responsible party that State law requires such notification to the Office of Emergency Services by any person that causes or allows a sewage discharge to waters of the State:

- A spill equal to 1,000 gallons or more that discharges (or has a potential to discharge) to waters of the State, or a drainage conveyance system that discharges to waters of the State; or
- A spill of any volume to surface waters.

5.17. Unintended Failure to Report

If an Enrollee becomes aware that they unintentionally failed to submit relevant facts in any report required in this General Order, the Enrollee shall promptly notify Regional Water Board and State Water Board staff. Regional Water Board contact information is included in Attachment F of this Order. State Water Board staff shall be contacted by email at SanitarySewer@waterboards.ca.gov for assistance in formally amending the corresponding report(s) in the online CIWQS Sanitary Sewer System Database.

5.18. Duty to Report to Water Boards

In accordance with Water Code section 13267 and/or section 13383, upon request by the State Water Board Executive Director (or designee) or a Regional Water Board Executive Officer (or designee), the Enrollee shall provide the requested information which the State or Regional Water Board deems necessary to determine compliance with this General Order.

5.19. Operation and Maintenance

To prevent discharges to the environment, the Enrollee shall maintain in good working order, and operate as designed, any facility or treatment and control system designed to contain sewage and convey it to a treatment plant.

6. PROVISIONS

6.1. Enforcement Provisions

The following enforcement provisions are based on existing federal and state regulations, laws and policies, including the federal Clean Water Act, the state Water Code and the State Water Board Enforcement Policy.

6.1.1. Enforceability of Clean Water Act and Water Code Violations

Noncompliance with requirements of this General Order or discharging sewage without enrolling in this General Order constitutes a violation of the Water Code and a potential

violation of the Clean Water Act and is grounds for an enforcement action by the State Water Board or the applicable Regional Water Board. Failure to comply with the notification, monitoring, inspection, entry, reporting, and recordkeeping requirements may subject the Enrollee to administrative civil liabilities of up to $10,000 a day per violation pursuant to Water Code section 13385; up to $1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement. Discharging waste not in compliance with the requirements of this General Order or the Clean Water Act may subject the Enrollee to administrative civil liabilities up to $10,000 a day per violation and additional liability up to $10 per gallon of discharge not cleaned up after the first 1,000 gallons of discharge; up to $5,000 a day per violation pursuant to Water Code section 13350 or up to $20 per gallon of waste discharged; or referral to the Attorney General for judicial civil enforcement.

6.1.2. Monetary Penalties

The Water Code provides the State and Regional Water Boards the authority to pursue formal enforcement actions, including imposing administrative liability and civil monetary penalties, for non-compliance with the requirements of this General Order and violations of the Clean Water Act.

6.1.3. Falsifying or Failure to Report

The Water Code provides that any person failing or refusing to furnish technical or monitoring program reports, as required under this General Order, or falsifying any information provided in the technical or monitoring reports is subject to administrative liability and civil monetary penalties. Any person who knowingly fails or refuses to furnish technical or monitoring program reports or falsifies any information provided in reports required by this General Order is subject to criminal penalties.

6.1.4. Severability of General Order

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

6.1.5. Indirect Discharges

In the event that a spill enters into a drainage conveyance system, the Enrollee shall take all feasible steps to prevent discharge of sewage into waters of the State by blocking or redirecting the flow in the drainage conveyance system, removing the sewage from the drainage conveyance system, and cleaning the system in a manner that does not inadvertently impact beneficial uses of the receiving water body.

6.1.6. Water Boards' Considerations for Discretionary Enforcement

Consistent with the State Water Board Enforcement Policy, when considering Water Code section 13327 factors, the State Water Board or a Regional Water Board may consider the Enrollee's efforts to contain, control, clean up, and mitigate spills. In assessing the factors, the State Water Board or the applicable Regional Water Board will consider:

- The Enrollee's compliance with this General Order with a focus on compliance with reporting requirements;
- The Enrollee's provision of adequate funding to implement the requirements of this General Order;
- The Enrollee's compliance with providing a complete and updated Sewer System Management Plan;
- The Enrollee's compliance with implementing its Sewer System Management Plan;
- The overall effectiveness of the Enrollee's Sewer System Management Plan with respect to:
    - System management, operation, and maintenance,
    - Adequate treatment facilities, sanitary sewer system facilities, and/or components with an appropriate design capacity, to reasonably prevent spills (e.g. adequately enlarging treatment or collection facilities to accommodate growth, infiltration and inflow, etc.),
    - Preventive maintenance (including cleaning, root grinding, and fats, oils, and grease control) and source control measures,
    - Implementation of backup equipment,
    - Inflow and infiltration prevention and control,
    - Appropriate sanitary sewer system capacity to prevent spills, and
    - The Enrollee's responsiveness to stop and mitigate the impact of the discharge;
- The Enrollee's compliance with identifying the cause of the spill;
- The Enrollee's use of available information and observations to accurately estimate the spill volume and identify the affected or potentially affected receiving waters;
- The Enrollee's thoroughness of cleaning up sewage in drainage conveyance systems after the spill(s);
- The Enrollee's use of water quality and biological monitoring and assessment to determine the short-term and long-term impacts to beneficial uses and the environment;
- The Enrollee's follow up actions to improve system performance;
- The Enrollee's implementation of feasible alternatives to prevent spills, such as:
    - Use of temporary storage or waste retention,
    - Reduction of system inflow and infiltration,
    - Collection and hauling of waste to a treatment facility,
    - Prevention of and/ or containment of spills due to a design storm event identified in the Enrollee's Sewer System Management Plan,

- Implementation of available equipment, technologies, strategies, and recommended industry practices for maintaining and managing sewer systems to prevent spills, and contain and eliminate discharges to waters of the State; and

- The spill duration and factors beyond the reasonable control of the Enrollee causing the event.

6.1.7. Enforcement Discretion Based on Reporting Compliance

Consistent with the State Water Board Enforcement Policy, the State Water Board or a Regional Water Board may consider the Enrollee's efforts to comply with spill reporting requirements when determining compliance with Water Code section 13267 and section 13383. When assessing Water Code section 13227 factors, the State Water Board or the applicable Regional Water Board will consider:

- The Enrollee's diligence to comply with all reporting requirements in this General Order;
- The use of best available information for the Enrollee's reporting of spill start date and start time in which the release of sewage from the sanitary sewer system initiated;
- The Enrollee's reporting of spill end date, and end time to be the date and time in which the release of sewage from the sanitary sewer system was stopped;
- The Enrollee's diligence to accurately estimate and report spill volumes;
- The Enrollee's subsequent verification and/or updates to initial Draft Spill Reports in accordance with this General Order; and
- The Enrollee's timely certification of required spill reports.

Consistent with Water Code section 13267 and section 13383, the State Water Board or a Regional Water Board may require an Enrollee to report the results of a condition assessment of a specified portion of the Enrollee's sanitary sewer system.

6.2. Other Regional Water Board Orders

It is the intent of the State Water Board that sanitary sewer systems be regulated in a manner consistent with federal and state regulations. This Order will not be interpreted or applied:

- In a manner inconsistent with the federal Clean Water Act;
- To authorize a spill or discharge that is illegal under either the Clean Water Act, the Water Code, and/or an applicable Basin Plan prohibition or water quality standard;
- To prohibit a Regional Water Board from issuing an individual National Pollutant Discharge Elimination System (NPDES) permit or individual waste discharge requirements superseding an Enrollee's regulatory coverage under this General Order for a sanitary sewer system authorized under the Clean Water Act or Water Code;

- To supersede any more specific or more stringent waste discharge requirements or enforcement orders issued by a Regional Water Board; or
- To supersede any more specific or more stringent state or federal requirements in existing regulation, an administrative/judicial order, or Consent Decree.

6.3. Sewer System Management Plan Availability

The Enrollee's updated Sewer System Management Plan must be maintained for public inspection at the Enrollee's offices and facilities and must be available to the public through CIWQS and/or on the Enrollee's website, in accordance with section 3.8 (Sewer System Management Plan Reporting Requirements) of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

6.4. Entry and Inspection

6.4.1. Entry and Availability of Information

The Enrollee shall allow State and Regional Water Board staff, upon presentation of credentials and other documents as may be required by law, to:

- Enter upon the Enrollee's premises where a regulated facility or activity is located or conducted, or where records are kept under the requirements of this General Order;
- Have access to and reproduce any records required to be maintained by this General Order;
- Inspect any facility and/or equipment (including monitoring and control equipment), practices, or operations required in this General Order; and
- Sample or monitor substances or parameters for assuring compliance with this General Order, or as otherwise authorized by the Water Code.

6.4.2. Pre-Inspection Questionnaire

The Enrollee shall provide pre-inspection information to State and Regional Water Board staff through the completion of a Pre-Inspection Questionnaire provided by Water Board staff.

ATTACHMENT A - DEFINITIONS

Annual Report

An Annual Report (previously termed as Collection System Questionnaire in Order 2006-0003-DWQ) is a mandatory report in which the Enrollee provides a calendar-year update of its efforts to prevent spills.

Basin Plan

A Basin Plan is a water quality control plan specific to a Regional Water Quality Control Board (Regional Water Board), that serves as regulations to: (1) define and designate beneficial uses of surface and groundwaters, (2) establish water quality objectives for protection of beneficial uses, and (3) provide implementation measures.

Beneficial Uses

The term “Beneficial Uses” is a Water Code term, defined as the uses of the waters of the State that may be protected against water quality degradation. Examples of beneficial uses include but are not limited to, municipal, domestic, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

California Integrated Water Quality System (CIWQS)

CIWQS is the statewide database that provides for mandatory electronic reporting as required in State and Regional Water Board-issued waste discharge requirements.

Data Submitter

A Data Submitter is an individual designated and authorized by the Enrollee’s Legally Responsible Official to enter spill data into the online CIWQS Sanitary Sewer System Database. A Data Submitter does not have the authority of a Legally Responsible Official to certify reporting entered into the online CIWQS Sanitary Sewer System Database.

Disadvantaged Community

A disadvantaged community is a community with a median household income of less than eighty percent (80%) of the statewide annual median household income.

For the purpose of this General Order, there is no differentiation between a small and large disadvantaged community.

Drainage Conveyance System

A drainage conveyance system is a publicly- or privately-owned separate storm sewer system, including but not limited to drainage canals, channels, pipelines, pump stations, detention basins, infiltration basins/facilities, or other facilities constructed to transport stormwater and non-stormwater flows.

Enrollee

An Enrollee is a public, private, or other non-governmental entity that has obtained approval for regulatory coverage under this General Order, including:

- A state agency, municipality, special district, or other public entity that owns and/or operates one or more sanitary sewer systems:
  - greater than one (1) mile in length (each individual sanitary sewer system);
  - one mile or less in length where the State Water Resources Control Board or a Regional Water Quality Control Board requires regulatory coverage under this Order, or
- A federal agency, private company, or other non-governmental entity that owns and/or operates a sanitary sewer system of any size where the State Water Resources Control Board or a Regional Water Quality Control Board requires regulatory coverage under this Order in response to a history of spills, proximity to surface water, or other factors supporting regulatory coverage.

Environmentally Sensitive Area

An environmentally sensitive area is a designated agricultural and/or wildlife area identified to need special natural landscape protection due to its wildlife or historical value.

Exfiltration

Exfiltration is the underground exiting of sewage from a sanitary sewer system through cracks, offset or separated joints, or failed infrastructure due to corrosion or other factors.

Flood Control Channel

A flood control channel is a channel used to convey stormwater and non-stormwater flows through and from areas for flood management purposes.

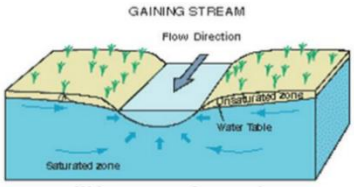
Governing Entity

A governing entity includes but is not limited to the following:

- A publicly elected governing board, council, or commission of a municipal agency;
- A Department or Division director of a federal or state agency that is not governed by a board;
- A governing board or commission of an organization or association; and
- A private system owner/manager that is not governed by a board.

Hydrologically Connected

Two waterbodies are hydrologically connected when one waterbody flows, or has the potential to flow, into the other waterbody. For the purpose of this General Order, groundwater is hydrologically connected to a surface water when the groundwater feeds into the surface water. (The surface waterbody in this example is termed a gaining stream as it gains flow from surrounding groundwater.)



Lateral (including Lower and Upper Lateral)

A lateral is an underground segment of smaller diameter pipe that transports sewage from a customer's building or property (residential, commercial, or industrial) to the Enrollee's main sewer line in a street or easement. Upper and lower lateral boundary definitions are subject to local jurisdictional codes and ordinances, or private system ownership.

A lower lateral is the portion of the lateral located between the sanitary sewer system main, and either the property line, sewer clean out, curb line, established utility easement boundary, or other jurisdictional locations.

An upper lateral is the portion of the lateral from the property line, sewer clean out, curb line, established utility easement boundary, or other jurisdictional locations, to the building or property.

Legally Responsible Official

A Legally Responsible Official is an official representative, designated by the Enrollee, with authority to sign and certify submitted information and documents required by this General Order.

Nuisance

For the purpose of this General Order, a nuisance, as defined in Water Code section 13050(m), is anything that meets all of the following requirements:

- Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property;
- Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; and
- Occurs during, or as a result of, the treatment or disposal of wastes.

Private Sewer Lateral

A private sewer lateral is the privately-owned lateral that transports sewage from private property(ies) into a sanitary sewer system.

Private Sanitary Sewer System

A private sanitary sewer system is a sanitary sewer system of any size that is owned and/or operated by a private individual, company, corporation, or organization. A private sanitary sewer system may or may not connect into a publicly owned sanitary sewer system.

Potential to Discharge, Potential Discharge

Potential to Discharge, or Potential Discharge, means any exiting of sewage from a sanitary sewer system which can reasonably be expected to discharge into a water of the State based on the size of the sewage spill, proximity to a drainage conveyance system, and the nature of the surrounding environment.

Receiving Water

A receiving water is a water of the State that receives a discharge of waste.

Resilience

Resilience is the ability to recover from or adjust to adversity or change, and grow from disruptions. Resilience can be built through planning, preparing for, mitigating, and adapting to changing conditions.

Sanitary Sewer System

A sanitary sewer system is a system that is designed to convey sewage, including but not limited to, pipes, manholes, pump stations, siphons, wet wells, diversion structures and/or other pertinent infrastructure, upstream of a wastewater treatment plant headworks, including:

- Laterals owned and/or operated by the Enrollee;
- Satellite sewer systems; and/or
- Temporary conveyance and storage facilities, including but not limited to temporary piping, vaults, construction trenches, wet wells, impoundments, tanks and diversion structures.

For purpose of this Order, sanitary sewer systems include only systems owned and/or operated by the Enrollee.

Satellite Sewer System

A satellite sewer system is a portion of a sanitary sewer system owned or operated by a different owner than the owner of the downstream wastewater treatment facility ultimately treating the sewage.

Sewer System Management Plan

A sewer system management plan is a living document an Enrollee develops and implements to effectively manage its sanitary sewer system(s) in accordance with this General Order.

Sewage

Sewage, and its associated wastewater, is untreated or partially treated domestic, municipal, commercial and/or industrial waste (including sewage sludge), and any mixture of these wastes with inflow or infiltration of stormwater or groundwater, conveyed in a sanitary sewer system.

Spill

A spill is a discharge of sewage from any portion of a sanitary sewer system due to a sanitary sewer system overflow, operational failure, and/or infrastructure failure. Exfiltration of sewage is not considered to be a spill under this General Order if the exfiltrated sewage remains in the subsurface and does not reach a surface water of the State.

Training

Training is in-house or external education and guidance needed that provides the knowledge, skills, and abilities to comply with this General Order.

Wash Down Water

Wash down water is water used to clean a spill area.

Waste

Waste, as defined in Water Code section 13050(d), includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

Waste Discharge Identification Number (WDID)

A waste discharge identification number (WDID) identifies each individual sanitary sewer system enrolled under this General Order. A WDID number is assigned to each enrolled system upon an Enrollee's approved regulatory coverage.

Waters of the State

Waters of the State are surface waters or groundwater within boundaries of the state as defined in Water Code section 13050(e), in which the State and Regional Water Boards have authority to protect beneficial uses. Waters of the State include, but are not limited to, groundwater aquifers, surface waters, saline waters, natural washes and pools, wetlands, sloughs, and estuaries, regardless of flow or whether water exists during dry conditions. Waters of the State include waters of the United States.

Waters of the United States

Waters of the United States are surface waters or waterbodies that are subject to federal jurisdiction in accordance with the Clean Water Act.

Water Quality Objective

A water quality objective is the limit or maximum amount of pollutant, waste constituent or characteristic, or parameter level established in statewide water quality control plans and Regional Water Boards' Basin Plans, for the reasonable protection of beneficial uses of surface waters and groundwater and the prevention of nuisance.

ATTACHMENT B – APPLICATION FOR ENROLLMENT

1. Enrollment Status: (Mark only one item)

☐ New Enrollee

☐ New Enrollee with previous regulatory coverage under Order 2006-0003-DWQ
(that failed to certify continuation of coverage in CIWQS per Order 2022-XXXX-DWQ)
Existing WDID Number: _____

2. Applicant Information:

Legally Responsible Official Submitting Application

First and Last Name: _____

Title: _____

Phone: _____

Email: _____

System Owner/Operator Name: _____

Mailing Address:_____

City, State, Zip:_____

County:_____

Sanitary Sewer System Name: _____

Regional Water Quality Control Board(s): _____

Signature and Date: _____

3. Applicant Type (Check one):

☐ City ☐ County ☐ State ☐ Federal ☐ Special District

☐ Government Combination ☐ Private ☐ Other Non-governmental Entity

4. Wastewater Treatment Plant Receiving Sanitary Sewer System Waste:

Wastewater Treatment Plant Permittee:_____

WDID No.: _____

5. Billing Information

Billing Address: _____

City, State, Zip: _____

Billing Contact Person and Title: _____

Phone and Email Address: _____

6. Application Fee:

The application fee, as required by Water Code section 13260, is based on the daily population served by the sanitary sewer system. See updated Fee Schedule. (https://www.waterboards.ca.gov/resources/fees/water_quality/)

Check one of the following and enter fee amount:

☐ Population Served < 50,000 – Total Fee submitted: $ _____

☐ Population Served ≥ 50,000 – Total Fee submitted: $ _____

Make the fee payment payable to the State Water Resources Control Board and mail the complete application package to:

State Water Resources Control Board, Accounting Office
P. O. Box 1888
Sacramento, CA 95812-1888

Attention: Statewide Sanitary Sewer System Program

7. Application Submittal Certification

I certify under penalty of perjury under the laws of the State of California that to the best of my knowledge and belief, the information in the submitted application package is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Print Name: _____

Title: _____

Signature: _____Date: _____

ATTACHMENT C - NOTICE OF TERMINATION

1. Enrollee Information

Enrollee Name: _____

WDID No:_____

Legally Responsible Official Requesting Termination of Coverage: _____

First and Last Name: _____

Title: _____

Phone: _____

Email: _____

Mailing Address: _____

City, State, Zip: _____

County: _____

Sanitary Sewer System Name(s) or Unique Identifier(s): _____

Regional Water Quality Control Board(s): _____

Signature and Date:_____

2. Basis of Termination

Explanation of termination, including subsequent regulatory coverage and subsequent owner/operator of enrolled sanitary sewer system, as applicable:

_____

_____

_____

_____

_____

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_____

_____

_____

_____

3. Regulatory Coverage Termination Certification

I certify under penalty of perjury under the laws of the State of California that to the best of my knowledge: 1) the sanitary sewer system I officially represent is not required to be regulated under the Statewide Waste Discharge Requirements for Sanitary Sewer Systems Order 2022-XXXX-DWQ, and 2) the information submitted in this Notice of Termination is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment. Additionally, I understand that the submittal of this Notice of Termination does not release sanitary sewer system agencies from liability for any violations of the Clean Water Act.

Print Name: _____

Title: _____

Signature: _____Date: _____

For State Water Board Use Only

☐ Approved for Termination ☐ Denied and Returned to Enrollee

Deputy Director of Water Quality Signature: _____

Date: _____Notice of Termination Effective Date: _____

ATTACHMENT D – SEWER SYSTEM MANAGEMENT PLAN – REQUIRED ELEMENTS

Table of Contents

ATTACHMENT D – SEWER SYSTEM MANAGEMENT PLAN – REQUIRED ELEMENTS

A Sewer System Management Plan (Plan) is a living planning document that documents ongoing local sewer system management program activities, procedures, and decision-making – at the scale necessary to address the size and complexity of the subject sanitary sewer system(s). This Plan may incorporate other programs and other plans by reference, to address short-term and long-term system resilience through:

- Proactive planning and decision-making;
- Local government ordinances;
- Updated operations and maintenance activities and procedures;
- Implementation of capital improvements;
- Sufficient local budget to support staff resources, contractors, equipment, and training; and
- Updated training of staff and contractors.

The Enrollee's development, update, and implementation of a Sewer System Management Plan addressing the requirements of this Attachment is an enforceable component of this General Order. As specified in Provision 6.1 (Enforcement Provisions) of this General Order, consistent with the Water Code and the State Water Board Enforcement Policy, the State Water Board or a Regional Water Board may consider the Enrollee's efforts in implementing an effective Sewer System Management Plan to prevent, contain, control, and mitigate spills when considering Water Code section 13327 factors to determine necessary enforcement of this General Order.

This Attachment includes the following required elements that the Enrollee shall address in its Plan and subsequent updates. The Enrollee shall identify any requirement in this Attachment that is not applicable to the Enrollee's sewer system and shall explain in its Plan why the requirement is not applicable.

1. SEWER SYSTEM MANAGEMENT PLAN GOAL AND INTRODUCTION

The goal of the Sewer System Management Plan (Plan) is to provide a plan and schedule to: (1) properly manage, operate, and maintain all parts of the Enrollee's sanitary sewer system(s), (2) reduce and prevent spills, and (3) contain and mitigate spills that do occur.

The Plan must include a narrative Introduction section that discusses the following items:

1.1. Regulatory Context

The Plan Introduction section must provide a general description of the local sewer system management program and discuss Plan implementation and updates.

1.2. Sewer System Management Plan Update Schedule

The Plan Introduction section must include a schedule for the Enrollee to update the Plan, including the schedule for conducting internal audits. The schedule must include milestones for incorporation of activities addressing prevention of sewer spills.

1.3. Sewer System Asset Overview

The Plan Introduction section must provide a description of the Enrollee-owned assets and service area, including but not limited to:

- Location, including county(ies);
- Service area boundary;
- Population and community served;
- System size, including total length in miles, length of gravity mainlines, length of pressurized (force) mains, and number of pump stations and siphons;
- Structures diverting stormwater to the sewer system;
- Data management systems;
- Sewer system ownership and operation responsibilities between Enrollee and private entities for upper and lower sewer laterals;
- Estimated number or percent of residential, commercial, and industrial service connections; and
- Unique service boundary conditions and challenge(s).

Additionally, the Plan Introduction section must provide reference to the Enrollee's up-to-date map of its sanitary sewer system, as required in section 4.1 (Updated Map of Sanitary Sewer System) of this Attachment.

2. ORGANIZATION

The Plan must identify organizational staffing responsible and integral for implementing the local Sewer System Management Plan through an organization chart or similar narrative documentation that includes:

- The name of the Legally Responsible Official as required in section 5.1 (Designation of a Legally Responsible Official) of this General Order;
- The position titles, telephone numbers, and email addresses for management, administrative, and maintenance positions responsible for implementing specific Sewer System Management Plan elements;
- Organizational lines of authority; and
- Chain of communication for reporting spills from receipt of complaint or other information, including the person responsible for reporting spills to the State and Regional Water Boards and other agencies, as applicable. (For example, county

health officer, county environmental health agency, and State Office of Emergency Services.)

3. LEGAL AUTHORITY

The Plan must include copies or an electronic link to the Enrollee's current sewer system use ordinances, service agreements and/or other legally binding procedures to demonstrate the Enrollee possesses the necessary legal authority to:

- Prevent illicit discharges into its sanitary sewer system from inflow and infiltration (I&I); unauthorized stormwater; chemical dumping; unauthorized debris; roots; fats, oils, and grease; and trash, including rags and other debris that may cause blockages;
- Collaborate with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure;
- Require that sewer system components and connections be properly designed and constructed;
- Ensure access for maintenance, inspection, and/or repairs for portions of the service lateral owned and/or operated by the Enrollee;
- Enforce any violation of its sewer ordinances, service agreements, or other legally binding procedures; and
- Obtain easement accessibility agreements for locations requiring sewer system operations and maintenance, as applicable.

4. OPERATION AND MAINTENANCE PROGRAM

The Plan must include the items listed below that are appropriate and applicable to the Enrollee's system.

4.1. Updated Map of Sanitary Sewer System

An up-to-date map(s) of the sanitary sewer system, and procedures for maintaining and providing State and Regional Water Board staff access to the map(s). The map(s) must show gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities within the sewer system service area boundaries.

4.2. Preventive Operation and Maintenance Activities

A scheduling system and a data collection system for preventive operation and maintenance activities conducted by staff and contractors.

The scheduling system must include:

- Inspection and maintenance activities;

- Higher-frequency inspections and maintenance of known problem areas, including areas with tree root problems;
- Regular visual and closed-circuit television (CCTV) inspections of manholes and sewer pipes.

The data collection system must document data from system inspection and maintenance activities, including system areas/components prone to root-intrusion potentially resulting in system backup and/or failure.

4.3. Training

In-house and external training provided on a regular basis for sanitary sewer system operations and maintenance staff and contractors. The training must cover:

- The requirements of this General Order;
- The Enrollee's Spill Emergency Response Plan procedures and practice drills;
- Skilled estimation of spill volume for field operators; and
- Electronic CIWQS reporting procedures for staff submitting data.

4.4. Equipment Inventory

An inventory of sewer system equipment, including the identification of critical replacement and spare parts.

5. DESIGN AND PERFORMANCE PROVISIONS

The Plan must include the following items as appropriate and applicable to the Enrollee's system:

5.1. Updated Design Criteria and Construction Standards and Specifications

Updated design criteria, and construction standards and specifications, for the construction, installation, repair, and rehabilitation of existing and proposed system infrastructure components, including but not limited to pipelines, pump stations, and other system appurtenances. If existing design criteria and construction standards are deficient to address the necessary component-specific hydraulic capacity as specified in section 8 (System Evaluation, Capacity Assurance and Capital Improvements) of this Attachment, the procedures must include component-specific evaluation of the design criteria.

5.2. Procedures and Standards

Procedures, and standards for the inspection and testing of newly constructed, newly installed, repaired, and rehabilitated system pipelines, pumps, and other equipment and appurtenances.

6. SPILL EMERGENCY RESPONSE PLAN

The Plan must include an up to date Spill Emergency Response Plan to ensure prompt detection and response to spills to reduce spill volumes and collect information for prevention of future spills. The Spill Emergency Response Plan must include procedures to:

- Notify primary responders, appropriate local officials, and appropriate regulatory agencies of a spill in a timely manner;
- Notify other potentially affected entities (for example, health agencies, water suppliers, etc.) of spills that potentially affect public health or reach waters of the State;
- Comply with the notification, monitoring and reporting requirements of this General Order, State law and regulations, and applicable Regional Water Board Orders;
- Ensure that appropriate staff and contractors implement the Spill Emergency Response Plan and are appropriately trained;
- Address emergency system operations, traffic control and other necessary response activities;
- Contain a spill and prevent/minimize discharge to waters of the State or any drainage conveyance system;
- Minimize and remediate public health impacts and adverse impacts on beneficial uses of waters of the State;
- Remove sewage from the drainage conveyance system;
- Clean the spill area and drainage conveyance system in a manner that does not inadvertently impact beneficial uses in the receiving waters;
- Implement technologies, practices, equipment, and interagency coordination to expedite spill containment and recovery;
- Implement pre-planned coordination and collaboration with storm drain agencies and other utility agencies/departments prior, during, and after a spill event;
- Conduct post-spill assessments of spill response activities;
- Document and report spill events as required in this General Order; and
- Annually, review and assess effectiveness of the Spill Emergency Response Plan, and update the Plan as needed.

7. SEWER PIPE BLOCKAGE CONTROL PROGRAM

The Sewer System Management Plan must include procedures for the evaluation of the Enrollee's service area to determine whether a sewer pipe blockage control program is needed to control fats, oils, grease, rags and debris. If the Enrollee determines that a program is not needed, the Enrollee shall provide justification in its Plan for why a program is not needed.

The procedures must include, at minimum:

- An implementation plan and schedule for a public education and outreach program that promotes proper disposal of pipe-blocking substances;
- A plan and schedule for the disposal of pipe-blocking substances generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of substances generated within a sanitary sewer system service area;
- The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages;
- Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, best management practices requirements, recordkeeping and reporting requirements;
- Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the fats, oils, and grease ordinance;
- An identification of sanitary sewer system sections subject to fats, oils, and grease blockages and establishment of a cleaning schedule for each section; and
- Implementation of source control measures for all sources of fats, oils, and grease reaching the sanitary sewer system for each section identified above.

8. SYSTEM EVALUATION, CAPACITY ASSURANCE AND CAPITAL IMPROVEMENTS

The Plan must include procedures and activities for:

- Routine evaluation and assessment of system conditions;
- Capacity assessment and design criteria;
- Prioritization of corrective actions; and
- A capital improvement plan.

8.1 System Evaluation and Condition Assessment

The Plan must include procedures to:

- Evaluate the sanitary sewer system assets utilizing the best practices and technologies available;

- Identify and justify the amount (percentage) of its system for its condition to be assessed each year;
- Prioritize the condition assessment of system areas that:
    - Hold a high level of environmental consequences if vulnerable to collapse, failure, blockage, capacity issues, or other system deficiencies;
    - Are located in or within the vicinity of surface waters, steep terrain, high groundwater elevations, and environmentally sensitive areas;
    - Are within the vicinity of a receiving water with a bacterial-related impairment on the most current Clean Water Act section 303(d) List;
- Assess the system conditions using visual observations, video surveillance and/or other comparable system inspection methods;
- Utilize observations/evidence of system conditions that may contribute to exiting of sewage from the system which can reasonably be expected to discharge into a water of the State;
- Maintain documents and recordkeeping of system evaluation and condition assessment inspections and activities; and
- Identify system assets vulnerable to direct and indirect impacts of climate change, including but not limited to: sea level rise; flooding and/or erosion due to increased storm volumes, frequency, and/or intensity; wildfires; and increased power disruptions.

8.2. Capacity Assessment and Design Criteria

The Plan must include procedures to identify system components that are experiencing or contributing to spills caused by hydraulic deficiency and/or limited capacity, including procedures to identify the appropriate hydraulic capacity of key system elements for:

- Dry-weather peak flow conditions that cause or contributes to spill events;
- The appropriate design storm(s) or wet weather events that causes or contributes to spill events;
- The capacity of key system components; and
- Identify the major sources that contribute to the peak flows associated with sewer spills.

The capacity assessment must consider:

- Data from existing system condition assessments, system inspections, system audits, spill history, and other available information;
- Capacity of flood-prone systems subject to increased infiltration and inflow, under normal local and regional storm conditions;

- Capacity of systems subject to increased infiltration and inflow due to larger and/or higher-intensity storm events as a result of climate change;
- Increases of erosive forces in canyons and streams near underground and above-ground system components due to larger and/or higher-intensity storm events;
- Capacity of major system elements to accommodate dry weather peak flow conditions, and updated design storm and wet weather events; and
- Necessary redundancy in pumping and storage capacities.

8.3. Prioritization of Corrective Action

The findings of the condition assessments and capacity assessments must be used to prioritize corrective actions. Prioritization must consider the severity of the consequences of potential spills.

8.4. Capital Improvement Plan

The capital improvement plan must include the following items:

- Project schedules including completion dates for all portions of the capital improvement program;
- Internal and external project funding sources for each project; and
- Joint coordination between operation and maintenance staff, and engineering staff/consultants during planning, design, and construction of capital improvement projects; and Interagency coordination with other impacted utility agencies.

9. MONITORING, MEASUREMENT AND PROGRAM MODIFICATIONS

The Plan must include an Adaptive Management section that addresses Plan-implementation effectiveness and the steps for necessary Plan improvement, including:

- Maintaining relevant information, including audit findings, to establish and prioritize appropriate Plan activities;
- Monitoring the implementation and measuring the effectiveness of each Plan Element;
- Assessing the success of the preventive operation and maintenance activities;
- Updating Plan procedures and activities, as appropriate, based on results of monitoring and performance evaluations; and
- Identifying and illustrating spill trends, including spill frequency, locations and estimated volumes.

10. INTERNAL AUDITS

The Plan shall include internal audit procedures, appropriate to the size and performance of the system, for the Enrollee to comply with section 5.4 (Sewer System Management Plan Audits) of this General Order.

11. COMMUNICATION PROGRAM

The Plan must include procedures for the Enrollee to communicate with:

- The public for:
  - Spills and discharges resulting in closures of public areas, or that enter a source of drinking water, and
  - The development, implementation, and update of its Plan, including opportunities for public input to Plan implementation and updates.
- Owners/operators of systems that connect into the Enrollee's system, including satellite systems, for:
  - System operation, maintenance, and capital improvement-related activities.

ATTACHMENT E1 – NOTIFICATION, MONITORING, REPORTING AND RECORDKEEPING REQUIREMENTS

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ATTACHMENT E1– NOTIFICATION, MONITORING, REPORTING AND RECORDKEEPING REQUIREMENTS

The Notification Requirements (section 1), Spill-specific Monitoring Requirements (section 2), Reporting Requirements (section 3) and Recordkeeping Requirements (section 4) in this Attachment are pursuant to Water Code section 13267 and section 13383, and are an enforceable component of this General Order. For the purpose of this General Order, the term:

- Notification means the notifying of appropriate parties of a spill event or other activity.
- Spill-specific Monitoring means the gathering of information and data for a specific spill event to be reported or kept as records.
- Reporting means the reporting of information and data into the online California Integrated Water Quality System (CIWQS) Sanitary Sewer System Database.
- Recordkeeping means the maintaining of information and data in an official records storage system.

Failure to comply with the notification, monitoring, reporting and recordkeeping requirements in this General Order may subject the Enrollee to civil liabilities of up to $10,000 a day per violation pursuant to Water Code section 13385; up to $1,000 a day per violation pursuant to Water Code section 13268; or referral to the Attorney General for judicial civil enforcement.

Water Code section 13193 et seq. requires the Regional Water Quality Control Boards (Regional Water Boards) and the State Water Resources Control Board (State Water Board) to collect sanitary sewer spill information for each spill event and make this information available to the public. Sanitary sewer spill information for each spill event includes but is not limited to: Enrollee contact information for each spill event, spill cause, estimated spill volume and factors used for estimation, location, date, time, duration, amount discharged to waters of the State, response and corrective action(s) taken.

1. NOTIFICATION REQUIREMENTS

1.1. Notification of Spills of 1,000 Gallons or Greater to the California Office of Emergency Services

Per Water Code section 13271, for a spill that discharges in or on any waters of the State, or discharges or is deposited where it is, or probably will be, discharged in or on any waters of the State, the Enrollee shall notify the California Office of Emergency Services and obtain a California Office of Emergency Services Control Number as soon as possible **but no later than two (2) hours** after:

- The Enrollee has knowledge of the spill; and
- Notification can be provided without substantially impeding cleanup or other emergency measures.

The notification requirements in this section apply to individual spills of 1,000 gallons or greater, from an Enrollee-owned and/or operated laterals, to a water of the State.

1.2. Spill Notification Information

The Enrollee shall provide the following spill information to the California Office of Emergency Services before receiving a Control Number, as applicable:

- Name and phone number of the person notifying the California Office of Emergency Services;
- Estimated spill volume (gallons);
- Estimated spill rate from the system (gallons per minute);
- Estimated discharge rate (gallons per minute) directly into waters of the State or indirectly into a drainage conveyance system;
- Spill incident description:
  - Brief narrative of the spill event, and
  - Spill incident location (address, city, and zip code) and closest cross streets and/or landmarks;
- Name and phone number of contact person on-scene;
- Date and time the Enrollee was informed of the spill event;
- Name of sanitary sewer system causing the spill;
- Spill cause or suspected cause (if known);
- Amount of spill contained;
- Name of receiving water body receiving or potentially receiving discharge; and
- Description of water body impact and/ or potential impact to beneficial uses.

1.3. Notification of Spill Report Updates

Following the initial notification to the California Office of Emergency Services and until such time that the Enrollee certifies the spill report in the online CIWQS Sanitary Sewer System Database, the Enrollee shall provide updates to the California Office of Emergency Services regarding substantial changes to:

- Estimated spill volume (increase or decrease in gallons initially estimated);
- Estimated discharge volume discharged directly into waters of the State or indirectly into a drainage conveyance system (increase or decrease in gallons initially estimated); and
- Additional impact(s) to the receiving water(s) and beneficial uses.

2. SPILL-SPECIFIC MONITORING REQUIREMENTS

2.1 Spill Location and Spread

The Enrollee shall visually assess the spill location(s) and spread using photography, global positioning system (GPS), and other best available tools. The Enrollee shall document the critical spill locations, including:

- Photography and GPS coordinates for:
  - The system location where spill originated.

    For multiple appearance points of a single spill event, the points closest to the spill origin.
- Photography for:
  - Drainage conveyance system entry locations,
  - The location(s) of discharge into surface waters, as applicable,
  - Extent of spill spread, and
  - The location(s) of clean up.

2.2 Spill Volume Estimation

To assess the approximate spill magnitude and spread, the Enrollee shall estimate the total spill volume using updated volume estimation techniques, calculations, and documentation for electronic reporting. The Enrollee shall update its notification and reporting of estimated spill volume (which includes spill volume recovered) as further information is gathered during and after a spill event.

2.3. Receiving Water Monitoring

2.3.1. Receiving Water Visual Observations

Through visual observations and use of best available spill volume-estimating techniques and field calculation techniques, the Enrollee shall gather and document the following information for spills discharging to surface waters:

- Estimated spill travel time to the receiving water;
- For spills entering a drainage conveyance system, estimated spill travel time from the point of entry into the drainage conveyance system to the point of discharge into the receiving water;
- Estimated spill volume entering the receiving water; and
- Photography of:
  - Waterbody bank erosion,
  - Floating matter,
  - Water surface sheen (potentially from oil and grease),

- Discoloration of receiving water, and
- Impact to the receiving water.

2.3.2. Receiving Water – Water Quality Sampling and Analysis

For sewage spills in which an estimated 50,000 gallons or greater are discharged into a surface water, the Enrollee shall conduct the following water quality sampling no later than **18 hours** after the Enrollee's knowledge of a potential discharge to a surface water:

- Collect one water sample, each day of the duration of the spill, at:
  - The DCS-001 location as described in section 2.3.4 (Receiving Water Sampling Locations) of this Attachment, if sewage discharges to a surface water via a drainage conveyance system; and/or
  - Each of the three receiving water sampling locations in section 2.3.4 (Receiving Water Sampling Locations) of this Attachment;

    If the receiving water has no flow during the duration of the spill, the Enrollee must report "No Sampling Due To No Flow" for its receiving water sampling locations.

The Enrollee shall analyze the collected receiving water samples for the following constituents per section 2.3.3 (Water Quality Analysis Specifications) of this Attachment:

- Ammonia, and
- Appropriate bacterial indicator(s) per the applicable Basin Plan water quality objectives, including one or more of the following, unless directed otherwise by the Regional Water Board:
  - Total Coliform Bacteria
  - Fecal Coliform Bacteria
  - *E-coli*
  - Enterococcus

  Dependent on the receiving water(s), sampling of bacterial indicators shall be sufficient to determine post-spill (after the spill) compliance with the water quality objectives and bacterial standards of the California Ocean Plan or the California Inland Surface Water Enclosed Bays, and Estuaries Plan, including the frequency and/or number of post-spill receiving water samples as may be specified in the applicable plans.

The Enrollee shall collect and analyze additional samples as required by the applicable Regional Water Board Executive Officer or designee.

2.3.3. Water Quality Analysis Specifications

Spill monitoring must be representative of the monitored activity (40 Code of Federal Regulations section 122.41(j)(1)).

Sufficiently Sensitive Methods

Sample analysis must be conducted according to sufficiently sensitive test methods approved under 40 Code of Federal Regulations Part 136 for the sample analysis of pollutants. For the purposes of this General Order, a method is sufficiently sensitive when the minimum level of the analytical method approved under 40 Code of Federal Regulations Part 136 is at or below the receiving water pollutant criteria.

Environmental Laboratory Accreditation Program-Accredited Laboratories

The analysis of water quality samples required per this General Order must be performed by a laboratory that has accreditation pursuant to Article 3 (commencing with section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code. (Water Code section 13176(a).) The State Water Board accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

2.3.4. Receiving Water Sampling Locations

The Enrollee shall collect receiving water samples at the following locations.

Sampling of Flow in Drainage Conveyance System (DCS) Prior to Discharge

Sampling Location	Sampling Location Description
DCS-001	A point in a drainage conveyance system before the drainage conveyance system flow discharges into a receiving water.

Receiving Surface Water Sampling (RSW)[1]

Sampling Location	Sampling Location Description
RSW-001 Point of Discharge	A point in the receiving water where sewage initially enters the receiving water.
RSW-001U: Upstream of Point of Discharge	A point in the receiving water, upstream of the point of sewage discharge, to capture ambient conditions absent of sewage discharge impacts.

Sampling Location	Sampling Location Description
RSW-001D: Downstream of Point of Discharge	A point in the receiving water, downstream of the point of sewage discharge, where the spill material is fully mixed with the receiving water.

[1] The Enrollee must use its best professional judgment to determine the upstream and downstream distances based on receiving water flow, accessibility to upstream/downstream waterbody banks, and size of visible sewage plume.

2.4. Safety and Access Exceptions

If the Enrollee encounters access restrictions or unsafe conditions that prevents its compliance with spill response requirements or monitoring requirements in this General Order, the Enrollee shall provide documentation of access restrictions and/or safety hazards in the corresponding required report.

3. REPORTING REQUIREMENTS

All reporting required in this General Order must be submitted electronically to the online CIWQS Sanitary Sewer System Database (https://ciwqs.waterboards.ca.gov), unless specified otherwise in this General Order. Electronic reporting may solely be conducted by a Legally Responsible Official or Data Submitter(s) previously designated by the Legally Responsible Official, as required in section 5.8 (Designation of Data Submitters) of this General Order.

The Enrollee shall report any information that is protected by the Homeland Security Act, by email to SanitarySewer@waterboards.ca.gov, with a brief explanation of the protection provided by the Homeland Security Act for the subject report to be protected from unauthorized disclosure and/or public access, and for official Water Board regulatory purposes only.

3.1. Reporting Requirements for Individual Category 1 Spill Reporting

3.1.1. Draft Spill Report for Category 1 Spills

Within three (3) business days of the Enrollee's knowledge of a Category 1 spill, the Enrollee shall submit a Draft Spill Report to the online CIWQS Sanitary Sewer System Database.

The Draft Spill Report must, at minimum, include the following items:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;

5. Estimated spill start date and time;
6. Date and time the Enrollee notified the California Office of Emergency Services, and the assigned control number;
7. Description, photographs, and GPS coordinates of the system location where the spill originated;
    - If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field;
8. Estimated total spill volume exiting the system;
9. Description and photographs of the extent of the spill and spill boundaries;
10. Did the spill reach a drainage conveyance system? If Yes:
    - Description of the drainage conveyance system transporting the spill;
    - Photographs of the drainage conveyance system entry location(s);
    - Estimated spill volume fully recovered from the drainage conveyance system;
    - Estimated spill volume remaining within the drainage conveyance system;
11. Description and photographs of all discharge point(s) into the surface water;
12. Estimated spill volume that discharged to surface waters; and
13. Estimated total spill volume recovered.

3.1.2. Certified Spill Report for Category 1 Spills

Within 15 calendar days of the spill end date, the Enrollee shall submit a Certified Spill Report for Category 1 spills, to the online CIWQS Sanitary Sewer System Database. Upon completion of the Certified Spill Report, the online CIWQS Sanitary Sewer System Database will issue a final spill event identification number.

The Certified Spill Report must, at minimum, include the following mandatory information in addition to all information in the Draft Spill Report per section 3.1.1 (Draft Spill Report for Category 1 Spills) above:

1. Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill;
2. Spill end date and time;
3. Description of how the spill volume estimations were calculated, including at a minimum:
    - The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
    - The methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time;

4. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
5. System failure location (for example, main, lateral, pump station, etc.);
6. Description of the pipe material, and estimated age of the pipe material, at the failure location;
7. Description of the impact of the spill;
8. Whether or not the spill was associated with a storm event;
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps;
11. Spill response completion date;
12. Detailed narrative of investigation and investigation findings of cause of spill;
13. Reasons for an ongoing investigation (as applicable) and the expected date of completion;
14. Name and type of receiving water body(s);
15. Description of the water body(s), including but not limited to:
    - Observed impacts on aquatic life,
    - Public closure, restricted public access, temporary restricted use, and/or posted health warnings due to spill,
    - Responsible entity for closing/restricting use of water body, and
    - Number of days closed/restricted as a result of the spill.
16. Whether or not the spill was located within 1,000 feet of a municipal surface water intake; and
17. If water quality samples were collected, identify sample locations and the parameters the water quality samples were analyzed for. If no samples were taken, Not Applicable shall be selected.

3.1.3. Spill Technical Report for Individual Category 1 Spill in which 50,000 Gallons or Greater Discharged into a Surface Water

For any spill in which 50,000 gallons or greater discharged into a surface water, **within 45 calendar days** of the spill end date, the Enrollee shall submit a Spill Technical Report to the online CIWQS Sanitary Sewer System Database. The Spill Technical Report, at minimum, must include the following information:

1. Spill causes and circumstances, including at minimum:
    - Complete and detailed explanation of how and when the spill was discovered;

- Photographs illustrating the spill origin, the extent and reach of the spill, drainage conveyance system entrance and exit, receiving water, and post-cleanup site conditions;
- Diagram showing the spill failure point, appearance point(s), the spill flow path, and ultimate destinations;
- Detailed description of the methodology employed, and available data used to calculate the discharge volume and, if applicable, the recovered spill volume;
- Detailed description of the spill cause(s);
- Description of the pipe material, and estimated age of the pipe material, at the failure location;
- Description of the impact of the spill;
- Copy of original field crew records used to document the spill; and
- Historical maintenance records for the failure location.

2. Enrollee's response to the spill:
   - Chronological narrative description of all actions taken by the Enrollee to terminate the spill;
   - Explanation of how the Sewer System Management Plan Spill Emergency Response Plan was implemented to respond to and mitigate the spill; and
   - Final corrective action(s) completed and a schedule for planned corrective actions, including:
     - Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable,
     - Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences, and
     - Necessary modifications to the Emergency Spill Response Plan to incorporate lessons learned in responding to and mitigating the spill.
3. Water Quality Monitoring, including at minimum:
   - Description of all water quality sampling activities conducted;
   - List of pollutant and parameters monitored, sampled and analyzed; as required in section 2.3 (Receiving Water Monitoring) of this Attachment;
   - Laboratory results, including laboratory reports;
   - Detailed location map illustrating all water quality sampling points; and
   - Other regulatory agencies receiving sample results (if applicable).
4. Evaluation of spill impact(s), including a description of short-term and long-term impact(s) to beneficial uses of the surface water.

3.1.4. Amended Certified Spill Reports for Individual Category 1 Spills

The Enrollee shall update or add additional information to a Certified Spill Report within **90 calendar days** of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

After **90 calendar days**, the Enrollee shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

3.2. Reporting Requirements for Individual Category 2 Spill Reporting

3.2.1. Draft Spill Report for Category 2 Spills

Within three (3) business days of the Enrollee's knowledge of a Category 2 spill, the Enrollee shall submit a Draft Spill Report to the online CIWQS Sanitary Sewer System Database.

The Draft Spill Report must, at minimum, include the following items:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;
5. Estimated spill start date and time;
6. Date and time the Enrollee notified the California Office of Emergency Services, and the assigned control number;
7. Description, photographs, and GPS coordinates of the system location where the spill originated;

   If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field;
8. Estimated total spill volume exiting the system;
9. Description and photographs of the extent of the spill and spill boundaries;
10. Did the spill reach a drainage conveyance system? If Yes:
    - Description of the drainage conveyance system transporting the spill;
    - Photographs of the drainage conveyance system entry location(s);
    - Estimated spill volume fully recovered from the drainage conveyance system;
    - Estimated spill volume remaining within the drainage conveyance system;

- Estimated spill volume discharged to a groundwater infiltration basin or facility, if applicable; and

11. Estimated total spill volume recovered.

3.2.2. Certified Spill Report for Category 2 Spills

Within 15 calendar days of the spill end date, the Enrollee shall submit a Certified Spill Report for the Category 2 spill, to the online CIWQS Sanitary Sewer System Database (https://ciwqs.waterboards.ca.gov). Upon completion of the Certified Spill Report, the online CIWQS Sanitary Sewer System Database will issue a final spill event identification number.

The Certified Spill Report must, at minimum, include the following mandatory information in addition to all information in the Draft Spill Report per section 3.2.1 (Draft Spill Report for Category 2 Spills) above:

1. Description of the spill event destination(s), including GPS coordinates if available, that represent the full spread and reach of the spill;
2. Spill end date and time;
3. Description of how the spill volume estimations were calculated, including at a minimum:
   - The methodology, assumptions and type of data relied upon, such as supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
   - The methodology(ies), assumptions and type of data relied upon for estimations of the spill start time and the spill end time;
4. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
5. System failure location (for example, main, pump station, etc.);
6. Description of the pipe/infrastructure material, and estimated age of the pipe material, at the failure location;
7. Description of the impact of the spill;
8. Whether or not the spill was associated with a storm event;
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of major milestones for those steps;
11. Spill response completion date;
12. Detailed narrative of investigation and investigation findings of cause of spill;
13. Reasons for an ongoing investigation (as applicable) and the expected date of completion; and

14. Whether or not the spill was located within 1,000 feet of a municipal surface water intake.

3.2.3. Amended Certified Spill Reports for Individual Category 2 Spills

The Enrollee shall update or add additional information to a Certified Spill Report within **90 calendar days** of the spill end date by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

After **90 calendar days**, the Enrollee shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the Amended Spill Report due date.

3.3. Monthly Certified Spill Reporting for Category 3 Spills

The Enrollee shall report and certify all Category 3 spills to the online CIWQS Sanitary Sewer System Database within 30 calendar days after the end of the month in which the spills occurred. (For example, all Category 3 spills occurring in the month of February shall be reported and certified by March 30th). After the Legally Responsible Official certifies the spills, the online CIWQS Sanitary Sewer System Database will issue a spill event identification number for each spill.

The monthly reporting of all Category 3 spills must include the following items for each spill:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Date and time the Enrollee was notified of, or self-discovered, the spill;
4. Operator arrival time;
5. Estimated spill start date and time;
6. Description, photographs, and GPS coordinates where the spill originated:
    - If a single spill event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the spill appearance point explanation field;
7. Estimated total spill volume exiting the system;
8. Description and photographs of the extent of the spill and spill boundaries;
9. Did the spill reach a drainage conveyance system? If Yes:
    - Description of the drainage conveyance system transporting the spill;
    - Photographs of the drainage conveyance system entry locations(s);
    - Estimated spill volume fully recovered from the drainage conveyance system; and

- Estimated spill volume discharged to a groundwater infiltration basis or facility, if applicable.

10. Estimated total spill volume recovered;
11. Description of the spill event destination(s), including GPS coordinates, if available, that represent the full spread and reaches of the spill;
12. Spill end date and time;
13. Description of how the spill volume estimations were calculated, including, at minimum:
    - The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
    - The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time;
14. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
15. System failure location (for example, main, pump station, etc.);
16. Description of the pipe/infrastructure material, and estimated age of the pipe/infrastructure material, at the failure location;
17. Description of the impact of the spill;
18. Whether or not the spill was associated with a storm event;
19. Description of spill response activities including description of immediate spill containment and cleanup efforts;
20. Description of spill corrective actions, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the spill, and a schedule of the major milestones for those steps; including, at minimum:
    - Local regulatory enforcement action taken against an illicit discharge in response to this spill, as applicable, and
    - Identifiable system modifications, and operation and maintenance program modifications needed to prevent repeated spill occurrences at the same spill event location, including:
      - Adjusted schedule/method of preventive maintenance,
      - Planned rehabilitation or replacement of sanitary sewer asset,
      - Inspected, repaired asset(s), or replaced defective asset(s),
      - Capital improvements,
      - Documentation verifying immediately implemented system modifications and operating/maintenance modifications,
      - Description of spill response activities,

- Spill response completion date, and
- Ongoing investigation efforts, and expected completion date of investigation to determine the full cause of spill;

21. Detailed narrative of investigation and investigation findings of cause of spill.

3.4. Monthly Certified Spill Reporting for Category 4 Spills

The Enrollee shall report and certify the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, within 30 calendar days after the end of the month in which the spills occurred.

3.5. Amended Certified Spill Reports for Category 3 Spills

Within 90 calendar days of the certified Spill Report due date, the Enrollee may update or add additional information to a certified Spill Report by amending the report or by adding an attachment to the Spill Report in the online CIWQS Sanitary Sewer System Database. The Enrollee shall certify the amended report.

After 90 calendar days, the Legally Responsible Official shall contact the State Water Board at SanitarySewer@waterboards.ca.gov to request to amend a certified Spill Report. The Legally Responsible Official shall submit justification for why the additional information was not reported within the 90-day timeframe for amending the certified Spill Report, as provided above.

3.6. Annual Certified Spill Reporting of Category 4 and/or Lateral Spills

For all Category 4 spills and spills from its owned and/or operated laterals that are caused by a failure or blockage in the lateral and that do not discharge to a surface water, the Enrollee shall:

- Maintain records per section 4.4. of this Attachment;

  The Enrollee shall provide records upon request by State Water Board or Regional Water Board staff.

- Annually upload and certify a report, in an appropriate digital format, of all recordkeeping of spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occurred.

A spill from an Enrollee-owned and/or operated lateral that discharges to a surface water is a Category 1 spill; the Enrollee shall report all Category 1 spills per section 3.1 of Attachment E1 (Notification, Monitoring, Reporting and Recordkeeping Requirements) of this General Order.

3.7. Monthly Certification of "No-Spills" or "Category 4 Spills" and/or "Non-Category 1 Lateral Spills"

If either (1) no spills occur during a calendar month or (2) only Category 4, and/or Enrollee-owned and/or operated lateral spills (that do not discharge to a surface water) occur during a calendar month, the Enrollee shall certify, within 30 calendar days after

the end of each calendar month, either a “No-Spill” certification statement, or a “Category 4 Spills” and/or “Non-Category 1 Lateral Spills” certification statement, in the online CIWQS Sanitary Sewer System Database, certifying that there were either no spills, or Category 4 and/or Non-Category 1 Lateral Spills that will be reported annually (per section 3.6 of this Attachment) for the designated month.

If a spill starts in one calendar month and ends in a subsequent calendar month, and the Enrollee has no further spills of any category, in the subsequent calendar month, the Enrollee shall certify “no-spills” for the subsequent calendar month.

If the Enrollee has no spills from its systems during a calendar month, but the Enrollee voluntarily reported a spill from a private lateral or a private system, the Enrollee shall certify “no-spills” for that calendar month.

If the Enrollees has spills from its owned and/or operated laterals during a calendar month, the Enrollee shall not certify “no spills” for that calendar month.

3.8. Electronic Sanitary Sewer System Service Area Boundary Map

The Legally Responsible Official shall submit, to the State Water Board, an up-to-date electronic spatial map of its sewer system service area boundaries. The map must be in accordance with section 5.14 (Electronic Sanitary Sewer System Service Area Boundary Map) of this General Order and the specification provided on the statewide Sanitary Sewer Systems program website. The map must include the location of wastewater treatment facility(ies) that treats the sewer system waste, if in the same sewer service boundary.

By the Effective Date of this General Order, specifications for the electronic sanitary sewer service area boundary map format will be provided on the statewide Sanitary Sewer Systems Order program website.

3.9. Annual Report (Previously termed as Collection System Questionnaire in General Order 2006-0003-DWQ)

A new Enrollee shall complete and submit its first certified Annual Report into the online CIWQS Sanitary Sewer System Database, **within 30 days of obtaining a CIWQS account**; Subsequent Annual Reports are due by April 1 of each year.

All enrollees shall update their previous year’s Annual Report, **by April 1 of each year after the Effective Date of this General Order,** for each calendar year (January 1 through December 31)**.**

The Annual Report must be entered directly into the online CIWQS Sanitary Sewer System Database. The Enrollee’s Legally Responsible Official shall certify the Annual Report as instructed in CIWQS;

The Annual Report must address, and update as applicable, the following items:

- Population served;

- Updated sewer system service area boundary map, if service area boundary has changed from original map submitted per section 5.14 (Electronic Sanitary Sewer System Service Area Boundary Map) of this General Order;
- Number of system operation and maintenance staff:
  - Entry level (less than two years of experience),
  - Journey level (greater than two years of experience),
  - Supervisory level, and
  - Managerial level;
- Number of operation and maintenance staff certified as a certified collection system operator by the California Water Environmental Association (CWEA), with:
  - Corresponding number of certified collection system operator grade levels (Grade I, II, III, IV, and V);
- System information:
  - Miles of system gravity and force mains,
  - Number of upper and lower service laterals connected to system,
  - Estimated number of upper and lower laterals owned and/or operated by the Enrollee,
  - Portion of laterals that is Enrollee's responsibility,
  - Average age the major components of system infrastructure,
  - Number and age of pump stations, and
  - Estimated total miles of the system pipeline not accessible for maintenance;
- Name and location of the treatment plant(s) receiving sanitary sewer system's waste;
- Name of satellite sewer system tributaries;
- Number of system's gravity sewer above or underground crossings of water bodies throughout system;
- Number of force main (pressurized pipe) above or underground crossings of water bodies throughout system;
- Number of siphons used to convey waste throughout the sewer system;
- Miles of sewer system cleaned;
- Miles of sewer system video inspected, or comparable (i.e., video closed-circuit television or alternative inspection methods);
- System Performance Evaluation as specified in section 5.11 (System Performance Analysis) of this General Order;
- Major spill causes (for example, root intrusion, grease deposition);

- System infrastructure failure points (for example, main, pump station, lateral, etc.);
- Ongoing spill investigations; and
- Actions taken to address system deficiencies.

3.10. Sewer System Management Plan Audit Reporting Requirements

The Enrollee shall submit its Sewer System Management Plan Audit and other pertinent audit information, in accordance with section 5.4 (Sewer System Management Plan Audits) of this General Order, to the online CIWQS Sanitary Sewer System Database **by six (6) months after the end of the 3-year audit period**.

If a Sewer System Management Plan Audit is not conducted as required: the Enrollee shall:

- Update the online CIWQS Sanitary Sewer System Database and select the justification for not conducting the Audit; and
- Notify its corresponding Regional Water Board (see Attachment F (Regional Water Quality Control Board Contact Information)) of the justification for the lapsed requirements.

The Enrollee's reporting of a justification for not conducting a timely Audit does not justify non-compliance with this General Order. The Enrollee shall:

- Submit the late Audit as required in this General Order; and
- Comply with subsequent Audit requirements and due dates corresponding with the original audit cycle.

3.11. Sewer System Management Plan Reporting Requirements

For an Existing Enrollee previously regulated by Order 2006-0003-DWQ: **Within every six (6) years after the required due date of its last Plan Update**, the Legally Responsible Official shall upload and certify a local governing entity-approved Sewer System Management Plan Update to the online CIWQS Sanitary Sewer System Database. If the electronic document format or size capacity prevents the electronic upload of the Plan, the Legally Responsible Official shall report an electronic link to its updated Sewer System Management Plan posted on its own website.

Order 2006-0003-DWQ required each enrollee to develop its initial Sewer System Management Plan per the following schedule, with required Plan updates at a frequency of 5-years thereafter:

Systems serving populations: Greater than 100,000: May 2, 2009

Between 100,000 and 10,000: August 2, 2009

Between 10,000 and 2,500: May 2, 2010

Less than 2,500: August 2, 2010

This Order carries forth the previously-required Plan Update schedule per Order 2006-0003-DWQ. Per the six-year Plan Update frequency required in this Order, the Enrollee shall upload and certify its first Plan Update, to the online CIWQS Sanitary Sewer System Database by the following due dates, with subsequent Plan Updates at the frequency of six years thereafter:

Systems serving populations: Greater than 100,000: May 2, 2025

Between 100,000 and 10,000: August 2, 2025

Between 10,000 and 2,500: May 2, 2026

Less than 2,500: August 2, 2026

For a New Enrollee: **Within twelve (12) months of its Application for Enrollment Approval date**, the Legally Responsible Official of a new Enrollee shall upload and certify a local governing entity-approved Sewer System Management Plan to the online CIWQS Sanitary Sewer System Database. If electronic document format or size capacity prevents the electronic upload of the Plan, the Legally Responsible Official shall report an electronic link to its Sewer System Management Plan posted on its own website. The due date for subsequent 6-year Plan updates, is six (6) years from the submittal due date of the new Enrollee's first Sewer System Management Plan.

4. RECORDKEEPING REQUIREMENTS

The Enrollee shall maintain records to document compliance with the provisions of this General Order, and previous General Order 2006-0003-DWQ as applicable, for each sanitary sewer system owned, including any required records generated by an Enrollee's contractor(s).

4.1. Recordkeeping Time Period

The Enrollee shall maintain records of documents required in this Attachment, including records collected for compliance with this General Order, and records collected in accordance with previous General Order 2006-0003-DWQ, for five (5) years.

4.2. Availability of Documents

The Enrollee shall make the records required in this General Order readily available, either electronic or hard copies, for review by Water Board staff during onsite inspections or through an information request.

4.3. Spill Reports

The Enrollee shall maintain records for each of the following spill-related events and activities:

- Spill event complaint, including but not limited to records documenting how the Enrollee responded to notifications of spills. Each complaint record must, at a minimum, include the following information:
    - Date, time, and method of notification,

- Date and time the complainant first noticed the spill, if available,
- Narrative description of the complaint, including any information the caller provided regarding whether the spill has reached surface waters or a drainage conveyance system, if available,
- Complainant's contact information, if available, and
- Final resolution of the complaint;

- Records documenting the steps and/or remedial action(s) undertaken by the Enrollee, using all available information, to comply with this General Order, and previous General Order 2006-0003-DWQ as applicable;
- Records documenting how estimate(s) of volume(s) and, if applicable, volume(s) of spill recovered were calculated;
- All California Office of Emergency Services notification records, as applicable; and
- Records, in accordance with the Monitoring Requirements in this Attachment.

4.4. Recordkeeping of Category 4 Spills and Non-Category 1 Lateral Spills

An Enrollee must maintain the following records for each individual Category 4 spill and for each individual non-Category 1 Enrollee-owned and/or operated lateral spill, and report in accordance to section 3.6 (Annual Certified Spill Reporting of Category 4 and/or Lateral Spills) of this Attachment.

Recordkeeping of Individual Category 4 Spill Information:

1. Contact information: Name and telephone number of Enrollee contact person to respond to spill-specific questions;
2. Spill location name;
3. Description and GPS coordinates for the system location where the spill originated;
4. Did the spill reach a drainage conveyance system? If Yes:
   - Description of drainage conveyance system location,
   - Estimated spill volume fully recovered within the drainage conveyance system, and
   - Estimated spill volume remaining within the drainage conveyance system;
5. Estimated total spill volume exiting the sanitary sewer system;
6. Spill date and start time;
7. Spill cause(s) (for example, root intrusion, grease deposition, etc.);
8. System failure location (for example, main, pump station, etc.);
9. Description of spill response activities including description of immediate spill containment and cleanup efforts;
10. Description of how the volume estimation was calculated, including, at minimum:

- The methodology and type of data relied upon, including supervisory control and data acquisition (SCADA) records, flow monitoring or other telemetry information used to estimate the volume of the spill discharged, and the volume of the spill recovered (if any volume of the spill was recovered), and
- The methodology and type of data relied upon to estimate the spill start time, on-going spill rate at time of arrival (if applicable), and the spill end time;

11. Description of implemented system modifications and operating/maintenance modifications.

Recordkeeping of Individual Lateral Spill Information:

1. Date and time the Enrollee was notified of, or self-discovered, the spill;
2. Location of individual spill;
3. Estimated individual spill volume;
4. Spill cause(s) (for example, root intrusion, grease deposition, etc.); and
5. Description of how the volume estimations were calculated.

Total Annual Spill Information:

1. Estimated total annual spill volume;
2. Description of spill corrective actions, including at minimum:
   - Local regulatory enforcement action taken against the sewer lateral owner in response to a spill, as applicable, and
   - System operation, maintenance and program modifications implemented to prevent repeated spill occurrences at the same spill location.

4.5. Sewer System Telemetry Records

The Enrollee shall maintain the following sewer system telemetry records if used to document compliance with this General Order, and previous General Order 2006-0003-DWQ as applicable, including spill volume estimates:

- Supervisory control and data acquisition (SCADA) system(s);
- Alarm system(s);
- Flow monitoring device(s) or other instrument(s) used to estimate sewage flow rates, and/or volumes;
- Computerized maintenance management system records; and
- Asset management-related records.

4.6. Sewer System Management Plan Implementation Records

The Enrollee shall maintain records documenting the Enrollee's implementation of its Sewer System Management Plan, including documents supporting its Sewer System Management Plan audits, corrections, modifications, and updates to the Sewer System Management Plan.

4.7. Audit Records

The Enrollee shall maintain, at minimum, the following records pertaining to its Sewer System Management Plan audits, and other internal audits:

- Completed audit documents and findings;
- Name and contact information of staff and/or consultants that conducted or involved in the audit; and
- Follow-up actions based on audit findings.

4.8. Equipment Records

The Enrollee shall maintain a log of all owned and leased sewer system cleaning, operational, maintenance, construction, and rehabilitation equipment.

4.9. Work Orders

The Enrollee shall maintain record of work orders for operations and maintenance projects.

ATTACHMENT E2 – SUMMARY OF NOTIFICATION, MONITORING AND REPORTING REQUIREMENTS

This Attachment provides a summary of notification, monitoring and reporting requirements, by spill category, and for Enrollee-owned and/or operated laterals as required in Attachment E1 of this General Order, for quick reference purposes only.

Table E2-1

Spill Category 1: Spills to Surface Waters

Spill Requirement	Due	Method
Notification	**Within two (2) hours** of the Enrollee's knowledge of a Category 1 spill of 1,000 gallons or greater, discharging or threatening to discharge to surface waters: Notify the California Office of Emergency Services and obtain a notification control number.	California Office of Emergency Services at: (800) 852-7550 (Section 1 of Attachment E1)
Monitoring	• Conduct spill-specific monitoring; • Conduct water quality sampling of the receiving water within **18 hours** of initial knowledge of spill of 50,000 gallons or greater to surface waters.	(Section 2 of Attachment E1)
Reporting	• Submit Draft Spill Report **within three (3) business days** of the Enrollee's knowledge of the spill; • Submit Certified Spill Report **within 15 calendar days** of the spill end date; • Submit Technical Report **within 45 calendar days** after the spill end date for a Category 1 spill in which **50,000 gallons or greater** discharged to surface waters; and • Submit Amended Spill Report **within 90 calendar days** after the spill end date.	(Section 3.1 of Attachment E1)

Table E2-2
Spill Category 2: **Spills of 1,000 Gallons or Greater That Do Not Discharge to Surface Waters**

Spill Requirements	Due	Method
Notification	**Within two (2) hours** of the Enrollee's knowledge of a Category 2 spill of 1,000 gallons or greater, discharging or threatening to discharge to waters of the State: Notify California Office of Emergency Services and obtain a notification control number.	California Office of Emergency Services at: (800) 852-7550 (Section 1 of Attachment E1)
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	• Submit Draft Spill Report **within three (3) business days** of the Enrollee's knowledge of the spill; • Submit Certified Spill Report **within 15 calendar days** of the spill end date; and • Submit Amended Spill Report **within 90 calendar days** after the spill end date.	(Section 3.2 of Attachment E1)

Table E2-3
Spill Category 3: Spills of Equal or Greater than 50 Gallons and Less than 1,000 Gallons That Does Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	• Submit monthly Certified Spill Report to the online CIWQS Sanitary Sewer System Database within **30 calendars days** after the end of the month in which the spills occur; and • Submit Amended Spill Reports **within 90 calendar days** after the Certified Spill Report due date.	(Section 3.3 and 3.5 of Attachment E1)

Table E2-4
Spill Category 4: Spills Less Than 50 Gallons That Do Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	• If, during any calendar month, Category 4 spills occur, certify monthly, the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills into the online CIWQS Sanitary Sewer System Database, within 30 days after the end of the calendar month in which the spills occurred. • Upload and certify a report, in an acceptable digital format, of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur.	(Section 3.4, 3.6, 3.7 and 4.4 of Attachment E1)

Table E2-5
Enrollee Owned and/or Operated Lateral Spills That Do Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	**Within two (2) hours** of the Enrollee's knowledge of a spill of 1,000 gallons or greater, from an enrollee-owned and/or operated lateral, discharging or threatening to discharge to waters of the State: Notify California Office of Emergency Services and obtain a notification control number. Not applicable to a spill of less than 1,000 gallons.	California Office of Emergency Services at: (800) 852-7550 (Section 1 of Attachment E1)
Monitoring	Conduct visual monitoring.	(Section 2 of Attachment E1)
Reporting	• Upload and certify a report, in an acceptable digital format, of all lateral spills (that do not discharge to a surface water) to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur. • Report a lateral spill of any volume that discharges to a surface water as a Category 1 spill.	(Sections 3.6, 3.7 and 4.4 of Attachment E1)

ATTACHMENT F – REGIONAL WATER QUALITY CONTROL BOARD CONTACT INFORMATION

This Attachment provides a map, list of counties, and contact information to assist the Enrollee in identifying the corresponding Regional Water Quality Control Board office, for all Regional Water Board notification requirements in this General Order.

Region 1 -- North Coast Regional Water Quality Control Board:
Del Norte, Glenn, Humboldt, Lake, Marin, Mendocino, Modoc, Siskiyou, Sonoma, and Trinity counties.

RB1SpillReporting@waterboards.ca.gov or (707) 576-2220

Region 2 -- San Francisco Bay Regional Water Quality Control Board:
Alameda, Contra Costa, San Francisco, Santa Clara (Northern most part of Morgan Hill), San Mateo, Marin, Sonoma, Napa, Solano counties.

RB2SpillReports@waterboards.ca.gov or (510) 622-2369

Region 3 -- Central Coast Regional Water Quality Control Board:
Santa Clara (most of Morgan Hill), San Mateo (Southern portion), Santa Cruz, San Benito, Monterey, Kern (small portions), San Luis Obispo, Santa Barbara, Ventura (Northern portion) counties.

CentralCoast@waterboards.ca.gov or (805) 549-3147

Region 4 -- Los Angeles Regional Water Quality Control Board:
Los Angeles, Ventura counties (small portions of Kern and Santa Barbara counties).

rb4-ssswdr@waterboards.ca.gov or (213) 576-6600

Region 5 -- Central Valley Regional Water Quality Control Board:

Rancho Cordova (Sacramento) Office: Colusa, Lake, Sutter, Yuba, Sierra, Nevada, Placer, Yolo, Napa, (North East), Solano (West), Sacramento, El Dorado, Amador, Calaveras, San Joaquin, Contra Costa (East), Stanislaus, Tuolumne counties.

RB5sSpillReporting@waterboards.ca.gov or (916) 464-3291

Fresno Office: Fresno, Kern, Kings, Madera, Mariposa, Merced, and Tulare counties, and small portions of San Benito and San Luis Obispo counties.

RB5fSpillReporting@waterboards.ca.gov or (559) 445-5116

Redding Office: Butte, Glen, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Tehama counties.

RB5rSpillReporting@waterboards.ca.gov or (530) 224-4845

Region 6 -- Lahontan Regional Water Quality Control Board:

Lake Tahoe Office: Alpine, Modoc (East), Lassen (East side and Eagle Lake), Sierra, Nevada, Placer, El Dorado counties.

RB6sSpillReporting@waterboards.ca.gov or (530) 542-5400

Victorville Office: Mono, Inyo, Kern (East), San Bernardino, Los Angeles (North East corner) counties.

RB6vSpillReporting@waterboards.ca.gov or (760) 241-6583

Region 7 -- Colorado River Basin Regional Water Quality Control Board:

Imperial county and portions of San Bernardino, Riverside, San Diego counties.

RB7SpillReporting@waterboards.ca.gov or (760) 346-7491

Region 8 -- Santa Ana Regional Water Quality Control Board:

Orange, Riverside, San Bernardino counties.

RB8SpillReporting@waterboards.ca.gov or (951) 782-4130

Region 9 -- San Diego Regional Water Quality Control Board:

San Diego county and portions of Orange and Riverside counties.

RB9Spill_Report@waterboards.ca.gov or (619) 516-1990

End of Order 2022-0103-DWQ

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 9, SAN DIEGO REGION

ORDER R9-2007-0005

WASTE DISCHARGE REQUIREMENTS
FOR SEWAGE COLLECTION AGENCIES
IN THE SAN DIEGO REGION

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. **STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS:** State Water Resource Control Board (State Board) Order No. 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*, adopted by the State Board on May 2 2006, establishes minimum requirements to prevent sanitary sewer overflows (SSOs) from publicly owned/ operated sanitary sewer system. Order No. 2006-0003-DWQ is the primary regulatory mechanism for sanitary sewer systems statewide, but allows each regional board to issue more stringent or more prescriptive Waste Discharge Requirements (WDRs) for sanitary sewer systems within their respective jurisdiction.

2. **ENROLLMENT UNDER ORDER NO. 2006-0003-DWQ:** In accordance with Order No. 2006-0003-DWQ, all federal and state agencies, municipalities, counties, districts, and other public entities that own, operate, acquire, or assume responsibility for 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 are required to apply for coverage under the general WDRs.

3. **ORDER No. 96-04**: On May 9, 1996, this Regional Board adopted Order No. 96-04, *General Waste Discharge Requirements Prohibiting Sanitary Sewer Overflows by Sewage Collection Agencies*, prohibiting the discharge of sewage from a sanitary sewer system at any point upstream of a sewage treatment plant. Each Sewage Collection Agency currently regulated under Order No. 96-04 is required to obtain enrollment under the State Board Order No. 2006-0003-DWQ.

4. **SAN DIEGO REGION SANITARY SEWER OVERFLOW REGULATIONS:** Order No. 96-04 has been an effective regulatory mechanism in reducing the number and magnitude of sewage spills in the Region. The Order is more stringent and prescriptive than Order No. 2006-0003-DWQ in that Order No. 2006-0003-DWQ may allow some SSOs that are currently prohibited under Order No. 96-04. In order to maintain regulation of Sanitary Sewer Systems in the San Diego Region consistent with the provisions of Order No. 96-04, this Order reaffirms the prohibition on all SSOs upstream of a sewage treatment plant. This strict prohibition implements the requirements contained in the Basin Plan, California Water Code, and Federal Clean Water Act.

5. **CONSISTENT REGIONAL REQUIREMENTS:** The regulation of all Sewage Collection Agencies will be consistent within the San Diego Region by requiring agencies such as California Department of Corrections; California State University, San Marcos; San Diego State University; and University of California, San Diego, which have not been regulated under Order No. 96-04, to comply with Regional Board requirements that augment State Board Order No. 2006-0003-DWQ.

6. **BASIN PLAN**: The Regional Board adopted a Water Quality Control Plan for the San Diego Basin (hereinafter Basin Plan) on September 8, 1994. The Basin Plan was subsequently approved by the State Board on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Board. The Basin Plan designates beneficial uses, narrative, and numerical water quality objectives, and prohibitions which are applicable to the discharges prohibited under this Order.

7. **PROHIBITIONS CONTAINED IN BASIN PLAN**: The Basin Plan contains the following prohibitions which are applicable to the discharges prohibited under this Order:

   a. "The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination, or nuisance as defined in California Water Code Section 13050, is prohibited."

   b. "The discharge of treated or untreated waste to lakes or reservoirs used for municipal water supply, or to inland surface water tributaries thereto, is prohibited."

   c. "The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. ..."

   d. "The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board."

   e. "The unauthorized discharge of treated or untreated sewage to waters of the state or to a storm water conveyance system is prohibited."

   f. "The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited."

   g. "The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board."

8. **PORTER-COLOGNE WATER QUALITY CONTROL ACT (CALIFORNIA WATER CODE, DIVISION 7):** California Water Code Section 13243 provides that a Regional Board, in establishing waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, is prohibited. California Water Code 13260 prohibits the discharge of waste to land prior to the filing of a required report of waste discharge and the subsequent issuance of either WDRs or a waiver of WDRs. California Water Code 13264 prohibits discharge of waste absent a report of waste discharge and waste discharge requirements.

9. **FEDERAL CLEAN WATER ACT:** The Federal Clean Water Act largely prohibits any discharge of pollutants from a point source to waters of the United States except as authorized under an NPDES permit. In general, any point source discharge of sewage effluent to waters of the United States must comply with technology-based, secondary treatment standards, at a minimum, and any more stringent requirements necessary to meet applicable water quality standards and other requirements. Hence, the unpermitted discharge of wastewater from a sanitary sewer system to waters of the United States is illegal under the Clean Water Act. Furthermore, the Code of Federal Regulation requires proper operation and maintenance of all POTW facilities including collection systems, which results in prevention of SSOs.

10. **RESCISSION OF ORDER No. 96-04:** Order No. 96-04 can be rescinded after all of the Sewage Collection Agencies regulated under Order No. 96-04 have obtained coverage under Order No. 2006-0003-DWQ.

11. **PRIVATE LATERAL SEWAGE DISCHARGES REPORTING:** Order No. 96-04 does not require Sewage Collection Agencies to report Private Lateral Sewage Discharges. Over the past several years, however, this Regional Board has been tracking the number of Private Lateral Sewage Discharges based on courtesy reports from the Sewage Collection Agencies. Duringthe period from July 2004 through June 2006, a total of 268 Private Lateral Sewage Discharges were reported by the Agencies. Duringsome of those months, more Private Lateral Sewage Discharges were reported than public SSOs. Because the Agencies are not required to report Private Lateral Sewage Discharges, it is not known if the numbers reported fully represent the number and locations of Private Lateral Sewage Spills in the Region.

Finding Nos. 2, 3, and 4 of State Board Order No. 2006-0003-DWQ pertaining to causes of SSOs and the potential threat to water quality resulting from SSOs are also applicable to Private Lateral Sewage Discharges. Because Private Lateral Sewage Discharges are numerous and are a potential threat to public health and the environment, there is a need to have a reliable reporting system for Private Lateral Sewage Discharges for similar reasons as the public SSOs. Although sewage collection agencies are not responsible for the cause, cleanup, or repair of Private Lateral Sewage Discharges, sewage collection agencies are typically notified and/or are the first responders to Private Lateral Sewage Discharges. Consequently, requiring the sewage collection agencies to report all known Private Lateral Sewage Discharges is reasonable and a first step toward development of a regulatory approach for reducing Private Lateral Sewage Discharges in the San Diego Region.

12. **PERMITTING FEES:** This Order will serve as additional requirements to the State Board Order No. 2006-0003-DWQ. Sewage Collection Agencies that are covered and pay the fees under State Board Order No. 2006-0003-DWQ (or orders that supersede 2006-0003-DWQ) will not be required to pay for fees under this Order No. R9-2007-0005.

13. **CALIFORNIA ENVIRONMENTAL QUALITY ACT:** The action to adopt this Order is exempt from the California Environmental Quality Act (Public Resources Code §21000 et seq.) because it is an action taken by a regulatory agency to assure the protection of the environment and the regulatory process involves procedures for protection of the environment. (Cal. Code Regs., tit. 14, §15308). In addition, the action to adopt this Order is exempt from CEQA pursuant to Cal.Code Regs., title 14, §15301 to the extent that it applies to existing sanitary sewer collection systems that constitute "existing facilities" as that term is used in Section 15301, and §15302, to the extent that it results in the repair or replacement of existing systems involving negligible or no expansion of capacity.

14. **PUBLIC NOTICE:** The Regional Board has notified all known interested persons and the public of its intent to consider adoption of this Order. Interested persons and the public have had reasonable opportunity to participate in review of the proposed Order.

15. **PUBLIC HEARING:** The Regional Board has considered all comments pertaining to this Order submitted to the Regional Board in writing, or by oral presentations at the public hearing held on February 14, 2007.

IT IS HEREBY ORDERED, that all Sewage Collection Agencies within the San Diego Region, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following, in addition to the State Water Resource Control Board Order No. 2006-0003-DWQ (or orders that supersede 2006-0003-DWQ) and its addenda (hereinafter referred to as State Board Order):

A. Definitions

1. For purposes of this Order, a Sewage Collection Agency shall mean an "enrollee", as defined in the State Board Order, within the boundaries of the San Diego Region.

B. Prohibition

1. The discharge of sewage from a sanitary sewer system at any point upstream of a sewage treatment plant is prohibited.

C. Monitoring and Reporting Program Requirements

1. Each Sewage Collection Agency shall report all SSOs in accordance with the Monitoring and Reporting Program No. 96-04 until the Sewage Collection Agency notifies the Regional Board that they can successfully report the SSOs to the State Board Online SSO System. The notification shall be a letter signed and certified by a person designated, for a municipality, state, federal or other public agency, as either a principal executive officer or ranking elected official.

2. For Category 1 (as defined in State Board Monitoring and Reporting Program No. 2006-0003-DWQ) SSOs, the Sewage Collection Agency shall provide notification of the SSO to the Regional Board by phone, email, or fax within 24 hours after the Sewage Collection Agency becomes aware of the SSO, notification is possible, and notification can be provided without substantially impeding cleanup or other emergency measures. The information reported to the Regional Board shall include the name and phone number of the person reporting the SSO, the responsible sewage collection agency, the estimated total sewer overflow volume, the location of the SSO, the receiving water (if any), the start date/time of the SSO (if known), the end date/time of the SSO (or whether or not the sewer overflow is still occurring at the time of the report), and confirmation that the local health services agency was or will be notified as required under the reporting requirements of the local health services agency.

3. The Sewage Collection Agency shall provide notification of all Private Lateral Sewage Discharges (as defined in the State Board Order), for which they become aware of, that equal or exceed 1,000 gallons; result in a discharge to a drainage channel and/or surface water; and/or discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system, to the Regional Board by phone or fax within 24 hours after the Sewage Collection Agency becomes aware of the Private Lateral Sewage Discharge, notification is possible, and notification can be provided without substantially impeding cleanup or other emergency measures. The information reported to the Regional Board shall include the following information, if known: the name and phone number of the person reporting the Private Lateral Sewage Discharge, the service area where the Private Lateral Sewage Discharge occurred, the responsible party (other than the Sewage Collection Agency, if known), the estimated Private

Lateral Sewage Discharge volume, the location of the Private Lateral Sewage Discharge, the receiving water (if any), the start date/time of the Private Lateral Sewage Discharge, the end date/time of the Private Lateral Sewage Discharge (or whether or not the sewer overflow is still occurring at the time of the report), and confirmation that the local health services agency was or will be notified as required under the reporting requirements of the local health services agency.

4. The following requirement supersedes the Private Lateral Sewage Discharge Reporting Timeframe for Private Lateral Sewage Discharges in the State Board Monitoring and Reporting Program No. 2006-0003-DWQ: For Private Lateral Sewage Discharges that occur within a Sewage Collection Agency's service area and that a Sewage Collection Agency becomes aware of, the Sewage Collection Agency shall report the Private Lateral Sewage Discharge to the State Board Online SSO Database within 30 days after the end of the calendar month in which the Private Lateral Sewage Discharge occurs. The Sewage Collection Agency must identify the sewage discharge as occurring and caused by a private lateral, and a responsible party (other than the Sewage Collection Agency) should be identified, if known. The Sewage Collection Agency will not be responsible for the cause, cleanup, or repair of Private Lateral Sewage Discharges, but only the reporting of those within their jurisdiction and for which they become aware of.

D. Notification

1. Upon completion with Monitoring and Reporting Program Requirement C.1, the Regional Board will give written notice to the Sewage Collection Agency stating that regulation of the Sewage Collection Agency under Order No. 96-04 is terminated.

2. Order No. 96-04 is rescinded once regulation of all Sewage Collection Agencies under Order No. 96-04 is terminated. The Regional Board will give written notice to all of the Sewage Collection Agencies stating that all Sewage Collection Agencies under Order No. 96-04 was terminated and, thus, Order 96-04 is rescinded.

I, John Robertus, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of Order No. 2007-0005 adopted by the California Regional Water Quality Control Board, San Diego Region on February 14, 2007.

JOHN H. ROBERTUS
Executive Officer

JHR:mpm:rwm:jll

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

2375 Northside Drive. Suite 100, San Diego, CA 92108
(619) 516-1990 • Fax (619) 516-1994
http://www.waterboards.ca.gov/sandiego/

ORDER NO. R9-2019-0167 AS AMENDED BY ORDER NO. R9-2020-0191
NPDES NO. CA0109347

WASTE DISCHARGE REQUIREMENTS FOR THE MARINE CORPS BASE, CAMP PENDLETON SOUTHERN REGIONAL TERTIARY TREATMENT PLANT AND ADVANCED WATER TREATMENT PLANT AT HAYBARN CANYON DISCHARGE TO THE PACIFIC OCEAN THROUGH THE OCEANSIDE OCEAN OUTFALL

The following Discharger is subject to waste discharge requirements (WDRs) set forth in this Order:

Table 1. Discharger Information

Discharger	Marine Corps Base, Camp Pendleton	
Name of Facility	Southern Regional Tertiary Treatment Plant and Advanced Water Treatment Plant at Haybarn Canyon	
Facility Address	Southern Regional Tertiary Treatment Plant (SRTTP)	Building 200831 Camp Pendleton, CA 92055 San Diego County
	Advanced Water Treatment Plant at Haybarn Canyon (AWT)	Building 2470B1 Camp Pendleton, CA 92055 San Diego County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Secondary-treated wastewater and waste brine	33º 09’ 46” N	117º 23’ 29” W	Pacific Ocean

Table 3. Administrative Information

This Order was adopted on:	February 12, 2020
This Order shall become effective on:	April 1, 2020
This Order shall expire on:	March 31, 2025
The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations (CCR), and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	**180 days prior to the Order expiration date**
The U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, San Diego Region have classified this discharge as follows:	**Major**

I, David W. Gibson, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, San Diego Region, on the date indicated above, as amended by Order No. R9-2020-0191 on August 12, 2020.

David W. Gibson, Executive Officer

CONTENTS

TABLES

ATTACHMENTS

I. FACILITY INFORMATION

Information describing the Southern Regional Tertiary Treatment Plant (SRTTP); the Advanced Water Treatment Plant at Haybarn Canyon (AWT); and the associated sanitary sewer system, pump stations, and land outfalls (collectively referred to as the Facilities) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Marine Corps Base, Camp Pendleton (Discharger) permit application.

II. FINDINGS

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), finds:

A. Legal Authorities. This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (Water Code) (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). This Order shall serve as an NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.

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

C. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections IV.B, IV.C, and V.B 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.

D. Executive Officer Delegation of Authority. The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to Water Code section 13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order, unless such delegation is unlawful under Water Code section 13223 or this Order explicitly states otherwise.

E. Notification of Interested Parties. The San Diego Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. The San Diego Water Board has also provided an opportunity for the Discharger and interested agencies and persons to submit oral comments and recommendations at a public hearing. Details of the notification are provided in the Fact Sheet (Attachment F).

F. Consideration of Public Comment. The San Diego 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.

THEREFORE, IT IS HEREBY ORDERED, that this Order supersedes Order No. R9-2013-0112 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. The Discharger is hereby authorized to discharge subject to WDRs in this Order at the discharge location described in Table 2 to the Pacific Ocean off the coast of San Diego County. This action in no way prevents the San Diego Water Board from taking enforcement action for past violations of Order No. R9-2013-0112.

III. DISCHARGE PROHIBITIONS

A. The discharge of waste from the SRTTP not treated by a secondary treatment process and/or not in compliance with the effluent limitations specified in section IV.A of this Order, and/or to a location other than Discharge Point No. 001, unless specifically regulated by this Order or separate WDRs, is prohibited.

B. The discharge of waste from the AWT not in compliance with the effluent limitations specified in section IV.A of this Order, and/or to a location other than Discharge Point No. 001, unless specifically regulated by this Order or separate WDRs, is prohibited.

C. The Discharger must comply with any applicable Discharge Prohibitions contained in the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan), incorporated into this Order as if fully set forth herein and summarized in Attachment G, as a condition of this Order.

D. The Discharger must comply with any applicable Discharge Prohibitions contained in chapter 4 of the *Water Quality Control Plan for the San Diego Basin* (Basin Plan), incorporated into this Order as if fully set forth herein and summarized in Attachment G, as a condition of this Order.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations and Performance Goals

1. Effluent Limitations

a. The Discharger shall maintain compliance with the following effluent limitations for the combined effluent from the SRTTP and the AWT at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001, as described in the Monitoring and Reporting Program (MRP, Attachment E):

Table 4. Effluent Limitations at Monitoring Location EFF-001[1]

Parameter	Unit	Water Quality-Based Effluent Limitations[2,3]			
		Six-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
Flow	million gallons per day (MGD)	--	3.6	--	--
Effluent Limitations Based on Objectives for Protection of Marine Aquatic Life					
Chronic Toxicity (Test of Significant Toxicity)[4,5]	"Pass"/"Fail"	--	--	"Pass"	--

Parameter	Unit	Water Quality-Based Effluent Limitations[2,3]			
		Six-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
Total Chlorine Residual	microgram per liter (µg/L)	1.76E+02	--	7.04E+02	5.28E+03
	pounds per day (lbs/day)	5.28E+00	--	2.11E+01	1.59E+02
Effluent Limitations Based on Objectives for Protection of Human Health – Carcinogens					
Aldrin	µg/L	--	1.94E-03	--	--
	lbs/day	--	5.81E-05	--	--
Beryllium, Total Recoverable	µg/L	--	2.90E+00	--	--
	lbs/day	--	8.72E-02	--	--
Dieldrin	µg/L	--	3.52E-03	--	--
	lbs/day	--	1.06E-04	--	--
Heptachlor	µg/L	--	4.40E-03	--	--
	lbs/day	--	1.32E-04	--	--
Heptachlor Epoxide	µg/L	--	1.76E-03	--	--
	lbs/day	--	5.28E-05	--	--
Hexachlorobenzene	µg/L	--	1.85E-02	--	--
	lbs/day	--	5.55E-04	--	--
Polynuclear Aromatic Hydrocarbons (PAHs)	µg/L	--	7.74E-01	--	--
	lbs/day	--	2.33E-02	--	--
Polychlorinated Biphenyls (PCBs)	µg/L	--	1.67E-03	--	--
	lbs/day	--	5.02E-05	--	--
TCDD equivalents	µg/L	--	3.43E-07	--	--
	lbs/day	--	1.03E-08	--	--
Toxaphene	µg/L	--	1.85E-02	--	--
	lbs/day	--	5.55E-04	--	--

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] Scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates that position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation a value of 6.1 E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^{2} or 610, and 6.1E+00 represents 6.1×10^{0} or 6.1.

[3] The mass emission rate (MER) limitation, in lbs/day, was calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the permitted flow for the Facilities (3.6 MGD) and C is the concentration (mg/L).

[4] As specified in section VII.L of this Order and section III.C of the MRP (Attachment E).

[5] The chronic toxicity effluent limitation is protective of both the numeric acute and chronic toxicity Ocean Plan water quality objectives. The effluent limitation will be implemented using *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995); current *USEPA guidance in the National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010) (https://www3.epa.gov/npdes/pubs/wet_final_tst_implementation2010.pdf); and USEPA Regions 8, 9, and 10, Toxicity Training Tool (January 2010).

b. The Discharger shall maintain compliance with the following effluent limitations for the SRTTP, with compliance measured at Monitoring Location EFF-002, as described in the MRP (Attachment E):

Table 5. SRTTP Effluent Limitations at Monitoring Location EFF-002[1]

Parameter	Unit	Effluent Limitations[2]			
		Average Monthly	Average Weekly	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand (5-day @ 20 °C) (BOD_5)	milligram per liter (mg/L)	30	45	--	--
	lbs/day	901	1,351	--	--
	% Removal	≥85	--	--	--
Total Suspended Solids (TSS)	mg/L	30	45	--	--
	lbs/day	901	1,351	--	--
	% Removal	≥85	--	--	--
Oil and Grease	mg/L	25	40	--	75
	lbs/day	751	1,201	--	2,252
Settleable Solids	milliliter per liter (ml/L)	1.0	1.5	--	3.0
Turbidity	nephelometric turbidity unit (NTU)	75	100	--	225
pH	standard unit	--	--	6.0	9.0

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] The MER limitation, in lbs/day, was calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the permitted flow for the SRTTP (3.6 MGD, assuming no flow from the AWT) and C is the concentration (mg/L).

c. The Discharger shall maintain compliance with the following effluent limitations for the AWT, with compliance measured at Monitoring Location EFF-003, as described in the MRP (Attachment E):

Table 6. AWT Effluent Limitations at Monitoring Location EFF-003[1]

Parameter	Unit	Effluent Limitations[2]			
		Average Monthly	Average Weekly	Instantaneous Maximum	Instantaneous Maximum
TSS	mg/L	60	--	--	--
	lbs/day	866	--	--	--
Oil and Grease	mg/L	25	40	--	75
	lbs/day	361	557	--	1,082
Settleable Solids	ml/L	1.0	1.5	--	3.0
Turbidity	NTU	75	100	--	225
pH	standards unit	--	--	6.0	9.0

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] The MER limitation, in lbs/day, was calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the flow for the AWT (1.73 MGD) and C is the concentration (mg/L).

2. Performance Goals

Parameters that do not have reasonable potential to cause or contribute to an exceedance of water quality objectives, or for which reasonable potential to cause or contribute to an exceedance of water quality objectives cannot be determined, are referred to as performance goal parameters and are assigned the performance goals listed in Table 7 below. Performance goal parameters shall be monitored at Monitoring Location EFF-001, as described in the MRP (Attachment E). The San Diego Water

Board will use the results for informational purposes only, not compliance determinations. The performance goals in Table 7 are not water quality-based effluent limitations (WQBELs) and are not enforceable, as such.

Table 7. Performance Goals at Monitoring Location EFF-001[1]

Parameter	Units	Performance Goal[2]			
		Six-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
Performance Goals Based on Objectives for Protection of Marine Aquatic Life					
Arsenic, Total Recoverable	µg/L	4.43E+02	--	2.56E+03	6.78E+03
Cadmium, Total Recoverable	µg/L	8.80E+01	--	3.52E+02	8.80E+02
Chromium (VI), Total Recoverable[e]	µg/L	1.76E+02	--	7.04E+02	1.76E+03
Copper, Total Recoverable	µg/L	9.00E+01	--	8.82E+02	2.47E+03
Lead, Total Recoverable	µg/L	1.76E+02	--	7.04E+02	1.76E+03
Mercury, Total Recoverable	µg/L	3.48E+00	--	1.40E+01	3.52E+01
Nickel, Total Recoverable	µg/L	4.40E+02	--	1.76E+03	4.40E+03
Selenium, Total Recoverable	µg/L	1.32E+03	--	5.28E+03	1.32E+04
Silver, Total Recoverable	µg/L	4.77E+01	--	2.32E+02	6.02E+02
Zinc, Total Recoverable	µg/L	1.06E+03	--	6.34E+03	1.69E+04
Cyanide, Total	µg/L	8.80E+01	--	3.52E+02	8.80E+02
Ammonia Nitrogen, Total (as N)	µg/L	5.28E+04	--	2.11E+05	5.28E+05
Phenolic Compounds (non-chlorinated)[1]	µg/L	2.64E+03	--	1.06E+04	2.64E+04
Chlorinated Phenolics[1]	µg/L	8.80E+01	--	3.52E+02	8.80E+02
Endosulfan[1]	µg/L	7.92E-01	--	1.58E+00	2.38E+00
Endrin	µg/L	1.76E-01	--	3.52E-01	5.28E-01
HCH (BHC)[1]	µg/L	3.52E-01	--	7.04E-01	1.06E+00
Radioactivity (alpha and beta particles)	picocuries per liter (pCi/L)	Not to exceed limits specified in title 17, division 1, chapter 5, subchapter 4, group 3, article 3, section 30253 of the CCR, reference to section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.			
Performance Goals Based on Objectives for Protection of Human Health – Noncarcinogens					
Acrolein	µg/L	--	1.94E+04	--	--
Antimony	µg/L	--	1.06E+05	--	--
Bis(2-chloroethoxy) Methane	µg/L	--	3.87E+02	--	--
Bis(2-chloroisopropyl) Ether	µg/L	--	1.06E+05	--	--
Chlorobenzene	µg/L	--	5.02E+04	--	--
Chromium (III), Total Recoverable[3]	µg/L	--	1.67E+07	--	--
Di-n-butyl Phthalate	µg/L	--	3.08E+05	--	--
Dichlorobenzenes[1]	µg/L	--	4.49E+05	--	--
Diethyl Phthalate	µg/L	--	2.90E+06	--	--
Dimethyl Phthalate	µg/L	--	7.22E+07	--	--
4,6-dinitro-2-methylphenol	µg/L	--	1.94E+04	--	--
2,4-dinitrophenol	µg/L	--	3.52E+02	--	--
Ethylbenzene	µg/L	--	3.61E+05	--	--

Parameter	Units	Performance Goal[2]			
		Six-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
Fluoranthene	µg/L	--	1.32E+03	--	--
Hexachlorocyclopentadiene	µg/L	--	5.10E+03	--	--
Nitrobenzene	µg/L	--	4.31E+02	--	--
Thallium, Total Recoverable	µg/L	--	1.76E+02	--	--
Toluene	µg/L	--	7.48E+06	--	--
Tributyltin	µg/L	--	1.23E-01	--	--
1,1,1-trichloroethane	µg/L	--	4.75E+07	--	--
Performance Goals Based on Objectives for Protection of Human Health – Carcinogens					
Acrylonitrile	µg/L	--	8.80E+00	--	--
Benzene	µg/L	--	5.19E+02	--	--
Benzidine	µg/L	--	6.07E-03	--	--
Bis(2-chloroethyl) Ether	µg/L	--	3.96E+00	--	--
Bis(2-ethlyhexyl) Phthalate	µg/L	--	3.08E+02	--	--
Carbon Tetrachloride	µg/L	--	7.92E+01	--	--
Chlordane[1]	µg/L	--	2.02E-03	--	--
Chlorodibromomethane (Dibromochloromethane)	µg/L	--	7.57E+02	--	--
Chloroform	µg/L	--	1.14E+04	--	--
Dichlorodiphenyltrichloroethane (DDT)[1]	µg/L	--	1.50E-02	--	--
1,4-dichlorobenzene	µg/L	--	1.58E+03	--	--
3,3'-dichlorobenzidine	µg/L	--	7.13E-01	--	--
1,2-dichloroethane	µg/L	--	2.46E+03	--	--
1,1-dichloroethylene	µg/L	--	7.92E+01	--	--
Dichlorobromomethane	µg/L	--	5.46E+02	--	--
Dichloromethane (Methylene Chloride)	µg/L	--	3.96E+04	--	--
1,3-dichloropropene (1,3-Dichloropropylenes)	µg/L	--	7.83E+02	--	--
2,4-dinitrotoluene	µg/L	--	2.29E+02	--	--
1,2-diphenylhydrazine	µg/L	--	1.41E+01	--	--
Halomethanes[1]	µg/L	--	1.14E+04	--	--
Hexachlorobutadiene	µg/L	--	1.23E+03	--	--
Hexachloroethane	µg/L	--	2.20E+02	--	--
Isophorone	µg/L	--	6.42E+04	--	--
N-nitrosodimethylamine	µg/L	--	6.42E+02	--	--
N-nitrosodi-N-propylamine	µg/L	--	3.34E+01	--	--
N-nitrosodiphenylamine	µg/L	--	2.20E+02	--	--
1,1,2,2-tetrachloroethane	µg/L	--	2.02E+02	--	--
Tetrachloroethylene (Tetrachloroethene)	µg/L	--	1.76E+02	--	--
Trichloroethylene (Trichloroethene)	µg/L	--	2.38E+03	--	--

Parameter	Units	Performance Goal[2]			
		Six-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
1,1,2-trichloroethane	µg/L	--	8.27E+02	--	--
2,4,6-trichlorophenol	µg/L	--	2.55E+01	--	--
Vinyl Chloride	µg/L	--	3.17E+03	--	--

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] Scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates that position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation a value of 6.1 E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^{2} or 610, and 6.1E+00 represents 6.1×10^{0} or 6.1.

[3] Dischargers may, at their option, apply this performance goal as a total chromium performance goal.

B. Land Discharge Specifications – Not Applicable

C. Recycling Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitation

The receiving water limitations set forth below for ocean waters are based on water quality objectives contained in the Basin Plan and Ocean Plan and are a required part of this Order. The discharge of waste shall not cause or contribute to violation of these limitations in the Pacific Ocean. Compliance with these limitations shall be determined from samples collected at stations representative of the area outside of the zone of initial dilution (ZID).

1. Bacterial Characteristics

a. Within a zone bounded by the shoreline and a distance of three nautical miles from the shoreline, including all kelp beds, the following bacterial objectives shall be maintained throughout the water column. The ZID for the ocean outfall is excluded.

i. Fecal Coliform

(a) Thirty-day geometric mean of fecal coliform density not to exceed 200 CFU per 100 milliliters (mL) calculated based on the five most recent samples from each site.

(b) Single sample maximum not to exceed 400 CFU per 100 mL.

ii. Enterococci

(a) Six-week rolling geometric mean not to exceed 30 CFU per 100 mL, calculated weekly.

(b) Statistical threshold value (STV) of 110 CFU per 100 mL not to be exceeded by more than 10 percent of samples collected in a calendar month, calculated in a static manner.

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

c. At all areas where shellfish may be harvested for human consumption, as determined by the San Diego Water Board, the median total coliform density (CFU)

shall not exceed 70 per 100 ml throughout the water column, and not more than 10 percent of the samples shall exceed 230 per 100 ml.

2. Physical Characteristics

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

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

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

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

e. Trash shall not be present in ocean waters, along shorelines or adjacent areas in amounts that adversely affect beneficial uses or cause nuisance.

3. Chemical Characteristics

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

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

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

d. The concentration of substances set forth in chapter II, Table 3 of the Ocean Plan, shall not be increased in marine sediments to levels that would degrade indigenous biota.

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

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

4. Biological Characteristics

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

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

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

5. Radioactivity

Discharge of radioactive waste shall not degrade marine life.

B. Groundwater Limitations – Not Applicable

VI. PROVISIONS

A. Standard Provisions

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

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

   a. The Facilities shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to title 23, division 3, chapter 26 of the CCR. The Facilities shall be provided with a sufficient number of qualified personnel to operate the Facilities effectively so as to achieve the required level of treatment at all times.

   b. The expiration date of this Order is contained in Table 3 of this Order. After the expiration date, the terms and conditions of this Order are automatically continued pending issuance of a new permit, provided that all requirements of USEPA's NPDES regulations at title 40 of the Code of Federal Regulations (40 CFR) section 122.6 and the State's regulations at title 23, division 3, chapter 9, article 3, section 2235.4 of the CCR regarding the continuation of expired permits and WDRs are met.

   c. A copy of this Order shall be posted at a prominent location and shall be available to site personnel, San Diego Water Board, State Water Resources Control Board (State Water Board), and USEPA or their authorized representative at all times.

B. Monitoring and Reporting Program (MRP) Requirements

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

2. Notifications required to be provided under this Order to the San Diego Water Board shall be made to:

   E-mail - SanDiego@waterboards.ca.gov or
   Telephone – (619) 516-1990, or
   Facsimile – (619) 516-1994.

C. Special Provisions

1. Reopener Provisions

   a. This Order may be reopened for modification to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above a performance goal(s) set forth in section IV.A.2 of this Order or as otherwise described in Table 3 of the Ocean Plan. (40 CFR section 122.44(d)(1))

   b. This Order may be reopened for modification of the monitoring and reporting requirements and/or special studies requirements, at the discretion of the San Diego Water Board. Such modification(s) may include, but is (are) not limited to, revision(s) (i) to implement recommendations from the Southern California Coastal Water Research Project (SCCWRP); (ii) to develop, refine, implement, and/or coordinate a regional monitoring program; (iii) to develop and implement improved monitoring and assessment programs in keeping with San Diego Water Board Resolution No. R9-2012-0069, *Resolution in Support of a Regional Monitoring Framework*; and/or

(iv) to add provisions to require the Discharger to evaluate and provide information on cost and values of the MRP (Attachment E).

c. This Order may be modified, revoked and reissued, or terminated for cause in accordance with the provisions of 40 CFR parts 122, 124, and 125 at any time prior to its expiration under any of the following circumstances:

   i. Violation of any terms or conditions of this Order. (Water Code section 13381(a));

   ii. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts. (Water Code section 13381(b)); and

   iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge. (Water Code section 13381(c)).

d. The filing of a request by the Discharger for modifications, revocation and reissuance, or termination of this Order does not stay any condition of this Order. Notification by the Discharger of planned operational or facility changes, or anticipated noncompliance with this Order does not stay any condition of this Order. (40 CFR section 122.41(f))

e. If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA section 307(a) for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the San Diego Water Board may institute proceedings under these regulations to modify or revoke and reissue this Order to conform to the toxic effluent standard or prohibition. (40 CFR section 122.44(b)(1))

f. This Order may be reopened and modified for consistency with any new water quality control plan, policy, law, or regulation. (40 CFR section 122.62(a)(3).)

g. This Order may be reopened and modified to revise effluent limitations as a result of future Ocean Plan, Basin Plan, and/or other statewide Water Quality Control Plan amendments; or the adoption of a total maximum daily load (TMDL) for the receiving water. (40 CFR section 122.62(a)(2))

h. This Order may be reopened upon submission by the Discharger of new information, the adequacy of which shall be determined by the San Diego Water Board, to provide for dilution credits or a mixing zone, as may be appropriate. (40 CFR section 122.62(a)(2))

i. This Order may also be reopened and modified, revoked and reissued, or terminated in accordance with the provisions of 40 CFR sections 122.44, 122.62 to 122.64, and 125.62. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order, and endangerment to human health or the environment resulting from the permitted activity.

j. The performance goals, contained in section IV.A.2 of this Order, may be re-evaluated and modified during this Order term, or this Order may be modified to incorporate WQBELs, in accordance with the requirements set forth at 40 CFR sections 122.62 and 124.5.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Spill Prevention and Response Plans**

i. For purposes of this section of the Order, a spill is a discharge that occurs at or downstream of the SRTTP's headworks, or influent intake location at the AWT, including the associated pumps stations and land outfalls, in violation of Discharge Prohibition III.A or Discharge Prohibition III.B of this Order. A spill may include a discharge of treated or untreated wastewater, or material other than treated or untreated wastewater that causes, may cause, or is caused by significant operational failure, and/or endangers or may endanger human health or the environment. The term "spill" as used in this section of the Order does not include sanitary sewer overflows from the sewage collection system that are covered under section VI.C.5.d of this Order.

ii. The Discharger shall maintain a Spill Prevention Plan (SPP) and a Spill Response Plan (SRP) for the Facilities, in an up-to-date condition and shall amend the SPP/SRP whenever there is a change (e.g., in the design, construction, operation, or maintenance of the sewerage system or sewerage facilities) which materially affects the potential for spills and the response required for each potential spill. The Discharger shall review and amend the SPP/SRP as appropriate after each spill from the Facilities. The SPP/SRP and any amendments thereto shall be subject to the approval of the San Diego Water Board and shall be modified as directed by the San Diego Water Board. The Discharger shall submit the SPP/SRP and any amendments thereto to the San Diego Water Board upon request of the San Diego Water Board. The Discharger shall ensure that the up-to-date SPP/SRP is readily available to the Facilities personnel at all times and that the sewerage system personnel are familiar with it.

b. **Spill Reporting Requirements**

The Discharger shall report spills, as defined in section VI.C.2.a.i above, in accordance with the following procedures:

i. If a spill results in a discharge of treated or untreated wastewater that is equal to or exceeds 1,000 gallons, and/or results in a discharge to a drainage channel and/or surface water, or results in a discharge to a storm drain that was not fully captured and returned to the sanitary sewer system, the Discharger shall:

(a) Report the spill to the San Diego Water Board by email at SanDiego@waterboards.ca.gov within 24 hours from the time the Discharger becomes aware of the spill. If email communication is not possible, report the spill by telephone (619-516-1990) within 24 hours from the time the Discharger becomes aware of the spill. The report shall include a description of the spill and its cause; the spill material; the duration of the spill including exact dates and times; the estimated spill volume and its destination; if the spill has not been terminated, the anticipated time it is expected to continue; and steps taken or planned to reduce and/or eliminate the spill.

(b) Submit a written report by email at SanDiego@waterboards.ca.gov, as well as any additional pertinent information, to the San Diego Water Board

no later than five days from the time the Discharger becomes aware of the spill. The written report must be signed and certified as required by section V of the Standards Provisions (Attachment D).

(c) The San Diego Water Board may waive the above-required written report under this provision on a case-by-case basis if the email or oral report has been received within 24 hours.

ii. If a spill results in a discharge of treated or untreated wastewater less than 1,000 gallons and the discharge does not reach a drainage channel or surface waters, or results in a discharge to a storm drain that was fully captured and returned to the wastewater treatment facility, the Discharger is not required to notify the San Diego Water Board within 24 hours, or provide a 5-day written report.

iii. For spills of material other than treated or untreated wastewater that cause, may cause, or are caused by significant operational failure, and/or endangers or may endanger human health or the environment, the Discharger shall:

(a) Notify the San Diego Water Board by email at SanDiego@waterboards.ca.gov within 24 hours from the time the Discharger becomes aware of the spill. If email communication is not possible, report the spill by telephone (619-516-1990) within 24 hours from the time the Discharger becomes aware of the spill. The report shall include a description of the spill and its cause; the spill material; the duration of the spill including exact dates and times; the estimated spill volume and its destination; if the spill has not been terminated, the anticipated time it is expected to continue; and steps taken or planned to reduce and/or eliminate the spill.

(b) Submit a written report by email at SanDiego@waterboards.ca.gov, as well as any additional pertinent information, to the San Diego Water Board no later than five days from the time the Discharger becomes aware of the spill. The written report must be signed and certified as required by section V of the Standards Provisions (Attachment D).

(c) The San Diego Water Board may waive the above-required written report under this provision on a case-by-case basis if the email or oral report has been received within 24 hours.

iv. For all spills, the Discharger shall include a detailed summary of spills in the monthly Self-Monitoring Report (SMR) for the month in which the spill occurred. If no spills occurred during the calendar month, the Discharger shall report no spills in the monthly SMR for that calendar month.

v. The spill reporting requirements contained in this Order do not relieve the Discharger of responsibilities to report spills to other agencies, such as the California Office of Emergency Services and the County of San Diego Department of Environmental Health Services.

3. Best Management Practices and Pollution Prevention

Pollutant Minimization Program (PMP) - The goal of the PMP shall be to reduce all potential sources of a pollutant through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent

concentration at or below the effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The San Diego Water Board may consider cost-effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan (PPP), if required pursuant to Water Code section 13263.3(d), shall be considered as fulfilling the PMP requirements.

a. Reporting protocols in the MRP (Attachment E) describe sample results that are to be reported as Detected, But Not Quantified (DNQ) or Not Detected (ND). Definitions for a reported Minimum Level (ML) and Method Detection Limit (MDL) are provided in the Ocean Plan and in Abbreviations and Definitions (Attachment A). These reporting protocols and definitions are used in determining the need to conduct a PMP, as follows:

   i. The Discharger shall develop and conduct a PMP as further described below 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.

   ii. Alternatively, the Discharger shall develop and conduct a PMP as further described below if all of the following conditions are true:

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

      (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.

b. The PMP shall include, but not be limited to, the following actions and submittals acceptable to the San Diego Water Board:

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

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

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

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

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

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

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

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

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

4. Construction, Operation and Maintenance Specifications

a. All proposed new treatment facilities and expansions of existing treatment facilities shall be completely constructed and operable prior to initiation of the discharge from the new or expanded facilities. The Discharger shall submit a certification report for each new treatment facility, expansion of an existing treatment facility, and design capacity re-ratings, prepared by the design engineer. For design capacity re-ratings, the certification report shall be prepared by the engineer who evaluated the treatment facility design capacity. The signature and engineering license number of the engineer preparing the certification report shall be affixed to the report. If reasonable, the certification report shall be submitted prior to beginning construction of new treatment facilities or expansions of existing treatment facilities.

i. The certification report shall:

(a) Identify the design capacity of the treatment facility, including the daily and 30-day design capacity;

(b) Certify the adequacy of each component of the treatment facility; and

(c) Contain a requirement-by-requirement analysis, based on acceptable engineering practices, of the process and physical design of the facility to ensure compliance with this Order.

ii. The Discharger shall not initiate a discharge from a treatment facility at a daily flow rate in excess of its previously approved design capacity until:

(a) The certification report is received by the San Diego Water Board,

(b) The San Diego Water Board has received written notification of completion of construction (new or expanded treatment facilities only),

(c) An inspection of the facility has been made by the San Diego Water Board or its designated representatives (new or expanded treatment facilities only), and

(d) The San Diego Water Board has provided the Discharger with written authorization to initiate discharge from a new or expanded treatment facility or at a daily flow rate in excess of its previously approved design capacity.

b. The Facilities shall be protected against a 100-year storm event as defined by the San Diego County Flood Control District (FCD).

c. The Facilities shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year, 24-hour storm event as defined by the San Diego County FCD.

d. The Facilities shall be protected against regional impacts due to climate change (e.g., sea level rise and floods).

e. The Discharger shall provide and maintain in good working order a sufficient alternate power source(s) to assure that, in the event of the loss, reduction, or failure of electrical power, the Facilities are in compliance with the terms and conditions of this Order. In addition to a sufficient alternate power source(s), backup systems may also include auxiliary power generators, retention storage capacity,

emergency operation procedures, and other contingencies to ensure continuous operation of all critical devices and systems used in the conveyance, storage, treatment, and recycling of wastewater in the event of the loss, reduction, or failure of electrical power. All equipment shall be located to minimize failure due to moisture, liquid spray, flooding, sea level rise, and other physical phenomena. The alternate power source(s) shall be designed to permit inspection and maintenance and shall provide for periodic testing.

5. Special Provisions for Wastewater Facilities

a. **Ensuring Adequate Treatment Plant Capacity**

Four years prior to reaching the SRTTP design capacity, the Discharger shall submit a Treatment Plant Capacity Report to the San Diego Water Board showing how flow volumes will be prevented from exceeding existing capacity or how capacity will be increased.

b. **Source Control Program Requirements**

i. Source Control Program

The Discharger shall develop and implement a source control program to control the discharge of non-domestic pollutants to its sanitary sewer system and its treatment facilities. This source control program shall be implemented to prevent:

(a) The pass-through of pollutants or any interference with wastewater treatment plant operations from any pollutant, including BOD_5, excessive heat, oil and grease, metals, and organics that may result in the violation of discharge requirements (including effluent limitations) contained in this Order;

(b) Sludge contamination that interferes with the disposal of sludge in accordance with 40 CFR part 503 and as specified in section VI.C.5.c below;

(c) The introduction of pollutants which could create a fire or explosion hazard in the sanitary sewer system or the treatment plant, including waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit (°F) using test methods specified in 40 CFR part 261.21; and

(d) The introduction of pollutants which could cause corrosive structural damage, obstructions in flow, or the formation of toxic gases and fumes in a quantity that could cause acute worker health and safety problems.

ii. Annual Industrial Waste Survey

The Discharger shall conduct an annual Industrial Waste Survey (IWS) of all non-domestic facilities in the service area of the permitted treatment plant to determine whether any such facilities may be contributing to violations of the discharge requirements specified in the Order. As part of the IWS, the Discharger shall conduct an influent priority pollutant scan at the treatment plant. A copy of the annual IWS report shall be submitted to the San Diego Water Board by March 1, of each year.

Based on the results of the IWS, the San Diego Water Board may amend this Order to require non-domestic discharges adversely impacting the performance

of the treatment plant be made subject to applicable provisions in the federal regulations which require the control of pollutant discharges using best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT) to prevent and/or reduce pollutants.

iii. Domestic Discharger Source Control Program

The Discharger shall implement a domestic discharger Source Control Program consisting of a public education program designed to minimize the entrance of domestic toxic pollutants into the sanitary sewer system. Annually, the domestic source control program shall be reviewed and, if necessary, updated.

iv. Treatment Plant Influent Monitoring Program

The Discharger shall implement a treatment plant influent monitoring program as specified in Attachment E (MRP).

v. Special Requirements for Facilities Using Oil/Water Separators

All non-domestic facilities with the potential to discharge oil and other petroleum products (e.g., vehicle maintenance facilities) shall be equipped with an oil/water separator (OWS) to handle peak hydraulic loads and to reduce plant influent from containing free oil, or oil and grease at levels that will adversely impact the operation and maintenance of the treatment plant.

vi. Special Requirements for Facilities Discharging Silver

Best Management Practices (BMPs) (e.g., installation of silver recovery units) shall be implemented to control the discharge of non-domestic waste containing silver.

vii. Special Requirements for Dining Facilities and Commercial Restaurants

BMPs (e.g., installation and maintenance of grease traps) shall be implemented to control the discharge of non-domestic waste containing oil and grease.

c. **Sludge (Biosolids) Disposal Requirements**

i. General Requirements

(a) All biosolids generated by the Discharger during the treatment of wastewater shall be used or disposed of in compliance with applicable portions of: 40 CFR part 503-for biosolids that are land applied, placed on a surface disposal site (dedicated land disposal site, monofill, or sludge-only parcel at a municipal landfill), or incinerated; 40 CFR part 258-for biosolids disposed of in a municipal solid waste landfill (with other materials); and 40 CFR part 257-for all biosolids use and disposal practices not covered under 40 CFR parts 258 or 503. The preparer of the biosolids is required under 40 CFR 503.7 to ensure that the applicable requirements in 40 CFR 503 are met when the sewage sludge is applied to the land.

Requirements for biosolids that are applied for the purpose of enhancing plant growth or for land reclamation are set forth in 40 CFR part 503, subpart B (land application). Requirements for biosolids that are placed on land for the purpose of disposal are set forth in 40 CFR part 503, subpart

C (surface disposal).

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

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

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

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

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

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

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

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

(i) If the biosolids are land applied, there shall be adequate screening at the SRTTP headworks and/or at the biosolids treatment units to ensure that all pieces of metal, plastic, glass, and other inert objects are removed.

ii. Inspection and Entry

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

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

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

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

iii. Monitoring

Biosolids shall be monitored for the following constituents, at the frequency stipulated in Table 1 of 40 CFR section 503.16:

- arsenic,
- cadmium,
- chromium,
- copper,
- lead,
- mercury,
- molybdenum,
- nickel,
- selenium,
- zinc, and
- total solids.

If biosolids are removed for use or disposal on a routine basis, sampling should be scheduled at regular intervals throughout the year. If biosolids are stored for an extended period prior to use or disposal, sampling may occur at regular intervals, or samples of the accumulated stockpile may be collected prior to use or disposal, corresponding to the tons accumulated in the stockpile over that period.

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

the analytical results whether the reported results are expressed on an "as-is" or a "100% dry weight" basis.

iv. Pathogen and Vector Control

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

(b) Prior to disposal on a surface disposal site, the Discharger shall demonstrate that biosolids meet Class B pathogen reduction levels, or ensure that the site is covered at the end of each operating day. If pathogen reduction is demonstrated using a "Process to Further Reduce Pathogens" or one of the "Processes to Significantly Reduce Pathogens," the Discharger shall maintain daily records of the operating parameters used to achieve this reduction. If pathogen reduction is demonstrated by testing for fecal coliform and/or pathogens, samples must be collected at the frequency specified in Table 1 of 40 CFR section 503.16. If Class B is demonstrated using fecal coliform, at least seven grab samples must be collected during each monitoring period and a geometric mean calculated from these samples. The following holding times between sample collection and analysis shall not be exceeded: fecal coliform-24 hours when cooled to four °C; Salmonella spp. bacteria-24 hours when cooled to four °C; enteric viruses-two weeks when frozen; and helminth ova-one month when cooled to four °C.

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

v. Surface Disposal

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

vi. Landfill Disposal

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

vii. Notifications

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

(a) Notification of Noncompliance

The Discharger shall notify USEPA, State Water Board, and San Diego Water Board (for both Discharger and use or disposal site) of any noncompliance with the biosolids within 24 hours, if the noncompliance may endanger human health or the environment. For other instances of

noncompliance with the biosolids, the Discharger shall notify USEPA, State Water Board, and San Diego Water Board of the noncompliance in writing within five working days of becoming aware of the noncompliance. The Discharger shall require their biosolids management contractors to notify USEPA, State Water Board, and San Diego Water Board of any noncompliance within these same time frames.

(b) Interstate Notification

If biosolids are shipped to another State or tribal land, the Discharger shall send 60 days prior notice of the shipment to the permitting authorities in the receiving State or tribal land, and the USEPA.

(c) Land Application Notification

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

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

The Discharger shall notify the applier of all subject requirements under 40 CFR part 503, including the requirement for the applier to certify that management practices, site restrictions, and applicable vector attraction reduction requirements have been met. The Discharger shall require the applier to certify at the end of 38 months, following application of Class B biosolids, that harvesting restrictions in effect for up to 38 months have been met.

This permit requires 90-days pre-notification prior to changing the current disposal practice. If the sludge remains in California, the sludge must be disposed of in Kettleman Landfill.

(d) Surface Disposal Notification

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

viii. Reporting

The Discharger shall submit an annual biosolids report to the State Water Board's CIWQS program website (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/), to the USEPA Biosolids Coordinator (CDX NeT electronic reporting system), and, if applicable, to the Arizona Department of Environmental Quality Biosolids Program Coordinator by February 19 of each year for the period covering the previous calendar year. The report shall include:

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

(b) Results of all pollutant monitoring required under section VI.C.5.d.iii of this Order. Results must be reported on a 100% dry weight basis.

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

(d) Names, mailing addresses, and street addresses of persons who received biosolids for storage, further treatment, disposal in a municipal landfill, or other use or disposal method not covered above, and volumes delivered to each.

(e) The following information must be submitted by the Discharger as an attachment to the CDX NeT electronic reporting system, unless the Discharger requires its biosolids management contractors to report this information directly to the USEPA Biosolids Coordinator:

(1) For land application sites:

- Locations of land application sites (with field names and numbers) used that calendar year, size of each field applied to, applier, and site owner;
- Volumes applied to each field (in wet tons and dry metric tons), nitrogen applied, and calculated plant available nitrogen;
- Crops planted, dates of planting and harvesting;
- For biosolids exceeding 40 CFR section 503.13 Table 3 metals concentrations, the locations of sites where the biosolids were applied and cumulative metals loading at the sites to date;
- Certifications of management practices at 40 CFR section 503.14; and
- Certifications of site restrictions at 40 CFR section 503.32(b)(5).

(2) For surface disposal sites:

- Locations of sites, site operator and site owner, size of parcel on which biosolids were disposed;
- Results of any required groundwater monitoring;
- Certifications of management practices at 40 CFR section 503.24; and
- For closed sites, the date of site closure and certifications of management practices for three years following site closure.

ix. All reports shall be submitted to:

State Water Board's CIWQS program website (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/)

Regional Biosolids Coordinator
U.S. Environmental Protection Agency
EPA's CDX NeT electronic reporting system

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

d. **Sewage Collection System**

The Discharger shall comply with the monitoring and reporting requirements in Attachment H to this Order, Sanitary Sewer System Requirements.

e. **Resource Recovery from Anaerobically Digestible Material**

If the Discharger plans to receive hauled-in anaerobically digestible material for injection into an anaerobic digester, the Discharger shall notify the San Diego Water Board and develop and implement Standard Operating Procedures (SOPs) for this activity. The SOPs shall be developed prior to receiving hauled-in anaerobically digestible material. The SOPs shall address material handling, including unloading, screening, or other processing prior to anaerobic digestion; transportation; spill prevention; and spill response. In addition, the SOPs shall address avoidance of the introduction of materials that could cause interference, pass-through, or upset of the treatment processes; avoidance of prohibited material; vector control; odor control; operation and maintenance; and the disposition of any solid waste segregated from introduction to the digester. The Discharger shall train its staff on the SOPs and shall maintain records for a minimum of three years for each load received, describing the hauler, waste type, and quantity received. In addition, the Discharger shall maintain records for a minimum of three years for the disposition, location, and quantity of cumulative pre-digestion-segregated solid waste hauled offsite.

6. Other Special Provisions – Not Applicable

7. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

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

A. Compliance with Average Monthly Effluent Limitation (AMEL)

If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of noncompliance in a 31-day month). The average of daily discharges over the calendar month that exceeds the AMEL for a parameter will be considered out of compliance for the month only. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that

calendar month. For any one calendar month during which no sample is taken, no compliance determination can be made for that calendar month.

B. Compliance with Average Weekly Effluent Limitation (AWEL)

If the average of daily discharges over a calendar week (Sunday through Saturday) exceeds the AWEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in seven days of noncompliance. The average of daily discharges over the calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance for that calendar week. For any one calendar week during which no sample is taken, no compliance determination can be made for that calendar week.

C. Compliance with Maximum Daily Effluent Limitation (MDEL)

The MDEL shall apply to flow weighted 24-hour composite samples, or grab samples, as specified in the MRP (Attachment E). If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that parameter for that one day only within the reporting period. For any one day during which no sample is taken, no compliance determination can be made for that day.

D. Compliance with Instantaneous Minimum Effluent Limitation

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

E. Compliance with Instantaneous Maximum Effluent Limitation

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

F. Compliance with Six-Month Median Effluent Limitation

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

G. Mass and Concentration Limitations

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

H. Percent Removal

Compliance with percent removal requirements for average monthly percent removal of BOD_5 and TSS shall be determined separately for each wastewater treatment facility discharging through an outfall. For each wastewater treatment facility, the monthly average percent removal is the average of the calculated daily discharge percent removals only for days on which the constituent concentration is monitored in both the influent and effluent of the wastewater treatment facility at the locations specified in the MRP (Attachment E) within a calendar month.

The percent removal for each day shall be calculated according to the following equation:

$$\text{Daily discharge percent removal} = \frac{Influent\ concentraton - Effluent concentraton}{Influent concentraton} \times 100\%$$

I. Ocean Plan Provisions for Table 3 Constituents

Sufficient sampling and analysis shall be required to determine compliance with the effluent limitation.

1. Compliance with Single-constituent Effluent Limitations

   The Discharger shall be deemed out of compliance with an effluent limitation or discharge specification if the concentration of the constituent in the monitoring sample is greater than the effluent limitation or discharge specification and greater than or equal to the ML.

2. Compliance with Effluent Limitations Expressed as a Sum of Several Constituents

   The Discharger is out of compliance with an effluent limitation that applies to the sum of a group of chemicals (e.g., PCBs) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as ND or DNQ.

3. Multiple Sample Data Reduction

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

4. Mass Emission Rate (MER)

   The MER, in lbs/day, shall be obtained from the following calculation for any calendar day:

   MER (lbs/day) = 8.34 x Q x C

In which Q and C are the flow rate in MGD and the constituent concentration in mg/L, respectively, and 8.34 is a conversion factor (lbs/gallon of water). If a composite sample is taken, then C is the concentration measured in the composite sample and Q is the average flow rate occurring during the period over which the samples are composited.

J. Bacterial Standards and Analysis

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

   Geometric Mean = (C1 x C2 x … x Cn)1/n

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

2. The STV used for determining compliance with bacterial standards shall not be exceeded by more than 10 percent of the samples collected in a calendar month, collected in a static manner.

3. Sample dilutions for fecal coliform bacterial analyses should be performed so the range of values extends from 2 to 16,000 CFU. Sample dilutions for enterococci bacterial analyses shall range from 1 to 10,000 CFU per 100 mL. The detection methods used for each analysis shall be reported with the results of the analysis. Detection methods used for fecal coliform shall be those listed in 40 CFR part 136 or an Alternative Test Procedure approved by USEPA. Detection methods used for enterococci shall be those presented in USEPA publication USEPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure*, listed under 40 CFR part 136, and any other method approved by the San Diego Water Board.

K. Single Operational Upset (SOU)

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

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

2. A Discharger may assert SOU to limit liability only for those violations which the Discharger submitted notice of the upset as required in section I.H of Attachment D.

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

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

L. Chronic Toxicity

The discharge is subject to determination of "Pass" or "Fail" from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA

833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is:

Mean discharge "in-stream" waste concentration (IWC) response ≤0.75 × Mean control response.

A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". This is a t-test (formally Student's t-test), a statistical analysis comparing two sets of replicate observations—in the case of WET test, only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is "Pass" or "Fail")). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances.

The MDEL for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST statistical approach, results in "Fail".

The MDEL for chronic toxicity is set at the IWC for the discharge (1.15% effluent[1]) and expressed in units of the TST statistical approach ("Pass" or "Fail"). All monitoring for the MDEL for chronic toxicity shall be reported using the IWC effluent concentration and negative control, expressed in units of the TST. The TST hypothesis (see above) is statistically analyzed using the IWC and a negative control. Effluent toxicity tests shall be run using *Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine Estuarine Organisms* (EPA/600/R-95/136, 1995). The San Diego Water Board's review of reported toxicity test results will include review of concentration-response patterns as appropriate (see section IV.C.5 of the Fact Sheet (Attachment F)). As described in the laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Board dated August 07, 2014, and from USEPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the no-observed-effect-concentration (NOEC) and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. SOPs used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach, including those that incorporate a consideration of concentration-response patterns, must be submitted to the San Diego Water Board (40 CFR section 122.41(h)). The San Diego Water Board will make a final determination as to whether a toxicity test result is compliant, and may consult with the Discharger, USEPA, the State Water Board's Quality Assurance (QA) Officer, or the State Water Board, Division of Drinking Water Environmental Laboratory Accreditation Program (ELAP), as needed.

[1] IWC = 1/minimum initial dilution factor (Dm) = 1/87 = 0.0115 = 1.15%

ATTACHMENT A – ABREVIATIONS AND DEFINITIONS

Part 1. – Abbreviations

Abbreviation	Definition
40 CFR	Title 40 of the Code of Federal Regulations
AMEL[1]	Average Monthly Effluent Limitation
AQUA	Aquaculture
ARV	Air Release Valve
ASBS[1]	Areas of Special Biological Significance
AUV	Autonomous Underwater Vehicle
AWEL[1]	Average Weekly Effluent Limitation
AWT	Advanced Water Treatment Plant at Haybarn Canyon
Basin Plan	*Water Quality Control Plan for the San Diego Basin*
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BIOL	Preservation of Biological Habitats of Special Significance
BMPs	Best Management Practices
BOD_5	Biochemical Oxygen Demand (5-Day @ 20°C)
BPJ	Best Professional Judgement
BPT	Best Practicable Treatment Control Technology
BRI	Benthic Response Index
°C	Degrees Celsius
Cal OES	California Office of Emergency Services
$CBOD_5$	Carbonaceous Biochemical Oxygen Demand (5-Day @ 20°C)
CCAP	Climate Change Action Plan
CCR	California Code of Regulations
CCT	Corrosion Control
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CFU	Colony Forming Units
City	City of Oceanside
CIWQS	California Integrated Water Quality System
CO_2	Carbon Dioxide
COMM	Commercial and Sport Fishing
CSM	Conceptual Site Model
CTD	Conductivity-Temperature-Depth
CWA	Clean Water Act
DDT[1]	Dichlorodiphenyltrichloroethane
Discharger	Marine Corps Base, Camp Pendleton
DMR[1]	Discharge Monitoring Report
DNQ[1]	Detected, But Not Quantified
DS	Data Submitter
EC25	Effects Concentration at 25 Percent
ELAP	Environmental Laboratory Accreditation Program
ELGs	Effluent Limitations, Guidelines, and Standards
eSMR	Electronic Self-Monitoring Reports
°F	Degrees Fahrenheit

Abbreviation	Definition
Facilities	The Southern Regional Tertiary Treatment Plant (SRTTP); the Advanced Water Treatment Plant at Haybarn Canyon (AWT); and the associated sanitary sewer system, pump stations, and land outfalls.
FCD	Flood Control District
GPS	Global Positioning System
HCH[1]	Hexachlorocyclohexane
Ho	Hypothesis
HSA	Hydrologic Subarea
HU	Hydrologic Unit
IND	Industrial Service Supply
IM Plant 24	South Water System Iron/Manganese Water Treatment Plant 240162
IU	Industrial User
IWC[1]	"In-Stream" Waste Concentration
lbs/day	Pounds per Day
LC	Lethal Concentration
LC 50	Percent Waste Giving 50 Percent Survival of Test Organisms
LGAC	Liquid Granulated Activated Carbon
LRO	Legally Responsible Official
MAR	Marine Habitat
MCBCP	Marine Corps Base, Camp Pendleton
MDEL[1]	Maximum Daily Effluent Limitation
MDL[1]	Method Detection Limit
MEC	Maximum Effluent Concentration
MER	Mass Emission Rate
MF	Microfiltration
mg/kg	Milligram per Kilogram
mg/L	Milligram per Liter
MGD	Million Gallons per Day
MIGR	Migration of Aquatic Organisms
ML[1]	Minimum Level
ml	Milliliter
ml/L	Milliliter per Liter
MRP	Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer System
NA	Not Applicable
NAV	Navigation
ND[1]	Not Detected
ng/kg	Nanogram per Kilogram
NOAA's	National Oceanic and Atmospheric Administration's
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NTU	Nephelometric Turbidity Unit
Ocean Plan	*Water Quality Control Plan for Ocean Waters of California, California Ocean Plan*
OOO	Oceanside Ocean Outfall

Abbreviation	Definition
OOOPS	Oceanside Ocean Outfall Pump Station
PAHs[1]	Polynuclear Aromatic Hydrocarbons
PCBs[1]	Polychlorinated Biphenyls
pCi/L	Picocuries per Liter
PMP[1]	Pollutant Minimization Program
PMSD	Percent Minimum Significant Difference
POTWs	Publicly-Owned Treatment Works
PPP	Pollution Prevention Plan
ppt	Parts per Thousand
psu	Practical Salinity Unit
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RARE	Rare, Threatened, or Endangered Species
REC-1	Contact Water Recreation
REC-2	Non-Contact Water Recreation
RCRA	Resource Conservation and Recovery Act
RL	Reporting Level
RO	Reverse Osmosis
ROTV	Remotely Operated Towed Vehicle
ROWD	Report of Waste Discharge
RPA	Reasonable Potential Analysis
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SBR	Sequencing Batch Reactors
SCADA	Supervisory Control and Data Acquisition
SCCWRP	Southern California Coastal Water Research Project
SHELL	Shellfish Harvesting
SMR	Self-Monitoring Report
SOPs	Standard Operating Procedures
SOU	Single Operational Upset
SPP	Spill Prevention Plan
SPWN	Spawning, Reproduction, and/or Early Development
SRP	Spill Response Plan
SRTTP	Southern Regional Tertiary Treatment Plant
SSMPs	Sanitary Sewer Management Plans
SSO[1]	Sanitary Sewer Overflow
State Water Board	State Water Resources Control Board
STV	Statistical Threshold Value
TAC	Test Acceptability Criteria
TBELs	Technology-Based Effluent Limitations
TCDD[1]	Tetrachlorodibenzodioxin
TIE[1]	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TRE[1]	Toxicity Reduction Evaluation
TSD	Technical Support Document
TSS	Total Suspended Solids
TST	Test of Significant Toxicity

Abbreviation	Definition
TUa[1]	Toxic Units Acute
TUc[1]	Toxic Units Chronic
UF	Ultrafiltration
µg	Microgram
µg/kg	Microgram per Kilogram
µg/L	Microgram per Liter
UM3	USEPA Modeling Application Visual Plumes
µmhos/cm	Micromhos per Centimeter
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
U.S.	United States
Water Code	California Water Code
WDRs	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WILD	Wildlife Habitat
WQBELs	Water Quality-Based Effluent Limitations
ZID	Zone of Initial Dilution

[1] See Part 2 of Attachment A (Glossary of Common Terms) for further definition.

Part 2. – Definitions

30-day average
The arithmetic mean of pollutant parameter values of samples collected in a period of 30 consecutive days.

6-Month Median Effluent Limitation
The highest allowable moving median of all daily discharges for any 180-day period.

Acute Toxicity
a. Acute Toxicity (TUa)

Expressed in Toxic Units Acute (TUa)

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

b. Lethal Concentration 50% (LC 50)

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

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

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

where:

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

Anaerobically Digestible Material
Inedible kitchen grease as defined in section 19216 of the Food and Agricultural Code and food material as defined in title 14, division 7, chapter 3.1, article 1, section 17582(a) (20) of the CCR.

Antidegradation
Policies which ensure protection of water quality for a particular body where the water quality exceeds levels necessary to protect fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as outstanding natural resource waters.

Areas of Special Biological Significance (ASBS)
Those areas designated by the State Water Resources Control Board (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.

Beneficial Uses
The uses of water necessary for the survival or wellbeing of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals. "Beneficial Uses" of the waters of the State that may be protected against include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. In the Basin Plan, existing beneficial uses are uses that were attained in the surface or ground water on or after November 28, 1975; and potential beneficial uses are uses that would probably develop in future years through the implementation of various control measures. “Beneficial Uses” are equivalent to "Designated Uses" under federal law. [Water Code section 13050(f)].

Bioaccumulation
The accumulation of contaminants in the tissues of organisms through any route, including respiration, ingestion, or direct contact with contaminated water, sediment, food, or dredged material.

Biosolids
Nutrient-rich organic materials resulting from the treatment of sewage sludge. When treated and processed, sewage sludge becomes biosolids which can be safely recycled and applied as fertilizer to sustainably improve and maintain productive soils and stimulate plant growth.

Brine
Brine is the byproduct of desalinated water having a salinity concentration greater than a desalination facility’s intake source water.

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

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

Chlorinated Phenolics
The sum of 4-chloro-3-methylphenol, 2-chlorophenol, pentachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol.

Chronic Toxicity
Chronic toxicity is the measure of the sub-lethal effects of a discharge or ambient water sample (e.g. reduced growth or reproduction.). Certain chronic toxicity tests include an additional measurement of lethality.

Composite Sample
A composite sample is defined as a combination of at least eight sample aliquots of at least 100 ml, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. Unless otherwise authorized by the San Diego Water Board, the composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. The 100 ml minimum volume of an aliquot does not apply to automatic self-purging samplers. If one 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.

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.

A grab sample is an individual sample of at least 100 ml collected at a randomly selected time over a period not exceeding 15 minutes.

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.

Desalination Facility
Desalination Facility is an industrial facility that processes water to remove salts and other components from the source water to produce water that is less saline than the source water.

Detected, But Not Quantified (DNQ)
Sample results that are less than the reported Minimum Level, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

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

Dichlorodiphenyltrichloroethane (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.

Discharge of a Pollutant
Discharge of a pollutant means: (a) Any addition of any "pollutant'' or combination of pollutants to ''waters of the United States'' from any ''point source,'' or (b) Any addition of any pollutant or combination of pollutants to the waters of the ''contiguous zone'' or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation. This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channelled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately-owned treatment works. This term does not include an addition of pollutants by any ''indirect discharger.'' "Discharge" when used without qualification means the "discharge of a pollutant." (40 CFR section 122.2)

Discharge Monitoring Reports (DMRs)
The DMRs means the U.S. Environmental Protection Agency (USEPA) uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by ''approved States'' as well as by USEPA. USEPA will supply DMRs

to any approved State upon request. The USEPA national forms may be modified to substitute the State agency name, address, logo, and other similar information, as appropriate, in place of USEPA's.

Downstream Ocean Waters
Waters downstream with respect to ocean currents.

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

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

Endosulfan
The sum of endosulfan-alpha and -beta and endosulfan sulfate.

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

Facilities
The Southern Regional Tertiary Treatment Plant (SRTTP); the Advanced Water Treatment Plant at Haybarn Canyon (AWT); and the associated sanitary sewer system, pump stations, and land outfalls.

Halomethanes
The sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

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

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

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

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

Instantaneous Maximum Effluent Limitation
The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum 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).

Interference
A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

(1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

(2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): section 405 of the CWA, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

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

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

Material
(a) In common usage: (1) the substance or substances of which a thing is made or composed (2) substantial; (b) For purposes of the Ocean Plan relating to waste disposal, dredging and the disposal of dredged material and fill, MATERIAL means matter of any kind or description which is subject to regulation as waste, or any material dredged from the navigable waters of the United States. See also, DREDGED MATERIAL.

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant.

Method Detection Limit (MDL)
The minimum concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 CFR part 136, Attachment B.

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

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

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

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

Pass Through
A discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Percent Removal
A percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the average values of the raw wastewater influent pollutant concentrations to the facility and the average values of the effluent pollutant concentrations for a given time period.

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

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

Phenolic Compounds (non-chlorinated)
The sum of 2,4-dimethylphenol, 4,6-Dinitro-2-methylphenol, 2,4-dinitrophenol, 2-methylphenol, 4-methylphenol, 2-nitropheneol, 4-nitrophenol, and phenol.

Pollutant
Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste

discharged into water. It does not mean: (a) Sewage from vessels; or (b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Pollutant Minimization Program (PMP)
A program 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.

Recycled Water
Recycled water means water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.

Reported Minimum Level
The reported ML (also known as the Reporting Level or RL) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the San Diego 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.

Sanitary Sewer Overflow (SSO)
An SSO is any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include: (i) Overflows or releases of untreated or partially treated wastewater that reach waters of the United States; (ii) Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and (iii) Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly-owned portion of a sanitary sewer system.

SSO Spill Category

SSO spill categories are defined as follows:

(1) Category 1: Discharges of untreated or partially treated wastewater of any volume resulting from an enrollee's sanitary sewer system failure or flow condition that:

- Reach surface water and/or reach a drainage channel tributary to a surface water; or
- Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).

(2) Category 2: Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from an enrollee's sanitary sewer system failure or flow condition that do not reach surface

water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.

(3) Category 3: All other discharges of untreated or partially treated wastewater resulting from an enrollee's sanitary sewer system failure or flow condition.

(4) Private Lateral Sewage Discharge (PLSD): Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately-owned sewer lateral connected to the enrollee's sanitary sewer system or from other private sewer assets. PLSDs that the enrollee becomes aware of may be voluntarily reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

Sanitary Sewer System
Any system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the publicly-owned treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered to be SSOs.

Severe Property Damage
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 section 122.41(m)(1)(ii))

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

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

Six-Month Median Effluent Limitation
See 6-Month Median above for definition of this term.

Sludge
Any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect.

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

Statistical Threshold Value (STV)
A set value that approximates the 90th percentile of the water quality distribution for a bacterial population.

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

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

Thirty-Day Average
See 30-day average above for definition of this term.

Toxicity Identification Evaluation (TIE)
A set of procedures conducted 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.

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

Trash
Trash means all improperly discarded solid material from any production, manufacturing, or processing operation including, but not limited to, products, product packaging, or containers constructed of plastic, steel, aluminum, glass, paper, or other synthetic or natural materials.

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.

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

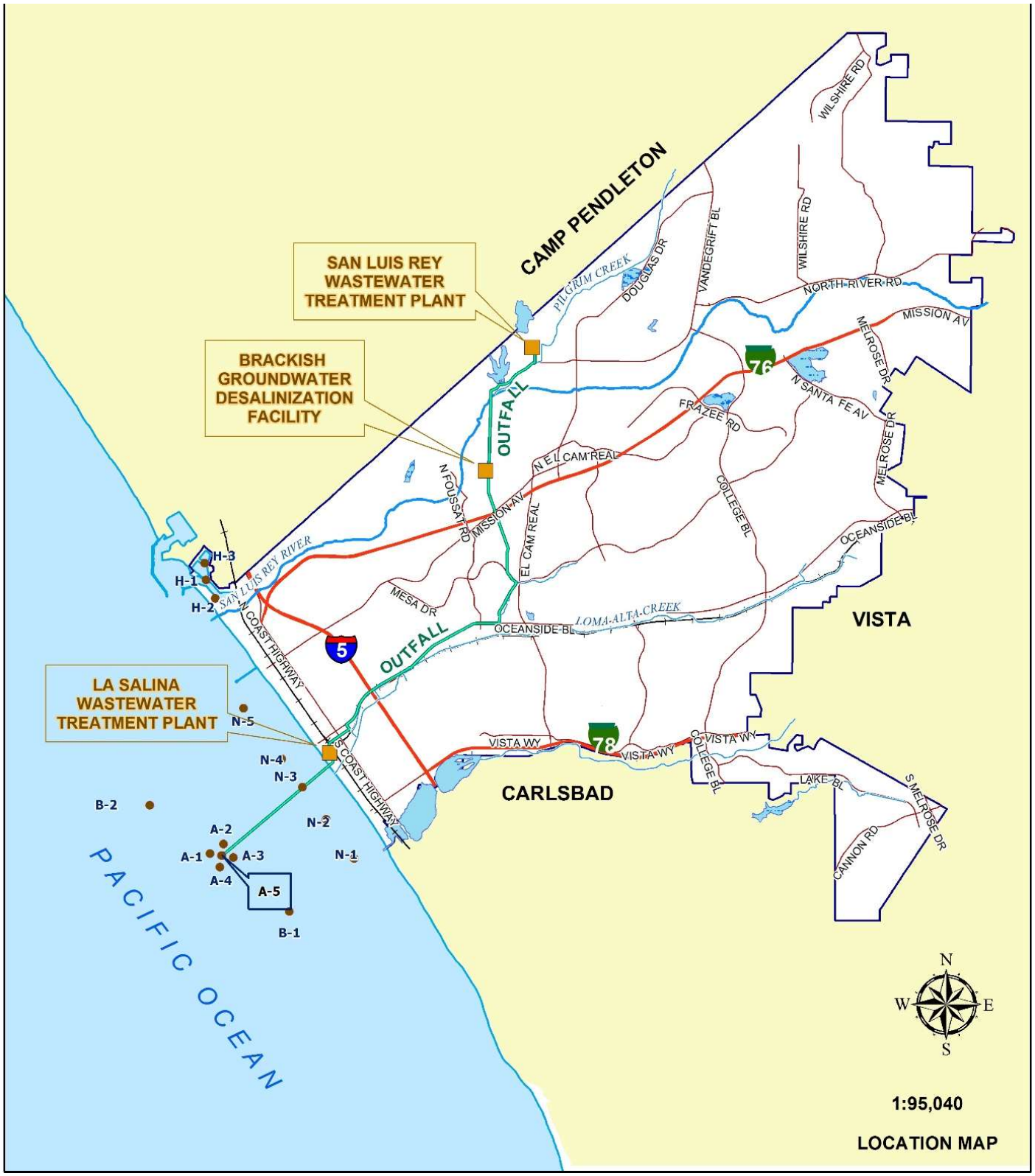
Water Quality Control Plans
There are two types of water quality control plans - Basin Plans and Statewide Plans. Regional Boards adopt Basin Plans for each region based upon surface water hydrologic basin boundaries. The Regional Basin Plans designates or describes (1) existing and potential beneficial uses of ground and surface water; (2) water quality objectives to protect the beneficial uses; (3) implementation programs to achieve these objectives; and (4) surveillance and monitoring activities to evaluate the effectiveness of the water quality control plan. The Statewide Plans address water quality concerns for surface waters that overlap Regional Board boundaries, are statewide in scope, or are otherwise considered significant and contain the same four elements. Statewide Water Quality Control Plans include the Ocean Plan, the Enclosed Bays and Estuaries Plan, the Inland Surface Waters Plan, and the Thermal Plan. A water quality control plan consists of a designation or establishment for the waters within a specified area of (1) beneficial uses to be protected, (2) water quality objectives, and (3) a program of implementation needed for achieving water quality objectives [Water Code section 13050(j)].

Water Quality Objectives
Numerical or narrative limits on constituents or characteristics of water designed to protect designated beneficial uses of the water. [Water Code section 13050(h)]. California's water quality objectives are established by the State and Regional Water Boards in the Water Quality Control Plans.

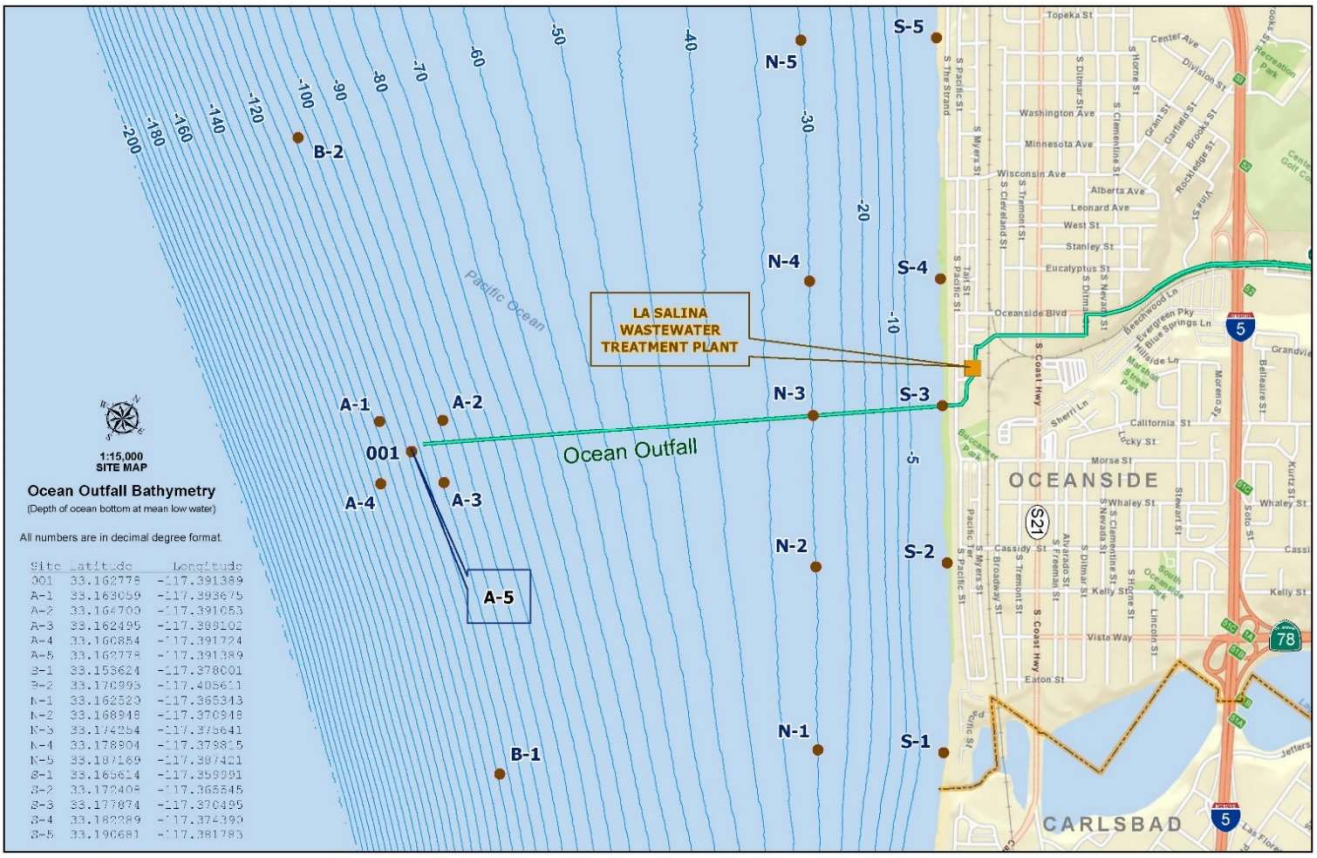
Water Quality Standards
Provisions of State or federal law which consist of a designated use or uses for waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act [40 CFR section 131.3(i)]. Under State law, the Water Boards establish beneficial uses and water quality objectives in their water quality control plans or basin plans. Together with an antidegradation policy, these beneficial uses and water quality objectives serve as water quality standards under the Clean Water Act. In Clean Water Act parlance, state beneficial uses are called "designated uses" and state water quality objectives are called "criteria." Throughout this Order, the relevant term is used depending on the statutory scheme.

ATTACHMENT B – MAPS

Facility and Discharge Point Locations

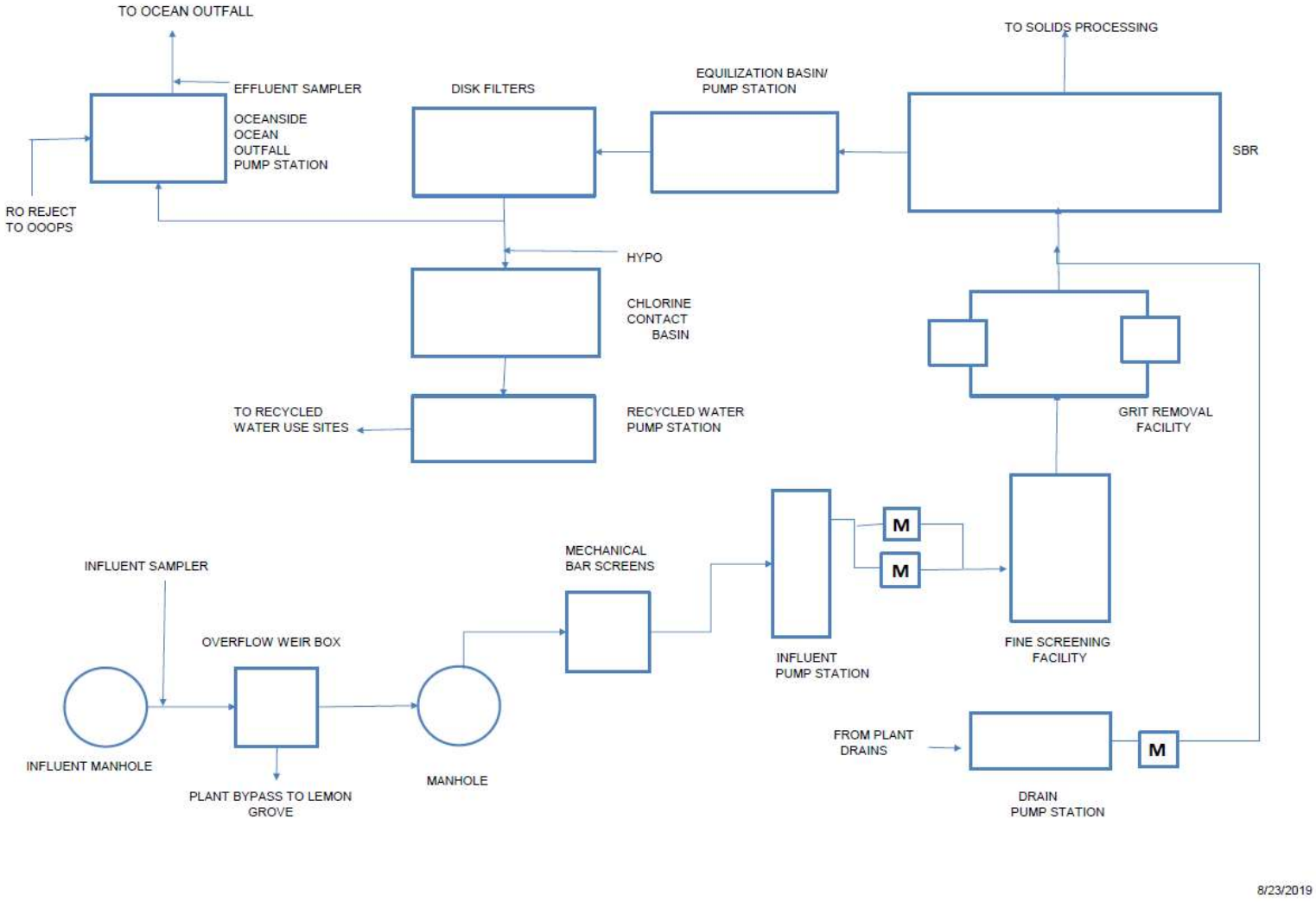


Oceanside Ocean Outfall Location

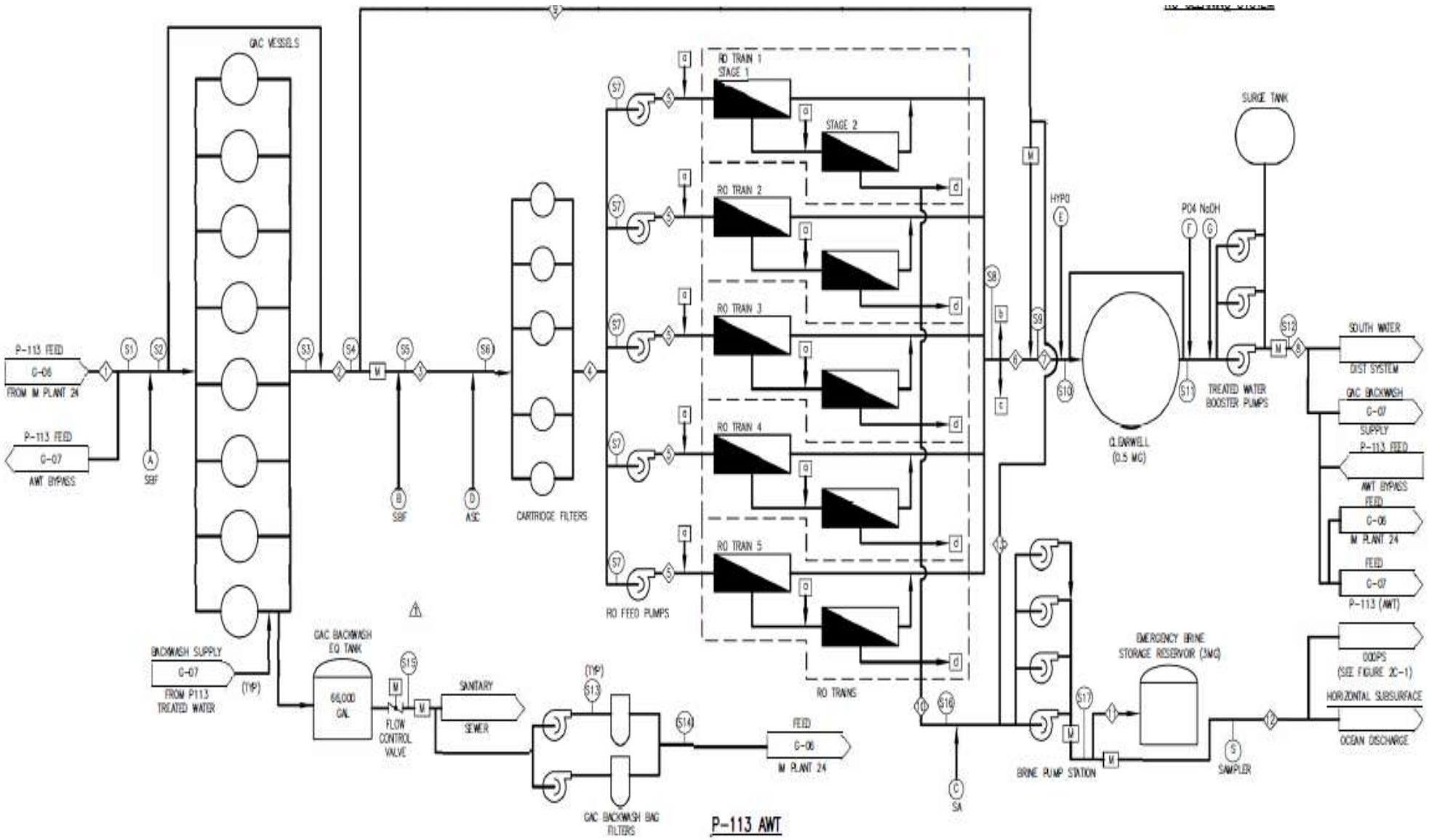


Oceanside Ocean Outfall Ocean Monitoring Locations

ATTACHMENT C – FLOW SCHEMATICS



Process Schematic
Southern Regional Tertiary Treatment Plant



Process Schematic
Advanced Water Treatment Plant at Haybarn Canyon

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (Water Code) and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (title 40 of the Code of Federal Regulations (40 CFR) sections 122.41(a); Water Code, sections 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants 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 section 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR section 122.41(d).)

D. Proper Operation and Maintenance

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

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR section 122.41(g).)
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations. (40 CFR section 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), State Water Resources Control Board (State Water Board), U.S. 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 (33 U.S.C. section 1318(a)(4)(b); 40 CFR section 122.41(i); Water Code, sections 13267, 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. section 1318(a)(4)(b)(i); 40 CFR section 122.41(i)(1); Water Code, sections 13267, 13383);
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. section 1318(a)(4)(b)(ii); 40 CFR section 122.41(i)(2); Water Code, sections 13267, 13383);
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. section 1318(a)(4)(b)(ii); 40 CFR section 122.41(i)(3); Water Code, sections 13267, 13383); and
4. 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. (33 U.S.C. section 1318(a)(4)(b); 40 CFR section 122.41(i)(4); Water Code, sections 13267, 13383.)

G. Bypass

1. Definitions
   a. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR section 122.41(m)(1)(i).)
   b. “Severe property damage” means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR section 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR section 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the San Diego Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR section 122.41(m)(4)(i)):
   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR section 122.41(m)(4)(i)(A));
   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR section 122.41(m)(4)(i)(B)); and

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

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

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass. The notice shall be sent to the San Diego Water Board. (40 CFR section 122.41(m)(3)(i).)

b. Unanticipated bypass. The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the San Diego Water Board. (40 CFR section 122.41(m)(3)(ii).)

H. Upset

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

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

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR section 122.41(n)(3)):

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

This Order is not transferable to any person except after notice to the San Diego Water Board. The San Diego Water Board may require modification or revocation and reissuance of this 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 sections 122.41(l)(3), 122.61.)

III. STANDARD PROVISIONS – MONITORING

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

B. Monitoring must be conducted according to test procedures approved under 40 CFR part 136 for the analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 CFR part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

1. The method Minimum Level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
2. The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter 1, subchapter N for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR part 136 or otherwise required under 40 CFR chapter 1, subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 CFR sections 122.21(e)(3),122.41(j)(4), 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. 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 San Diego Water Board Executive Officer at any time. (40 CFR section 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR section 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 CFR section 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 CFR section 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 CFR section 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 CFR section 122.41(j)(3)(v)); and
6. The results of such analyses. (40 CFR section 122.41(j)(3)(vi).)

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the San Diego Water Board, State Water Board, or USEPA within a reasonable time, any information which the San Diego 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 San Diego Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR section 122.41(h); Water Code, sections 13267, 13383.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the San Diego Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, V.B.5, and V.B.6 below. (40 CFR section 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR section 122.22(a)(3).).
3. All reports required by this Order and other information requested by the San Diego Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR section 122.22(b)(1));

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

c. The written authorization is submitted to the San Diego Water Board and State Water Board. (40 CFR section 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the San Diego 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 section 122.22(c).)

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

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 CFR section 122.22(d).)

6. Any person providing the electronic signature for documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all relevant requirements of 40 CFR part 3 (Cross-Media Electronic Reporting) and 40 CFR part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R section 122.22(e).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR section 122.41(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the San Diego Water Board or State Water Board. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J and comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR section 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR part 136, or another method required for an industry-specific waste stream under 40 CFR chapter 1, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the San Diego Water Board or State Water Board. (40 CFR section 122.41(l)(4)(ii).)

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance which 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 report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report 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.

   For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (i.e., combined sewer overflow, sanitary sewer overflow, or bypass event), type of overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volume untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the event, and whether the noncompliance was related to wet weather.

   As of December 21, 2020, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events: must be submitted to the San Diego Water Board and> must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J. The reports shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. The San Diego Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR section 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours:

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

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

3. The San Diego Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR section 122.41(l)(6)(ii)(B).)

F. Planned Changes

The Discharger shall give notice to the San Diego 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 section 122.41(l)(1)):

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

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR section 122.41(l)(1)(ii).)

   The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 CFR section 122.41(l)(1)(ii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the San Diego Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 CFR section 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 CFR part 127. The San Diego Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR section 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the San Diego Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR section 122.41(l)(8).)

J. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 CFR part 127 to the initial recipient defined in 40 CFR section 127.2(b). USEPA will identify and publish the list of initial recipients on its website and in the Federal Register, by State and by NPDES data group [see 40 CFR section 127.2(c)]. USEPA will update and maintain this listing.
(40 CFR section 122.41(l)(9).)

VI. STANDARD PROVISIONS – ENFORCEMENT

The San Diego Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

Publicly-Owned Treatment Works (POTWs) - All POTWs shall provide adequate notice to the San Diego Water Board of the following (40 CFR section 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 section 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 this Order. (40 CFR section 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 section 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

CONTENTS

TABLES

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Section 308 of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 CFR) require that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. California Water Code (Water Code) sections 13267 and 13383 also authorize the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. Pursuant to this authority, this MRP establishes conditions for the Marine Corps Base, Camp Pendleton (Discharger) to conduct routine or episodic self-monitoring of the discharges regulated under this Order at specified effluent and receiving water monitoring locations. The MRP requires the Discharger to report the results to the San Diego Water Board with information necessary to evaluate discharge characteristics and compliance status.

The purpose of the MRP is to determine and ensure compliance with effluent limitations and other requirements established in this Order, assess treatment efficiency, characterize effluents, and characterize the receiving water and the effects of the discharge on the receiving water. The MRP also specifies requirements concerning the proper use, maintenance, and installation of monitoring equipment and methods, and the monitoring type intervals and frequency necessary to yield data that are representative of the activities and discharges regulated under this Order.

Each monitoring section contains an introductory paragraph summarizing why the monitoring is needed and the key management questions the monitoring is designed to answer. In developing the list of key management questions, the San Diego Water Board considered four basic types of information for each question:

(1) Management Information Need – Why does the San Diego Water Board need to know the answer?

(2) Monitoring Criteria – What monitoring will be conducted for deriving an answer to the question?

(3) Expected Product – How should the answer be expressed and reported?

(4) Possible Management Actions – What actions will be potentially influenced by the answer?

The framework for this monitoring program has three components that comprise a range of spatial and temporal scales: 1. core monitoring, 2. regional monitoring, and 3. special studies.

1. Core monitoring consists of the basic site-specific monitoring necessary to measure compliance with individual effluent limits and/or impacts to receiving water quality. Core monitoring is typically conducted in the immediate vicinity of the discharge by examining local scale spatial effects.

2. Regional monitoring provides information necessary to make assessments over large areas and serves to evaluate cumulative effects of all anthropogenic inputs. Regional monitoring data also assists in the interpretation of core monitoring studies. In the event that a regional monitoring effort takes place during the permit cycle in which the MRP does not specifically address regional monitoring, the San Diego Water Board may allow relief from aspects of core monitoring components in order to encourage participation pursuant to section V of this MRP.

3. Special studies are directed monitoring efforts designed in response to specific management or research questions identified through either core or regional monitoring programs. Often, they are used to help understand core or regional monitoring results, where a specific environmental process is not well understood, or to address unique issues of local importance.

I. GENERAL MONITORING PROVISIONS

A. 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 points specified in section II, Table E-1 and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the San Diego Water Board.

B. 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. 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 flow measurement devices shall be installed, calibrated at least once per year (i.e., no more than 12 months between calibrations) or more frequently, and maintained to ensure that the accuracy of the measurement is consistent with the accepted capability of that type of device. The flow measurement devices selected shall be capable of measuring flows with a maximum deviation of less than ±5 percent from true discharge rates throughout the range of expected discharge volumes.

C. Monitoring must be conducted according to U.S. Environmental Protection Agency (USEPA) test procedures approved at 40 CFR part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the CWA* as amended, or unless other test procedures are specified in this Order and attachments thereof or an alternative test procedure (ATP) approved by USEPA, or by the San Diego Water Board when there are no methods specified for a pollutant at 40 CFR part 136.

D. Data produced and reports submitted pursuant to this Order shall be generated by a laboratory accredited by the State of California Environmental Laboratory Accreditation Program (ELAP). The laboratory must hold a valid certificate of accreditation for the analytical test method specified in 40 CFR 136, an ATP approved by USEPA, or by the San Diego Water Board when there are no methods specified for a pollutant at 40 CFR part 136. The laboratory must include quality assurance/quality control data in all data reports required by this Order and submit electronic data as required by the San Diego Water Board. Data generated using field tests is exempt pursuant to California Water Code Section 13176. Additional information on ELAP can be accessed at: http://www.waterboards.ca.gov/drinking_water/certlic/labs/index.shtml.

E. Records of monitoring information shall include information required under Standard Provision, Attachment D, section IV of this Order.

F. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Duplicate chemical analyses must be conducted on a minimum of 10 percent of the samples or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples. The Discharger should have a success rate equal or greater than 80 percent.

G. When requested by USEPA or the San Diego Water Board, the Discharger will participate in the NPDES Discharge Monitoring Report QA (DMR-QA) performance study. If the DMR-QA is not requested, the Discharger shall submit the most recent Water Pollution Performance Evaluation Study. The Discharger shall ensure that the results of the DMR-QA Study or the most recent Water Pollution Performance Evaluation Study are submitted annually by December 31 to the State Water Resources Control Board at the following address:

State Water Resources Control Board Quality Assurance Program Officer
Office of Information Management and Analysis
State Water Resources Control Board
1001 I Street, Sacramento, CA 95814

H. Analysis for toxic pollutants, including chronic toxicity, with effluent limitations or performance goals based on water quality objectives and criteria of the *Water Quality Control Plan for the San Diego Basin* (Basin Plan) and the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) shall be conducted in accordance with procedures described in the Ocean Plan and restated in this MRP.

I. The Discharger shall ensure that analytical procedures used to evaluate compliance with effluent limitations or performance goals established in this Order use minimum levels (ML) no greater than the applicable effluent limitations or performance goals and are consistent with the requirements of 40 CFR part 136, or otherwise approved by USEPA and authorized by the San Diego Water Board. If no authorized ML value is below the effluent limitation, then the method must achieve an ML no greater than the lowest ML value provided in 40 CFR part 136.

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[1]

Discharge Point Name	Monitoring Location Name	Monitoring Location Description[2]
--	INF-001	At a location where all influent flows to the Southern Regional Tertiary Treatment Plant (SRTTP) are accounted for in monitoring events; upstream of any in-plant return flows; and where representative samples of influent can be collected.
001	EFF-001	At a location where representative samples of commingled effluent from the SRTTP and the Advanced Water Treatment Plant at Haybarn Canyon (AWT) can be collected, prior to commingling with other discharges contributing to the Oceanside Ocean Outfall (OOO).
--	EFF-002	Downstream of any in-plant return flows at the SRTTP where representative samples of effluent treated solely at the SRTTP can be collected, prior to commingling with other discharges contributing to the OOO. (approximately: 33°9'46" N 117°23'28" W)
--	EFF-003	At a location where a representative sample of waste brine from the AWT to the Brine Storage Reservoir or the 16-inch diameter land outfall can be obtained, prior to commingling with other discharges contributing to the OOO.
SURF ZONE STATIONS		
--	S1	Surf zone, 5,500 feet south of the outfall (approximately: 33°09'56"N 117°21'36"W).
--	S2	Surf zone, 2,500 feet south of the outfall (approximately: 33°10'21"N 117°21'56"W).
--	S3	Surf zone; at the outfall (approximately: 33°10'40"N 117°22'14"W).
--	S4	Surf zone, 2,000 feet north of the outfall (approximately: 33°10'56"N 117°22'28"W).
--	S5	Surf zone, 5,800 feet north of the outfall (approximately: 33°11'27"N 117°22'54"W).
--	S6	To be determined by the San Diego Water Board based on the results of the Plume Tracking Monitoring Program
--	S7	To be determined by the San Diego Water Board based on the results of the Plume Tracking Monitoring Program

Discharge Point Name	Monitoring Location Name	Monitoring Location Description[2]
NEARSHORE STATIONS		
--	N1	Opposite S1, at the 30-foot depth contour, mean lower low water (MLLW) (approximately: 33°09'45"N 117°21'55"W).
--	N2	Opposite S2, at the 30-foot depth contour, MLLW (approximately: 33°10'08"N 117°22'15"W).
--	N3	Opposite S3, at the 30-foot depth contour, MLLW (approximately: 33°10'27"N 117°22'32"W).
--	N4	Opposite S4, at the 30-foot depth contour, MLLW (approximately: 33°10'44"N 117°22'47"W).
--	N5	Opposite S5, at the 30-foot depth contour, MLLW (approximately: 33°11'14"N 117°23'15"W).
--	N6	To be determined by the San Diego Water Board based on the results of the Plume Tracking Monitoring Program
--	N7	To be determined by the San Diego Water Board based on the results of the Plume Tracking Monitoring Program
OFFSHORE STATIONS		
--	A1	Northwest corner of a 1,000 ft x 1,000 ft square having one side parallel to shore and the intersection of its diagonals at the seaward end of the outfall (approximately: 33°09'47"N 117°23'37"W).
--	A2	Northeast corner of a 1,000 ft x 1,000 ft square having one side parallel to shore and the intersection of its diagonals at the seaward end of the outfall (approximately: 33°09'53"N 117°23'28"W).
--	A3	Southeast corner of a 1,000 ft x 1,000 ft square having one side parallel to shore and the intersection of its diagonals at the seaward end of the outfall (approximately: 33°09'45"N 117°23'21"W).
--	A4	Southwest corner of a 1,000 ft x 1,000 ft square having one side parallel to shore and the intersection of its diagonals at the seaward end of the outfall (approximately: 33°09'39"N 117°23'30"W).
--	A5	At the seaward end of the outfall (approximately: 33°09'46"N 117°23'29"W).
--	B1	One mile downcoast from the outfall, and over the same depth contour as Station A5 (approximately: 33°09'13"N 117°22'41"W).
--	B2	One mile upcoast from the outfall and over the same depth contour as Station A5 (approximately: 33°10'16"N 117°24'20"W).
TRAWL STATIONS		
--	T3	Begin trawl slightly downcoast of station A5, first trawl to be away from station heading downcoast along the 100-foot depth (MLLW) contour
--	T4	Begin trawl slightly downcoast of station B1, first trawl to be away from station heading downcoast along the 100-foot depth (MLLW) contour
--	T5	Begin trawl slightly upcoast of station B2, first trawl to be away from station heading upcoast along the 100-foot depth (MLLW) contour.
RIG FISHING STATIONS		
--	RF1	8,000 feet northeast of the outfall (approximately: 33°08'52"N 117°22'22"W).
--	RF2	At the seaward end of outfall (approximately: 33°09'46"N 117°23'29"W).
--	RF3	8,000 feet southeast of the outfall (approximately: 33°10'59"N 117°24'09"W).

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] The North latitude and West longitude information in Table E-1 are approximate for administrative purposes.

III. Core Monitoring Requirements

A. Influent Monitoring Requirements

Influent monitoring is the collection and analysis of samples or measurements of wastewater prior to the treatment processes. Influent monitoring of a wastewater stream prior to entering the treatment plant is necessary to address the following question:

(1) Is the source control program effectively controlling pollutant loads from non-residential facilities?

(2) What is the frequency of unexpected non-residential pollutants (or pollutants loads) which can cause or contribute to an upset in the wastewater process?

(3) Is the influent inhibiting or disrupting the plant, its treatment processes or operations, or its sludge processes, use, or disposal?

(4) Is the SRTTP complying with permit conditions including, but not limited to, biochemical oxygen demand (5-day @ 20 °C) (BOD_5) and total suspended solids (TSS) percent removal limitations?

The Discharger shall monitor the influent at Monitoring Location INF-001 as follows:

Table E-2. Influent Monitoring at Monitoring Location INF-001[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	million gallons per day (MGD)	Recorder/Totalizer	Continuous	--
BOD_5	milligram per liter (mg/L)	24-hr Composite	1/Day[2]	[3]
TSS	mg/L	24-hr Composite	1/Day[2]	[3]
Oil and Grease	mg/L	Grab	1/Month	[3]

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] Applies 5 days per week, except 7 days per week for at least 1 week during July or August of each year.

[3] As required under 40 CFR part 136.

B. Effluent Monitoring Requirements

Effluent monitoring is the collection and analysis of samples or measurements of effluents, after all treatment processes, to determine and quantify contaminants and to demonstrate compliance with applicable effluent limitations, standards, and other requirements of this Order.

Effluent monitoring is necessary to address the following questions:

(1) Does the effluent comply with permit effluent limitations, performance goals, and other requirements of this Order, thereby ensuring that water quality standards are achieved in the receiving water?

(2) What is the mass of constituents that are discharged daily, monthly, or annually?

(3) Is the effluent concentration or mass changing over time?

(4) Are the Facilities being properly operated and maintained to ensure compliance with the conditions of this Order?

1. The Discharger shall monitor the effluent at Monitoring Location EFF-001 (Discharge Point No. 001) as follows:

Table E-3. Effluent Monitoring at Monitoring Location EFF-001 (SRTTP and AWT)[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Recorder/Totalizer	Continuous	--
Temperature	°C	Grab	1/Week	2
Dissolved Oxygen	mg/L	Grab	1/Week	2
Specific Electrical Conductivity (@ 25°C)	micromhos per centimeter (µmhos/cm)	Grab	1/Month	2
Fecal Coliform	CFU/100 mL	Grab	1/Quarter [4]	2
Enterococci	CFU/100 mL	Grab	1/Quarter[4]	2
Nitrogen, Total	mg/L	24-hr Composite	1/Quarter	2
Phosphorus, Total (as P)	mg/L	24-hr Composite	1/Quarter	2
TABLE 3 PARAMETERS FOR PROTECTION OF MARINE AQUATIC LIFE				
Arsenic, Total Recoverable	microgram per liter (µg/L)	24-hr Composite	2/Year[5,6]	2
Cadmium, Total Recoverable	µg/L	24-hr Composite	2/Year[5,6]	2
Chromium (VI), Total Recoverable[7]	µg/L	24-hr Composite	2/Year[5,6]	2
Copper, Total Recoverable	µg/L	24-hr Composite	2/Year[5,6]	2
Lead, Total Recoverable	µg/L	24-hr Composite	2/Year[5,6]	2
Mercury, Total Recoverable	µg/L	24-hr Composite	2/Year[5,6]	2
Nickel, Total Recoverable	µg/L	24-hr Composite	2/Year[5,6]	2
Selenium, Total Recoverable	µg/L	24-hr Composite	2/Year[5,6]	2
Silver, Total Recoverable	µg/L	24-hr Composite	2/Year[5,6]	2
Zinc, Total Recoverable	µg/L	24-hr Composite	2/Year[5,6]	2
Cyanide, Total	µg/L	24-hr Composite	2/Year[5,6]	2,8
Total Chlorine Residual	µg/L	Continuous	Continuous[5,9]	2
Ammonia Nitrogen, Total (as N)	mg/L	24-hr Composite	1/Month[5,6]	2
Chronic Toxicity	"Pass"/"Fail" (Test of Significant Toxicity)[10]	24-hr Composite	1/Quarter	11
Phenolic Compounds (nonchlorinated)[1]	µg/L	24-hr Composite	2/Year[5,6]	2
Phenolic Compounds (chlorinated)[1]	µg/L	24-hr Composite	2/Year[5,6]	2
Endosulfan[1]	µg/L	24-hr Composite	2/Year[5,6]	2
Endrin	µg/L	24-hr Composite	2/Year[5,6]	2
HCH[1]	µg/L	24-hr Composite	2/Year[5,6]	2
Radioactivity (alpha and beta particles)	picocuries per liter (pCi/L)	24-hr Composite	2/Year[5,6]	2
TABLE 3 PARAMETERS FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS				
Acrolein	µg/L	Grab	2/Year[5,6]	2
Antimony, Total Recoverable	µg/L	24-hr Composite	2/Year[5,6]	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Bis (2-chloroethoxy) Methane	µg/L	24-hr Composite	2/Year[5,6]	[2]
Bis (2-chloroisopropyl) Ether	µg/L	24-hr Composite	2/Year[5,6]	[2]
Chlorobenzene	µg/L	Grab	2/Year[5,6]	[2]
Chromium (III), Total Recoverable[7]	µg/L	24-hr Composite	2/Year[5,6]	[2]
Di-n-butyl Phthalate	µg/L	24-hr Composite	2/Year[5,6]	[2]
Dichlorobenzenes[1]	µg/L	Grab	2/Year[5,6]	[2]
Diethyl Phthalate	µg/L	24-hr Composite	2/Year[5,6]	[2]
Dimethyl Phthalate	µg/L	24-hr Composite	2/Year[5,6]	[2]
4,6-dinitro-2-methylphenol	µg/L	24-hr Composite	2/Year[5,6]	[2]
2,4-dinitrophenol	µg/L	24-hr Composite	2/Year[5,6]	[2]
Ethylbenzene	µg/L	Grab	2/Year[5,6]	[2]
Fluoranthene	µg/L	24-hr Composite	2/Year[5,6]	[2]
Hexachlorocyclopentadiene	µg/L	24-hr Composite	2/Year[5,6]	[2]
Nitrobenzene	µg/L	24-hr Composite	2/Year[5,6]	[2]
Thallium, Total Recoverable	µg/L	24-hr Composite	2/Year[5,6]	[2]
Toluene	µg/L	Grab	2/Year[5,6]	[2]
Tributyltin	µg/L	24-hr Composite	2/Year[5,6]	[2]
1,1,1-trichloroethane	µg/L	Grab	2/Year[5,6]	[2]
TABLE 3 PARAMETERS FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS				
Acrylonitrile	µg/L	Grab	2/Year[5,6]	[2]
Aldrin	µg/L	24-hr Composite	1/Quarter[5,6]	[2]
Benzene	µg/L	Grab	2/Year[5,6]	[2]
Benzidine	µg/L	24-hr Composite	2/Year[5,6]	[2]
Beryllium, Total Recoverable	µg/L	24-hr Composite	1/Quarter [5,6]	[2]
Bis (2-chloroethyl) Ether	µg/L	24-hr Composite	2/Year[5,6]	[2]
Bis (2-ethlyhexyl) Phthalate	µg/L	24-hr Composite	2/Year[5,6]	[2]
Carbon Tetrachloride	µg/L	Grab	2/Year[5,6]	[2]
Chlordane[1]	µg/L	24-hr Composite	2/Year[5,6]	[2]
Chlorodibromomethane	µg/L	Grab	2/Year[5,6]	[2]
Chloroform	µg/L	Grab	2/Year[5,6]	[2]
Dichlorodiphenyltrichloroethane (DDT)[1]	µg/L	24-hr Composite	2/Year[5,6]	[2]
1,4-dichlorobenzene	µg/L	Grab	2/Year[5,6]	[2]
3,3'-dichlorobenzidine	µg/L	24-hr Composite	2/Year[5,6]	[2]
1,2-dichloroethane	µg/L	Grab	2/Year[5,6]	[2]
1,1-dichloroethylene	µg/L	Grab	2/Year[5,6]	[2]
Dichlorobromomethane	µg/L	Grab	2/Year[5,6]	[2]
Dichloromethane	µg/L	Grab	2/Year[5,6]	[2]
1,3-dichloropropene	µg/L	Grab	2/Year[5,6]	[2]
Dieldrin	µg/L	24-hr Composite	1/Quarter [5,6]	[2]
2,4-dinitrotoluene	µg/L	24-hr Composite	2/Year[5,6]	[2]
1,2-diphenylhydrazine	µg/L	24-hr Composite	2/Year[5,6]	[2]
Halomethanes[1]	µg/L	Grab	2/Year[5,6]	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Heptachlor	µg/L	24-hr Composite	1/Quarter [5,6]	[2]
Heptachlor Epoxide	µg/L	24-hr Composite	1/Quarter [5,6]	[2]
Hexachlorobenzene	µg/L	24-hr Composite	1/Quarter [5,6]	[2]
Hexachlorobutadiene	µg/L	24-hr Composite	2/Year [5,6]	[2]
Hexachloroethane	µg/L	24-hr Composite	2/Year [5,6]	[2]
Isophorone	µg/L	24-hr Composite	2/Year [5,6]	[2]
N-nitrosodimethylamine	µg/L	24-hr Composite	2/Year [5,6]	[2]
N-nitrosodi-N-propylamine	µg/L	24-hr Composite	2/Year [5,6]	[2]
N-nitrosodiphenylamine	µg/L	24-hr Composite	2/Year [5,6]	[2]
Polynuclear Aromatic Hydrocarbons (PAHs)[1]	µg/L	24-hr Composite	1/Quarter [5,6]	[2]
Polychlorinated Biphenyls (PCBs)[1]	µg/L	24-hr Composite	1/Quarter [5,6]	[2]
TCDD equivalents[1]	µg/L	24-hr Composite	1/Quarter [5,6]	[2]
1,1,2,2-tetrachloroethane	µg/L	Grab	2/Year [5,6]	[2]
Tetrachloroethylene	µg/L	Grab	2/Year [5,6]	[2]
Toxaphene	µg/L	24-hr Composite	1/Quarter [5,6]	[2]
Trichloroethylene	µg/L	Grab	2/Year [5,6]	[2]
1,1,2-trichloroethane	µg/L	Grab	2/Year [5,6]	[2]
2,4,6-trichlorophenol	µg/L	24-hr Composite	2/Year [5,6]	[2]
Vinyl Chloride	µg/L	Grab	2/Year [5,6]	[2]

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] As required under 40 CFR part 136.

[3] The Discharger shall monitor the effluent on the same day as the receiving water monitoring for the same parameter.

[4] The Discharger shall calculate and report the MER of the constituent for each sample taken. The MER shall be calculated in accordance with section VII.I.4 of this Order.

[5] The minimum frequency of monitoring for this constituent is automatically increased to twice the minimum frequency specified, if any analysis for this constituent yields a result higher than the applicable effluent limitation or performance goal specified in this Order. The increased minimum frequency of monitoring shall remain in effect until the results of a minimum of four consecutive analyses for this constituent are below all applicable effluent limitations or performance goals specified in this Order.

[6] The Discharger may, at their option, meet this performance goal as a total chromium performance goal and monitor for total recoverable chromium in lieu of total recoverable chromium (III) or total recoverable chromium (VI).

[7] If a Discharger can demonstrate to the satisfaction of the San Diego Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, performance goals may be evaluated with the combined measurement of free cyanide, simple alkali metals 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.

[8] Monitoring of total chlorine residual is not required on days when none of the treatment units that are subject to this Order use chlorine for disinfection. If only one sample is collected for total chlorine residual analysis on a particular day, that sample must be collected at the time when the concentration of total chlorine residual in the discharge would be expected to be greatest. The times of chlorine discharges on the days that samples are collected, and the time at which samples are collected, shall be reported.

[9] For compliance determination, chronic toxicity results shall be reported as “Pass” or “Fail”. For monitoring purpose only, chronic toxicity results shall also include “Percent Effect.”

[10] As specified in section VII.L of this Order and section III.C of this MRP (Attachment E).

[11] If the effluent is in compliance with the chronic toxicity effluent limitation contained in Section IV.A.1, Table 4 of this Order for ten consecutive routine monitoring events, the Discharger may submit a request to the San Diego Water Board to decrease the

minimum sampling frequency for chronic toxicity from quarterly to semiannually. If during the reduced frequency the effluent is not in compliance with the chronic toxicity effluent limitation, the frequency is atomically increased back to once per quarter.

2. The Discharger shall monitor the effluent at Monitoring Location EFF-002 as follows:

Table E-4. Effluent Monitoring at Monitoring Location EFF-002 (SRTTP)[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Calculated	Continuous	--
BOD_5	mg/L	24-hr Composite	1/Day[2,3,4]	[5]
Carbonaceous Biochemical Oxygen Demand (5-Day @ 20°C) ($CBOD_5$)	mg/L	24-hr Composite	1/Month[3]	[5]
TSS	mg/L	24-hr Composite	1/Day[2,3,4]	[5]
pH	standard units	Grab	1/Day[2]	[5]
Oil and Grease	mg/L	Grab	1/Month[3]	[5]
Settleable Solids	milliliter per liter (ml/L)	Grab	1/Day[2]	[5]
Turbidity	nephelometric turbidity unit (NTU)	Grab	1/Week	[5]

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] Applies 5 days per week, except 7 days per week for at least 1 week during July or August of each year.

[3] The Discharger shall calculate and report the mass emission rate (MER) of the constituent for each sample taken. The MER shall be calculated in accordance with section VII.I.4 of this Order.

[4] The Discharger shall calculate the monthly average percent removal for BOD_5 and TSS in accordance with section VII.H of this Order.

[5] As required under 40 CFR part 136.

3. The Discharger shall monitor the effluent at Monitoring Location EFF-003 as follows:

Table E-5. Effluent Monitoring at Monitoring Location EFF-003 (AWT)[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Recorder/Totalizer	Continuous	--
TSS	mg/L	Grab	1/Week[2]	[3]
pH	standard units	Grab	1/Week	[3]
Oil and Grease	mg/L	Grab	1/Month[2]	[3]
Settleable Solids	ml/L	Grab	1/Week	[3]
Turbidity	NTU	Grab	1/Week	[3]
Specific Electrical Conductivity (@ 25°C)	µmhos/cm	Grab	1/Week	[3]

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] The Discharger shall calculate and report the mass emission rate (MER) of the constituent for each sample taken. The MER shall be calculated in accordance with section VII.I.4 of this Order.

[3] As required under 40 CFR part 136.

C. Whole Effluent Toxicity Testing Requirements

The WET refers to the overall aggregate toxic effect of an effluent measured directly by an aquatic toxicity test(s). The control of WET is one approach this Order uses to control the discharge of toxic pollutants. WET tests evaluate the 1) aggregate toxic effects of all chemicals in the effluent including additive, synergistic, or antagonistic toxicity effects; 2) the toxicity effects of unmeasured chemicals in the effluent; and 3) variability in bioavailability of the chemicals in the effluent.

Monitoring to assess the overall toxicity of the effluent is required to answer the following questions:

(1) Does the effluent comply with effluent limitations for toxicity thereby ensuring that water quality standards are achieved in the receiving water?

(2) If the effluent does not comply with effluent limitations for toxicity, are unmeasured pollutants causing risk to aquatic life?

(3) If the effluent does not comply with effluent limitations for toxicity, are pollutants in combinations causing risk to aquatic life?

1. Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity

The chronic IWC is calculated by dividing 100 percent by the dilution ratio. The chronic toxicity IWC is 1.15 percent effluent.

2. Sample Volume and Holding Time

The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume of the effluent shall be collected to perform the required toxicity test. Sufficient sample volume shall also be collected during accelerated monitoring for subsequent Toxicity Identification Evaluation (TIE) studies, if necessary, at each sampling event. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.

3. Chronic Marine Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity >one parts per thousand (ppt), the Discharger shall conduct the following chronic toxicity tests on effluent samples, at the Discharge IWC (1.15 percent effluent), in accordance with species and test methods in *Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine Estuarine Organisms* (EPA/600/R-95/136, 1995). Artificial sea salts or hypersaline brine shall be used to increase sample salinity if needed. In no case shall these species be substituted with another test species unless written authorization from the San Diego Water Board is received.

a. A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01). If laboratory-held cultures of the topsmelt, *Atherinops affinis*, are not available for testing, then the Discharger shall conduct a static renewal toxicity test with the inland silverside, *Menidia beryllina* (Larval Survival and Growth Test Method 1006.01), found in the third edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms* (EPA-821-R-02-014, 2002; Table IA, 40 CFR part

136). Additional species may be used by the Discharger if approved by the San Diego Water Board.

b. A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*/sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0 or Larval Development Test Method); or a static non-renewal toxicity test with the red abalone, *Haliotis rufescens* (Larval Shell Development Test Method).

c. A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0).

4. Species Sensitivity Screening

Species sensitivity screening shall be conducted during this Order's first required sample collection, or within 24 months of the most recent screening, whichever is later.

For each suite during the species sensitivity screening, the Discharger shall collect a single effluent sample to initiate and concurrently conduct three toxicity tests using the fish, an invertebrate, and the alga species previously referenced. This sample shall also be analyzed for the parameters required on a monthly frequency for the discharge, during that given month. As allowed under the test method for the *Atherinops affinis*, a second and third sample shall be collected for use as test solution renewal water as the seven-day toxicity test progresses. If the result of all three species is "Pass," then the species that exhibits the highest "Percent Effect" at the discharge IWC is considered the most sensitive species for that suite. If only one species fails, then that species is considered the most sensitive species for that suite. Likewise, if two or more species result in "Fail," then the species that exhibits the highest "Percent Effect" at the discharge IWC is considered the most sensitive species for that suite.

If the first suite of rescreening tests demonstrates that the same species is the most sensitive, then the rescreening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is ambiguity, then the Discharger shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites.

Species sensitivity rescreening is required every 24 months. The Discharger shall rescreen with the marine vertebrate species, a marine invertebrate species, and the alga species previously referenced, and continue to monitor with the most sensitive species.

The species used during routine monitoring shall be the most sensitive species from the most recent species sensitivity screening.

During the calendar month, toxicity tests used to determine the most sensitive test species shall be reported as effluent compliance monitoring results for the chronic toxicity maximum daily effluent limitation (MDEL).

5. Quality Assurance (QA) and Additional Requirements

The QA measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.

a. The discharge is subject to determination of "Pass" or "Fail" from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833- R-10-003, 2010), Appendix A, Figure A-1 and

Table A-1 and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is: Mean discharge IWC response ≤0.75 × Mean control response. A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". This is a t-test (formally Student's t-test), a statistical analysis comparing two sets of replicate observations—in the case of WET, only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is "Pass" or "Fail"). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances. The relative "Percent Effect" at the discharge IWC is defined and reported as: ((Mean control response - Mean discharge IWC response) ÷ Mean control response) × 100.

b. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995), the test should be declared invalid, then the Discharger must resample and re-test within 14 days of test termination.

c. Dilution water and control water, including brine controls, shall be 1-mircrometer-filtered uncontaminated natural seawater, hypersaline brine prepared using uncontaminated natural seawater, or laboratory water prepared and used as specified in the test methods manual. Dilution water and control water, including brine controls, shall be uncontaminated natural water, as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.

d. Monthly reference toxicant testing is sufficient if in accordance with *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). All reference toxicant test results should be reviewed and reported using the effects concentration at 25 percent (EC25).

e. The Discharger shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of this MRP and the rationale is explained in the Fact Sheet (Attachment F).

6. Preparation of an Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan

The Discharger shall prepare and submit a copy of the Discharger's Initial Investigation TRE Work Plan to the San Diego Water Board for approval within 90 days of the effective date of this Order. If the San Diego Water Board does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use USEPA manual EPA/833B-99/002 (municipal), or most current version, as guidance. The TRE Work Plan shall describe the steps that the Discharger intends to follow if toxicity is detected, and shall include, at a minimum:

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

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

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

7. Accelerated Monitoring Schedule for Maximum Daily Single Result: "Fail"

The maximum daily single result of a "Fail" shall be used to determine if accelerated testing needs to be conducted.

Once the Discharger becomes aware that the maximum daily single result is "Fail," the Discharger shall notify the San Diego Water Board and implement an accelerated monitoring schedule within five calendar days of the receipt of the result. However, if the sample is contracted out to a commercial laboratory, the Discharger shall ensure that the San Diego Water Board is notified, and the first of four accelerated monitoring tests is initiated within seven calendar days of the Discharger becoming aware of the result. The accelerated monitoring schedule shall consist of four toxicity tests (including the discharge IWC), conducted at approximately two-week intervals, over an eight-week period; in preparation for the TRE process and associated reporting, these results shall also be reported using the EC25. If each of the accelerated toxicity tests results in "Pass," the Discharger shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results in "Fail," the Discharger shall immediately implement the TRE Process conditions set forth below. During accelerated monitoring schedules, TST results ("Pass" or "Fail") for chronic toxicity tests shall be used to determine effluent compliance for the chronic toxicity MDEL.

8. TRE Process

During the TRE Process, minimum effluent monitoring shall resume and TST results ("Pass" or "Fail") for chronic toxicity tests shall be used to determine effluent compliance for the chronic toxicity MDEL.

a. Preparation and Implementation of Detailed TRE Work Plan. The Discharger shall immediately initiate a TRE using, according to the type of treatment facility, USEPA manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833/B-99/002, 1999) and, within 15 days of receiving validated results, submit to the San Diego Water Board a Detailed TRE Work Plan, which shall follow the Initial Investigation TRE Work Plan revised as appropriate for this toxicity event. It shall include the following information, and comply with additional conditions set by the San Diego Water Board:

   i. Further actions by the Discharger to investigate, identify, and correct the causes of toxicity;

   ii. Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and

   iii. A schedule for these actions, progress reports, and the final report.

b. TIE Implementation. The Discharger may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test method and, as guidance, USEPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification*

Procedures for Samples Exhibiting Acute and Chronic Toxicity (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005, 1991); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.

c. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. Whenever possible, TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.

d. The Discharger shall continue to conduct the minimum effluent monitoring while the TRE and/or TIE process is taking place. Additional accelerated monitoring and TRE Work Plans are not required once a TRE is begun.

e. The San Diego Water Board recognizes that toxicity may be episodic and identification of causes and reduction of sources of toxicity may not be successful in all cases. Upon approval from the San Diego Water Board, the TRE may be ended at any stage if routine monitoring finds there is no longer toxicity.

f. The San Diego Water Board may consider the results of any TRE/TIE studies in an enforcement action.

9. Reporting

The Self-Monitoring Report (SMR) shall include a full laboratory report for each toxicity test. This report shall be prepared using the format and content of the test methods manual chapter called Report Preparation[1], and shall include:

a. The valid toxicity test results for the TST statistical approach, reported as “Pass” or “Fail” and “Percent Effect” at the chronic toxicity IWC for the discharge. All toxicity test results (whether identified as valid or otherwise) conducted during the quarter shall be reported on the SMR due date specified in Table E-10.

b. Summary water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).

c. The statistical analysis used in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1.

d. TRE/TIE results. The San Diego Water Board shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. Prior to the completion of the final TRE/TIE report, the Discharger shall provide status updates in the monthly SMRs, indicating which TRE/TIE steps are underway, which steps have been completed, and the estimated time to completion of the final TRE/TIE report. The

[1] Section 10 of Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to the West Coast Marine and Estuarine Organisms, August 1995, EPA/600/R-95-136, https://cfpub.epa.gov/si/si_public_file_download.cfm?p_download_id=524691

final TRE/TIE report shall be submitted to the San Diego Water Board within 30 days of report completion.

e. Statistical program (e.g., TST calculator, CETIS, etc.) output results, including graphical plots, for each toxicity test.

f. Graphical plots clearly showing the laboratory's performance for the reference toxicant for the previous 20 tests and the laboratory's performance for the control mean, control standard deviation, and control coefficient of variation for the previous 12-month period.

g. Any additional quality assurance/quality control (QA/QC) documentation or any additional chronic toxicity-related information, upon written request from the San Diego Water Board.

D. Land Discharge Monitoring Requirements – Not Applicable

E. Recycling Monitoring Requirements – Not Applicable

IV. RECEIVING WATER MONITORING REQUIREMENTS

The receiving water monitoring requirements set forth below are designed to measure the effects of the OOO discharge on the receiving ocean waters, including effects on coastal water quality, seafloor sediments, and marine life. The overall receiving water monitoring program is intended to answer the following questions:

(1) Does the receiving water meet water quality standards?

(2) Are the receiving water conditions getting better or worse over time?

(3) What is the relative contribution of the Facilities discharge to pollution in the receiving water?

(4) What are the effects of the discharge on the receiving waters?

Receiving water in the vicinity of the OOO shall be conducted as specified below. This program is intended to document conditions, within the zone of initial dilution (ZID), within the waste field where initial dilution is completed, at reference stations, and at other areas beyond the ZID where discharge impacts might be reasonably expected. Station location, sampling, sample preservation, and analyses, when not specified, shall be by methods approved by the San Diego Water Board. The monitoring program may be modified by the San Diego Water Board at any time. The Discharger may also submit a list of proposed changes with supporting rational to these monitoring requirements that it considers to be appropriate to the San Diego Water Board for approval.

The receiving water and sediment monitoring program for the OOO may be conducted either individually or jointly with other dischargers to the OOO.

All receiving water monitoring shall be conducted in accordance with restrictions and requirements established by the State of California Department of Fish and Wildlife and this Order. During monitoring events, sample stations shall be located using a land-based microwave positioning system or a satellite positioning system such as global positioning system (GPS).

In the event that the Discharger is unable to obtain a sample from a monitoring station(s) due to safety, legal, or other reasons, collection of samples at such station(s) can be omitted. The visual observations listed in footnote no. 2 to Table E-6 below shall still be recorded and reported in the monthly SMR to the San Diego Water Board for these stations at the time of the sample collection. If practicable, an effort should be made to return to the sampling station that was omitted and collect the sample during safer conditions within the same reporting period. In the event that a

monitoring location is omitted, the Discharger shall submit a statement to the San Diego Water Board containing, at a minimum, the following information:

- The monitoring station(s) that was omitted;
- The date the monitoring station was omitted; and
- A description of the circumstances for omitting the collection of data at the monitoring station.

A. Surf Zone Water Quality Monitoring Requirements

As ocean surface waves come closer to shore they break, forming the foamy, bubbly surface called surf. The region of breaking waves defines the surf zone.

Monitoring of the surf zone is intended to answer the following questions:

(1) Does the effluent cause or contribute to an exceedance of the water quality standards in the receiving water?

(2) Does the effluent reach water contact zones or commercial shellfish beds?

(3) Are densities of bacteria in water contact areas below levels protective of public health?

All surf zone stations listed in Table E-1 (S1 through S7) shall be monitored as follows:

Table E-6. Surf Zone Water Quality Monitoring[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency
Visual Observations	--	Visual	[2]
Temperature	°C	Grab	1/Week
Total Coliform	CFU/100 ml	Grab	3/Month[3]
Fecal Coliform	CFU/100 ml	Grab	5/Month[3,4]
Enterococci	CFU/100 ml	Grab	5/Month[3,4]

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] Visual observations of the surface water conditions at the designated receiving water stations shall be conducted in such a manner as to enable the observer to describe and report the presence, if any, of floatables of sewage origin. Observations of wind (direction and speed), weather (cloudy, sunny, or rainy), direction of current, tidal conditions (high or low), water color, discoloration, oil and grease, turbidity, and odor shall be recorded. These observations shall be taken whenever a sample is collected. Visual observations shall also be conducted for repeat sampling.

[3] Sampling shall be spaced equally throughout the month to the extent possible.

[4] Samples for fecal coliform and enterococci shall be collected on the same day fecal coliform and enterococci are sampled at monitoring location M-004.

B. Nearshore and Offshore Water Quality Monitoring Requirements

The nearshore for the purposes of monitoring and assessment is considered to extend from the shoreline to a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline. Offshore for the purposes of monitoring and assessment is considered to extend beyond the nearshore zone. Nearshore and offshore monitoring is necessary to answer the following questions:

(1) Is natural light significantly reduced at any point outside the ZID as a result of the discharge?

(2) Does the discharge cause a discoloration of the ocean surface?

(3) Does the discharge of oxygen demanding waste cause the dissolved oxygen concentration to be depressed at any time more than 10 percent from that which occurs naturally outside the ZID?

(4) Does the discharge of waste cause the pH to change at any time more than 0.2 standard units from that which occurs naturally outside the ZID?

(5) Does the discharge of waste cause the salinity to become elevated in the receiving water?

(6) Do nutrients cause objectionable aquatic growth or degrade indigenous biota?

(7) Is the wastewater plume encroaching upon receiving water areas used for swimming, surfing, diving, and shellfish harvesting?

(8) What is the fate of the discharge plume?

(9) Is fecal indicator bacteria present outside the zone of initial dilution? If so, is the bacteria human source?

1. All nearshore and offshore stations listed in Table E-1 (N1 through N7, A1 through A5, B1, and B2) shall be monitored as follows:

Table E-7. Nearshore and Offshore Water Quality Monitoring Requirements[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency
Visual Observations	--	Visual[2]	1/Quarter
Fecal Coliform	CFU /100 ml	Grab[3,4]	1/Quarter
Enterococci	CFU/100 ml	Grab[3,4]	1/Quarter
Human Marker HF183	Number of copies (molecules)/100 mL	Grab[5]	1/Quarter
Nitrogen, Total	mg/L	Grab[3]	1/Quarter
Phosphorus, Total (as P)	mg/L	Grab[3]	1/Quarter
Temperature and Depth	˚C, meters	[6]	1/Quarter
Dissolved Oxygen	mg/L	[6]	1/Quarter
Light Transmittance	percent	[6]	1/Quarter
pH	standard units	[6]	1/Quarter
Salinity	ppt	[6]	1/Quarter

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] Visual observations of the surface water conditions at the designated receiving water stations shall be conducted in such a manner as to enable the observer to describe and report the presence, if any, of floatables of sewage origin. Observations of wind (direction and speed), weather (cloudy, sunny, or rainy), direction of current, tidal conditions (high or low), water color, oil and grease, turbidity, and odor shall be recorded. The proximity of recreational and commercial vessels to monitoring locations shall also be recorded. These observations shall be taken whenever a sample is collected.

[3] At the surface for nearshore monitoring locations N1 through N7 and surface and mid-depth for offshore monitoring locations A1 through A5, B1, and B2.

[4] Samples for fecal coliform and enterococci shall be collected on the same day fecal coliform and enterococci are sampled at monitoring location M-004.

[5] Samples shall be collected at the at the surface and mid-depth at offshore monitoring locations A1-A5, B1 and B2 and analyzed in accordance with section IV.B.2 of this MRP.

[6] For offshore monitoring locations A1-A5, B1 and B2, temperature, depth, dissolved oxygen, light transmittance, pH, and salinity profile data shall be measured throughout the entire water column using a CTD profiler during the quarterly sampling events. Depth profile measurements shall be obtained using multiple sensors to measure parameters through the entire water column (from the surface to as close to the bottom as practicable). For nearshore monitoring locations N1 through N7, temperature, depth, dissolved oxygen, light transmittance, pH, and salinity shall be measured throughout the entire water column by a CTD profiler or at the surface by grab samples.

2. Human Marker HF183 Monitoring Requirements

Human Marker HF183 monitoring is used to confirm the presence of human fecal material when the single sample maximum receiving water limitation for fecal coliform is exceeded. Analysis of the Human Marker HF183 sample is not required if the result for fecal coliform is below receiving water limitations.

i. Sample Collection. The Discharger shall collect samples for the Human Marker HF183 concurrently with samples collected for fecal coliform at the offshore monitoring locations A1 through A5, B1, and B2, and in accordance with EPA method 1696, or an alternative method proposed by the Discharger with comparable accuracy, unless the method is not accepted by the San Diego Water Board. Samples shall be filtered through a membrane filter as soon as possible, but no later than 6 hours after sample collection. Following filtration, the membrane filter shall be stored at -80 ºC for later analysis.

ii. Sample Analysis. If a result for fecal coliform exceeds the single sample maximum receiving water limitation of 400 CFU per 100 mL (section V.A.1.a.i.(b) of this Order), the Discharger shall analyze the Human Marker HF183 sample that was collected concurrently with the fecal coliform sample that exceeded the receiving water limitation. Samples shall be analyzed in accordance with EPA method 1696, the ddPCR method developed by the Southern California Coastal Waters Research Project (SCCWRP), or an alternative method proposed by the Discharger with comparable accuracy, unless the method is not accepted by the San Diego Water Board. If the Discharger proposes to use the ddPCR method, the Discharger shall submit QA/QC procedures for concurrence with the San Diego Water Board. The Discharger shall follow all quality control and quality assurance procedures outlined in the method or as approved by the San Diego Water Board. If the results for fecal coliform are below receiving water limitations, the discharger may discard the Human Marker HF183 sample.

iii. Sample Results (if applicable). Results to the Human Marker HF183 shall be submitted with the monthly self-monitoring report to the California Integrated Water Quality System (CIWQS) as an attachment in PDF format.

C. Benthic Monitoring Requirements

Seafloor sediments integrate constituents that are discharged to the ocean. Most particles that come from the OOO discharge, and any associated contaminants, will eventually settle to the seafloor where they are incorporated into the existing sediments. Sediments can accumulate these particles over the years until the point where sediment quality is degraded and beneficial uses are impaired.

Benthic organisms are strongly affected by sediment contaminant exposure because these organisms often live in continual direct contact with sediment/pore water, and many species ingest significant quantities of sediment as a source of nutrition. Because the benthos are

dependent on their surroundings, they serve as a biological indicator that reflects the overall conditions of the aquatic environment.

The assessment of sediment quality with respect to sediment chemistry, sediment toxicity, and benthic community condition is necessary to answer the following questions:

(1) Is the dissolved sulfide concentration of waters in sediments significantly increased above that present under natural conditions?

(2) Is the concentration of substances set forth in Table 3 of the Ocean Plan for protection of marine aquatic life in marine sediments at levels which would degrade the benthic community?

(3) Is the concentration of organic pollutants in marine sediments at levels that would degrade the benthic community?

(4) Are benthic communities degraded as a result of the discharge?

(5) Is the sediment quality changing over time?

The assessment of sediment quality to evaluate potential effects of the OOO discharge and compliance with narrative water quality standards specified in the Ocean Plan consist of the measurement and integration of three lines of evidence: 1) physical and chemical properties of seafloor sediments, 2) seafloor sediment toxicity to assess bioavailability and toxicity of sediment contaminants, and 3) ecological status of the biological communities (benthos) that live in or on the seafloor sediments. The Discharger may request to fulfill the benthic monitoring requirements through a regional monitoring program described in section V.B of this MRP.

1. Sediment Assessment for Physical and Chemical Properties

a. **Sediment Sampling Stations and Monitoring Frequency.** The sediment monitoring program is designed to assess spatial and temporal trends at the offshore stations and to assess benthic habitat condition in terms of physical and chemical composition (e.g., grain-size distribution, sediment chemistry). Sediment samples for assessment of sediment chemistry shall be collected once during the permit term at each of the offshore stations listed in Table E-1 (A1 through A5, B1, and B2). Results from sediment monitoring are due no later than 180 days prior to the expiration date of this Order.

b. **Sediment Sample Collection Methods.** Sediment samples shall be taken using a 0.1-square meter modified Van Veen grab sampler. Samples for grain-size and chemical analyses shall be taken from the top two centimeters of the surface sediment. Sediment samples for physical and chemical properties shall be taken concurrently with and adjacent to (as much as possible) the sediment samples for toxicity and benthic community condition. Bulk sediment chemical analysis shall include at a minimum the set of constituents listed in Table E-8.

c. **Sediment Chemistry Test Methods.** Sediment chemistry is the measurement of the concentration of chemicals of concern in sediments. The chemistry line of evidence is used to assess the potential overall exposure risk to benthic organisms from pollutants in surficial sediments. Chemical analysis of sediment shall be conducted using USEPA-approved methods, methods developed by the National Oceanic and Atmospheric Administration's (NOAA's) *National Status and Trends for Marine Environmental Quality*, or methods developed in conjunction with the

Southern California Bight Regional Monitoring Program. For chemical analysis of sediment, samples shall be reported on a dry weight basis.

Sediment monitoring for physical and chemical properties shall be conducted at the offshore stations listed in Table E-1 (A1 through A5, B1, and B2) for the parameters identified in Table E-8:

Table E-8. List of Parameters to Characterize Sediment Contamination Exposure and Effect[1]

Parameter	Units	Type of Sample	Minimum Sampling Frequency
Sediment Grain Size	micrometer (µm)	Grab	1/Permit Term
Total Organic Carbon	Percent	Grab	1/Permit Term
Total Nitrogen	Percent	Grab	1/Permit Term
Acid Volatile Sulfides	milligram/kilogram (mg/kg)	Grab	1/Permit Term
Aluminum	mg/kg	Grab	1/Permit Term
Antimony	mg/kg	Grab	1/Permit Term
Arsenic	mg/kg	Grab	1/Permit Term
Cadmium	mg/kg	Grab	1/Permit Term
Total Chromium	mg/kg	Grab	1/Permit Term
Copper	mg/kg	Grab	1/Permit Term
Iron	mg/kg	Grab	1/Permit Term
Lead	mg/kg	Grab	1/Permit Term
Manganese	mg/kg	Grab	1/Permit Term
Mercury	mg/kg	Grab	1/Permit Term
Nickel	mg/kg	Grab	1/Permit Term
Selenium	mg/kg	Grab	1/Permit Term
Silver	mg/kg	Grab	1/Permit Term
Tin	mg/kg	Grab	1/Permit Term
Zinc	mg/kg	Grab	1/Permit Term
PCBs	nanogram/kilogram (ng/kg)	Grab	1/Permit Term
2,4-DDD	ng/kg	Grab	1/Permit Term
4,4-DDD	ng/kg	Grab	1/Permit Term
2,4-DDE	ng/kg	Grab	1/Permit Term
4,4-DDE	ng/kg	Grab	1/Permit Term
2,4-DDT	ng/kg	Grab	1/Permit Term
4,4-DDT	ng/kg	Grab	1/Permit Term
Aldrin	ng/kg	Grab	1/Permit Term
Alpha-Chlordane	ng/kg	Grab	1/Permit Term
Dieldrin	ng/kg	Grab	1/Permit Term
Endosulfan	ng/kg	Grab	1/Permit Term
Endrin	ng/kg	Grab	1/Permit Term
Gamma-BHC	ng/kg	Grab	1/Permit Term
Heptachlor	ng/kg	Grab	1/Permit Term
Heptachlor Epoxide	ng/kg	Grab	1/Permit Term
Hexachlorobenzene	ng/kg	Grab	1/Permit Term
Mirex	ng/kg	Grab	1/Permit Term
Trans-Nonachlor	ng/kg	Grab	1/Permit Term
Acenaphthene	microgram/kilogram (µg/kg)	Grab	1/Permit Term
Acenaphthylene	µg/kg	Grab	1/Permit Term
Anthracene	µg/kg	Grab	1/Permit Term
Benzo(a)anthracene	µg/kg	Grab	1/Permit Term
Benzo(o)fluoranthene	µg/kg	Grab	1/Permit Term
Benzo(k)fluoranthene	µg/kg	Grab	1/Permit Term

Parameter	Units	Type of Sample	Minimum Sampling Frequency
Benzo(ghi)pyrelene	µg/kg	Grab	1/Permit Term
Benzo(a)pyrene	µg/kg	Grab	1/Permit Term
Benzo(e)pyrene	µg/kg	Grab	1/Permit Term
Biphenyl	µg/kg	Grab	1/Permit Term
Chrysene	µg/kg	Grab	1/Permit Term
Dibenzo(ah)anthracene	µg/kg	Grab	1/Permit Term
Fluoranthene	µg/kg	Grab	1/Permit Term
Fluorene	µg/kg	Grab	1/Permit Term
Ideno(123cd)pyrene	µg/kg	Grab	1/Permit Term
Naphthalene	µg/kg	Grab	1/Permit Term
1-Methylnaphthalene	µg/kg	Grab	1/Permit Term
2-Methylnaphthalene	µg/kg	Grab	1/Permit Term
2,6-Dimethylnaphthalene	µg/kg	Grab	1/Permit Term
2,3,5-Trimethylnaphthale	µg/kg	Grab	1/Permit Term
Perylene	µg/kg	Grab	1/Permit Term
Phenanthrene	µg/kg	Grab	1/Permit Term
1-Methylphenanthene	µg/kg	Grab	1/Permit Term
Pyrene	µg/kg	Grab	1/Permit Term

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

2. Sediment Toxicity

a. **Toxicity Sampling Stations and Frequency.** Sediment toxicity is a measure of the response of invertebrates exposed to surficial sediments under controlled laboratory conditions. The sediment toxicity line of evidence is used to assess both pollutant-related biological effects and exposure. Sediment samples for assessment of toxicity shall be monitored once during the permit term at each of the offshore stations listed in Table E-1 (A1 through A5, B1, and B2). Results from sediment toxicity sampling are due no later than 180 days prior to the expiration date of this Order.

b. **Sediment Toxicity Collection Methods.** Sediment samples shall be taken using a 0.1-square meter modified Van Veen grab sampler. Samples for toxicity analyses shall be taken from the top two centimeters of the surface sediment. Sediment samples for toxicity shall be taken concurrently with and adjacent to (as much as possible) the sediment samples for physical and chemical properties, and benthic community condition.

c. **Sediment Toxicity Test Methods.** Sediment toxicity tests shall utilize alternative amphipod species (*Eohaustorius estuaries, Leptocheirus plumulosus, Rhepoxynius abronius*) and be conducted in accordance with EPA 600/R-94/0925 (USEPA, 1994), *Methods for Assessing the Toxicity of Sediment-associated Contaminants with Estuarine and Marine Amphipods*, and the Southern California Bight Project sediment toxicity testing guidelines (Bight'13 Toxicology Committee, 2013). Response criteria shall include mortality, emergence from sediment during exposure, and ability to rebury in clean sediment at the end of the 10-day exposure period. Results shall be reported as "Pass"/"Fail" and percent response.

d. **Data Analysis.** Analysis of sediment toxicity shall include a calculation of the mean control normalized response.

3. Benthic Community Condition

a. **Benthic Community Sampling Stations and Frequency.** Sediment samples for assessment of benthic community structure shall be collected once during the permit term at each of the offshore stations listed in Table E-1 (A1 through A5, B1, and B2). One sample per station shall be collected for analysis of benthic community structure. Results from benthic community sampling are due no later than 180 days prior to the expiration date of this Order.

b. **Benthic Community Sample Collection Methods.** Benthic community samples shall be collected using the guidance specified in the most recent field manual developed for the Southern California Bight Regional Monitoring Program. The benthic samples shall be collected using a 0.1-square meter modified Van Veen grab sampler. These grab samples shall be taken concurrently with and adjacent to (as much as possible) samples collected for sediment physical and chemical properties, and toxicity. The samples shall be sieved using a 1.0-millimeter mesh screen. The benthic organisms retained on the sieve shall be fixed in 10 percent buffered formalin and transferred to at least 70 percent ethanol within two to seven days of storage. All benthic invertebrates in the screened sample shall be identified to the lowest possible taxon, enumerated (counted), measured, and, where feasible, assessed for reproductive condition.

c. **Benthic Community Analysis.** Analysis of benthic community structure shall include determination of the number of species, number of individuals per species, and total numerical abundance present. The following parameters or metrics shall be calculated for each 0.1-square meter grab sample and summarized by station, as appropriate:

i. Number of species;

ii. Total numerical abundance;

iii. Benthic Response Index (BRI);

iv. Swartz's 75 percent dominance index;

v. Shannon-Weiner's diversity index (H); and

vi. Pielou evenness index (J).

4. Benthic Monitoring Work Plan

a. **Benthic Monitoring Work Plan.** The Discharger shall submit to the San Diego Water Board within 180 days after the effective date of this Order, a Benthic Monitoring Work Plan to implement the sediment monitoring program. The Benthic Monitoring Work Plan is not required if the Discharger is fulfilling the benthic monitoring requirements contained in Attachment E section IV.C.1 through IV.C.3 by participating in a regional monitoring program, as described in Attachment E section V.B. If required, the Benthic Monitoring Work Plan shall include the following elements:

i. A Quality Assurance Project Plan (QAPP) describing the project objectives and organization, functional activities, and quality assurance/quality control protocols;

ii. Protocols for sediment sample collection and processing;

iii. Proposed methods for analyzing sediment data and integrating the three lines of evidence (i.e., sediment physical and chemical properties, sediment toxicity, and benthic community condition); and

iv. Schedule for completion of sample collection and submission of the results.

b. **Benthic Monitoring Work Plan Implementation.** The Discharger shall implement the Benthic Monitoring Work Plan sixty (60) days after submission of the Benthic Monitoring Work Plan, unless otherwise directed in writing by the San Diego Water Board. The Discharger shall notify the San Diego Water Board of the intent to initiate the proposed actions included in the Benthic Monitoring Work Plan; and comply with any conditions set by the San Diego Water Board.

D. Fish and Macroinvertebrates Monitoring Requirements

Many pollutants discharged into receiving waters have the potential to bioaccumulate and persist in tissues of aquatic organisms, including marine fishes. Chemical pollutants that bioaccumulate tend to biomagnify as they pass through the aquatic food chain. Therefore, fish monitoring data is required to assess the human health risks for individuals who may consume fish and to assess trends of contaminants levels in fish tissue over time.

Aquatic benthic invertebrates are excellent indicators of ecosystem health because they are ubiquitous, abundant, diverse, and typically sedentary. The growth, survival, and reproduction of many species of aquatic invertebrates are all sensitive to changes in environmental health, making analysis of assemblage structure a good ecosystem monitoring tool.

Fish and invertebrate monitoring is necessary to answer the following questions:

(1) Does the concentration of pollutants in fish, shellfish, or other marine organisms used for human consumption bioaccumulate to levels that are harmful to human health?

(2) Does the concentration of pollutants in marine life bioaccumulate to levels that degrade marine communities?

(3) Are the concentrations of pollutants in fish and other marine organisms changing over time?

(4) Is the health of fish changing over time?

(5) Are the populations of selected species of fish and invertebrates changing over time?

The Discharger may request to fulfill the fish and macroinvertebrate monitoring requirements through a regional monitoring program described in section V.B of this MRP.

1. Fish and Invertebrate Trawls

a. **Demersal Fish and Invertebrate Trawl Frequency and Locations.** Fish and invertebrate trawls shall be conducted to assess the structure of demersal fish and megabenthic invertebrate communities, while the presence of priority pollutants in fish shall be analyzed from species captured using both trawling and rig fishing techniques. Single community trawls for fish and invertebrates shall be conducted once per permit term at the three biological transect (trawl) stations T3, T4, and T5 listed in Table E-1. These trawl stations represent one area 50 feet downcoast of Discharge Point No. 001 (station T3), one area 1 mile downcoast of Discharge Point No. 001 (station T4), and one area 1 mile upcoast of Discharge Point No. 001 (station T5). The Discharger shall notify the San Diego Water Board of the intent to initiate the fish and invertebrate trawls, no later than 30 days before the survey.

Results from the fish and invertebrate trawls are due no later than 180 days prior to the expiration date of this Order.

b. **Fish and Invertebrate Trawl Method.** Trawls shall be conducted using a Marinovich 7.62-meter (25-foot) head rope otter trawl, using the guidance specified in the most recent field manual developed for the Southern California Bight Regional Monitoring Program. Captured organisms shall be identified at all stations.

In order to minimize negative impacts that may occur due to unsuccessful trawling efforts associated with unusual environmental conditions, the requirement to conduct trawls during any given period may be postponed or waived at the discretion of the Executive Officer of the San Diego Water Board upon receipt of written justification provided by the Discharger. Examples of such unusual events include the presence of large populations of red tuna crabs (*Pleuroncodes planipes*) associated with El Niño and the occurrence of large squid egg masses that prevent hauling in the trawl nets.

c. **Fish and Invertebrate Community Structure Analysis.** All demersal fishes and megabenthic invertebrates collected by trawls shall be identified by species if possible. For fish, community structure analysis shall consist of determining the standard length and total wet weight, total number of individuals per species, the total numerical abundance of all fish, species richness, species diversity (H'), and multivariate pattern analyses (e.g., ordination and classification analyses). The presence of any physical abnormalities or disease symptoms (e.g., fin erosion, external lesions, and tumors) or external parasites shall also be recorded. For invertebrates, community structure shall be summarized as the total number of individuals per species, the total numerical abundance of all invertebrates, species richness, and species diversity (H').

d. **Fish Liver Tissue Chemical Analysis.** Chemical analyses of fish liver tissues shall be performed once per permit term on target species collected at or near the trawl stations. The three trawl stations are classified into three zones for the purpose of collecting sufficient numbers of fish for tissue analyses. Trawl Zone 1 represents the nearfield zone, defined as the area within a 0.5-km radius of trawl station T3; Trawl Zone 2 is considered the down coast zone, defined as the area within a 1-km radius of trawl station T4; and Trawl Zone 3 is considered the up coast zone, and is defined as the area centered within a 1-km radius of trawl station T5.

Liver tissues shall be analyzed during each survey from fishes collected in each of the above three trawl zones. No more than a maximum of five 10-minute (bottom time) trawls shall be required per zone in order to acquire sufficient numbers of fish for composite samples; these trawls may occur anywhere within a defined zone. If sufficient numbers of trawl zone target species cannot be, or are unlikely to be, captured by trawling, fish for tissue analysis from these areas may be collected using alternative methods such as those described below under Rig Fishing in section IV.D.2.b of this MRP (e.g., hook and line, baited lines).Three replicate composite samples shall be prepared from each trawl zone, with each composite consisting of tissues from at least three individual fish of the same species. These liver tissues shall be analyzed for the constituents listed in the Table E-9.

e. **Fish Targeted for Chemical Analysis.** The species of fish targeted for tissue analysis from the trawl sites shall be primarily flatfish including, but not limited to, Pacific sanddab (Citharichthys sordidus), longfin sanddab (Citharichthys

xanthostigma), bigmouth sole (Hippoglossina stomata), California tonguefish (Symphurus atricaudus) and hornyhead turbot (Pleuronichthys verticalis). If sufficient numbers of these primary flatfish species are not present in a zone, secondary target species such as the longspine combfish (Zaniolepis latipinnis), California scorpionfish (Scorpaena guttata), California lizardfish (Synodus lucioceps) may be collected as necessary.

2. Rig Fishing

a. **Rig Fishing Frequency.** Fish muscle tissues shall be analyzed once during the permit term from fishes collected in each of the three rig fishing zones described below in order to monitor the uptake of pollutants in selected species. The Discharger shall notify the San Diego Water Board of the intent to initiate sample collection, no later than 30 days before sampling. Results from the fish muscle tissue analyses are due no later than 180 days prior to the expiration date of this Order.

b. **Rig Fishing Method and Location.** The fish shall be collected by hook and line or by setting baited lines from within zones surrounding rig fishing stations RF1, RF2, and RF3 listed in Table E-1. Rig Fishing Zone 2 is the nearfield area centered within a 0.5-km radius of station RF2; Rig Fishing Zone 1 represents the northern farfield area centered within 1-km radius of station RF1; and Rig Fishing Zone 3 represents the southern farfield area centered within a 1-km radius of station RF3. There are no depth requirements for these three rig fishing zones with regards to the collection of fishes for tissue analysis. Fish samples shall be identified to species, with number of individuals per species, standard length and wet weight recorded. Physical abnormalities or disease symptoms (e.g., fin rot, lesions, and tumors) and external parasites shall be recorded and itemized.

c. **Rig Fishing Targeted Species.** The species of fish targeted for tissue analysis from the rig fishing stations shall be representative of those caught by recreational and/or commercial fishery activities in the region. The species targeted for muscle tissue analysis shall be primarily rockfish (*Sebastes spp.*), excluding species restricted by the California Department of Fish and Wildlife. If sufficient numbers of rockfish are not present or cannot be caught in a particular zone, secondary target species (e.g., scorpionfish and lingcod) may be collected and analyzed as necessary.

d. **Rig Fishing Collection.** Three replicate composite samples of the target species shall be obtained from each zone, with each composite consisting of a minimum of three individual fish. Muscle tissue shall be chemically analyzed for the same set of constituents as trawl-caught fish specified in Table E-9.

Table E-9. List of Parameters to Characterize Fish Tissue[1]

Parameter	Units	Type of Sample	Minimum Sampling Frequency
Total Lipids	mg/kg	Composite	1/Permit Term
Aluminum	mg/kg	Composite	1/Permit Term
Antimony	mg/kg	Composite	1/Permit Term
Arsenic	mg/kg	Composite	1/Permit Term
Cadmium	mg/kg	Composite	1/Permit Term
Chromium	mg/kg	Composite	1/Permit Term
Copper	mg/kg	Composite	1/Permit Term

Parameter	Units	Type of Sample	Minimum Sampling Frequency
Iron	mg/kg	Composite	1/Permit Term
Lead	mg/kg	Composite	1/Permit Term
Manganese	mg/kg	Composite	1/Permit Term
Mercury	mg/kg	Composite	1/Permit Term
Nickel	mg/kg	Composite	1/Permit Term
Selenium	mg/kg	Composite	1/Permit Term
Silver	mg/kg	Composite	1/Permit Term
Tin	mg/kg	Composite	1/Permit Term
Zinc	mg/kg	Composite	1/Permit Term
PCBs	ng/kg	Composite	1/Permit Term
2,4-DDD	ng/kg	Composite	1/Permit Term
4,4-DDD	ng/kg	Composite	1/Permit Term
2,4-DDE	ng/kg	Composite	1/Permit Term
4,4-DDE	ng/kg	Composite	1/Permit Term
2,4-DDT	ng/kg	Composite	1/Permit Term
4,4-DDT	ng/kg	Composite	1/Permit Term
Aldrin	ng/kg	Composite	1/Permit Term
Alpha-Chlordane	ng/kg	Composite	1/Permit Term
Dieldrin	ng/kg	Composite	1/Permit Term
Endosulfan	ng/kg	Composite	1/Permit Term
Endrin	ng/kg	Composite	1/Permit Term
Gamma-BHC	ng/kg	Composite	1/Permit Term
Heptachlor	ng/kg	Composite	1/Permit Term
Heptachlor Epoxide	ng/kg	Composite	1/Permit Term
Hexachlorobenzene	ng/kg	Composite	1/Permit Term
Mirex	ng/kg	Composite	1/Permit Term
Trans-Nonachlor	ng/kg	Composite	1/Permit Term
Acenaphthene	µg/kg	Composite	1/Permit Term
Acenaphthylene	µg/kg	Composite	1/Permit Term
Anthracene	µg/kg	Composite	1/Permit Term
Benzo(a)anthracene	µg/kg	Composite	1/Permit Term
Benzo(o)fluoranthene	µg/kg	Composite	1/Permit Term
Benzo(k)fluoranthene	µg/kg	Composite	1/Permit Term
Benzo(ghi)pyrelene	µg/kg	Composite	1/Permit Term
Benzo(a)pyrene	µg/kg	Composite	1/Permit Term
Benzo(e)pyrene	µg/kg	Composite	1/Permit Term
Biphenyl	µg/kg	Composite	1/Permit Term
Chrysene	µg/kg	Composite	1/Permit Term
Dibenzo(ah)anthracene	µg/kg	Composite	1/Permit Term
Fluoranthene	µg/kg	Composite	1/Permit Term
Fluorene	µg/kg	Composite	1/Permit Term
Ideno(123cd)pyrene	µg/kg	Composite	1/Permit Term
Naphthalene	µg/kg	Composite	1/Permit Term
1-Methylnaphthalene	µg/kg	Composite	1/Permit Term
2-Methylnaphthalene	µg/kg	Composite	1/Permit Term
2,6-Dimethylnaphthalene	µg/kg	Composite	1/Permit Term
2,3,5-Trimethylnaphthale	µg/kg	Composite	1/Permit Term
Perylene	µg/kg	Composite	1/Permit Term
Phenanthrene	µg/kg	Composite	1/Permit Term
1-Methylphenanthene	µg/kg	Composite	1/Permit Term
Pyrene	µg/kg	Composite	1/Permit Term

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

E. California Environmental Data Exchange Network

In addition to submitting self-monitoring reports (SMRs), the Discharger shall also ensure that all the receiving water monitoring results are submitted to the California Environmental Data Exchange Network (CEDEN) no later than 90 days after the completion of monitoring. If the receiving water monitoring is conducted jointly with other dischargers to the OOO, the Discharger shall coordinate the submittal of the receiving water monitoring results with other agencies discharging through the OOO to ensure data is not duplicated in CEDEN. A statement certifying that all monitoring results have been timely uploaded into CEDEN shall be submitted annually by March 1 of each year. Only monitoring results from the following requirements shall be reported in CEDEN:

1. Shoreline, nearshore, and offshore water quality (sections IV.A and IV.B of this MRP);
2. Sediment assessment for physical and chemistry properties (section IV.C.1 of this MRP);
3. Sediment toxicity (section IV.C.2 of this MRP);
4. Benthic community condition (section IV.C.3 of this MRP);
5. Demersal fish and macroinvertebrate trawls (section IV.D.1 of this MRP); and
6. Rig fishing (section IV.D.2 of this MRP).

F. Receiving Water Status and Trends

1. **Receiving Water Monitoring Report.** The Discharger shall submit a receiving water monitoring report, prepared individually or jointly with other discharges to the OOO, once no later than 180 days prior to the expiration date of this Order. The receiving water monitoring report shall cover the following requirements:
    a. Shoreline, nearshore, and offshore water quality (sections IV.A and IV.B of this MRP);
    b. Sediment assessment for physical and chemistry properties (section IV.C.1 of this MRP);
    c. Sediment toxicity (section IV.C.2 of this MRP);
    d. Benthic community condition (section IV.C.3 of this MRP);
    e. Demersal fish and macroinvertebrate trawls (section IV.D.1 of this MRP);
    f. Rig fishing (section IV.D.2 of this MRP); and
    g. Plume tracking (section VI.B of this MRP).
2. The report shall include, as a minimum, 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, if such information is available, differences unique to each station (e.g., station location, sediment grain size, distribution of bottom sediments, rocks, shell litter, calcareous worm tubes, etc.);
    c. A description of the sample collection and preservation procedures used in the survey;

d. A description of the specific method used for laboratory analysis;

e. An in-depth discussion, evaluation (e.g., detailed statistical analyses), interpretation and tabulation of the data including interpretations and conclusions as to whether applicable receiving water limitations in this Order have been attained at each station;

f. A narrative summary of general observations, including any abnormal conditions; and

g. An in-depth discussion addressing the questions proposed in each section of the Receiving Water Monitoring Requirements of this MRP.

3. **State of the Ocean Report.** The Discharger, either individually or collectively with other discharges to the OOO, shall present an oral report to the San Diego Water Board summarizing the conclusions of the receiving water monitoring report. The State of the Ocean Report shall be given once no later than 180 days prior to the expiration date of this Order. If an oral report cannot be scheduled for a San Diego Water Board meeting, the San Diego Water Board may approve submission of a written State of the Ocean Report. The State of the Ocean Report shall include, at minimum, the following elements:

   a. Description of the monitoring effort completed;

   b. The status and trends of receiving water quality conditions; and

   c. Plans for future monitoring efforts.

V. REGIONAL MONITORING REQUIREMENTS

Regional ocean water monitoring provides information about the sources, fates, and effects of anthropogenic contaminants in the coastal marine environment necessary to make assessments over large areas. The large-scale assessments provided by regional monitoring describe and evaluate cumulative effects of all anthropogenic inputs and enable better decision-making regarding protection of beneficial uses of ocean waters. Regional monitoring data assists in the interpretation of core monitoring studies by providing a more accurate and complete characterization of reference conditions and natural variability. Regional monitoring also leads to methods standardization and improved quality control through inter-calibration exercise. The coalitions implementing regional monitoring enable sharing of technical resources, trained personnel, and associated costs. Focusing these resources on regional issues and developing a broader understanding of pollutants effects in ocean waters enables the development of more rapid and effective response strategies. Based on all of these considerations the San Diego Water Board supports regional approaches to monitoring ocean waters.

The Discharger shall, as directed by the San Diego Water Board, participate with other regulated entities, other interested parties, and the San Diego Water Board in development and implementation of new and improved monitoring and assessment programs for ocean waters in the San Diego Region and discharges to those waters. These programs shall be developed and implemented so as to answer the following questions:

(1) What are the status and trends of conditions in ocean waters in the San Diego Region with regard to beneficial uses? For example:

   i. Are fish and shellfish safe to eat?

   ii. Is water quality safe for swimming?

   iii. Are ecosystems healthy?

(2) What are the primary stressors causing or contributing to conditions of concern?

(3) What are the major sources of the stressors causing or contributing to conditions of concern?

(4) Are the actions taken to address such stressors and sources effective (i.e., environmental outcomes)?

Development and implementation of new and improved monitoring and assessment programs for ocean waters will be guided by the following:

1. The Ocean Plan;
2. San Diego Water Board Resolution No. R9-2012-0069, *Resolution in Support of A Regional Monitoring Framework*;
3. San Diego Water Board staff report entitled *A Framework for Monitoring and Assessment in the San Diego Region*; and
4. Other guidance materials, as appropriate.

A. Kelp Bed Canopy Monitoring Requirements

Kelp consists of a number of species of brown algae. Along the central and southern California coast, giant kelp (*Macrocystis pyrifera*) is the largest species colonizing rocky, and in some cases sandy, subtidal habitats. Giant kelp is an important component of coastal and island communities in southern California, providing food and habitat for numerous animals. Monitoring of the kelp beds is necessary to answer the following questions:

(1) What is the maximum areal extent of the coastal kelp bed canopies each year?

(2) What is the variability of the coastal kelp bed canopy over time?

(3) Are coastal kelp beds disappearing? If yes, what are factors that could contribute to the disappearance?

(4) Are new coastal kelp beds forming?

The Discharger shall participate with other Southern California ocean dischargers in an ongoing regional survey of coastal kelp beds in the Southern California Bight. The intent of these surveys is to provide an indication of the health of these kelp beds, recognizing that the extent of kelp bed canopies may change due to a variety of influences.

Kelp beds shall be monitored by means of vertical aerial infrared photography to determine the maximum areal extent of the canopies of coastal kelp beds each year. Surveys shall be conducted as close as possible to when kelp bed canopies are at their greatest extent during the year. The entire San Diego Region coastline, from the international boundary to the San Diego Region/Santa Ana Region boundary shall be photographed on the same day.

Annually by October 1, the Discharger shall submit to the San Diego Water Board a report which summarizes the data, analyses, assessment, and images produced by the surveys. The report is a joint collaboration among multiple ocean dischargers in the Southern California (e.g., Regional 9 Kelp Survey Consortium member agencies). In addition to the kelp bed canopies, the images shall show onshore reference points, locations of all ocean outfalls and diffusers, artificial reefs, areas of known hard-bottom substrate (i.e., rocky reefs), and depth contours at intervals of 30-feet mean lower low water (MLLW). The report shall also be made available in a user-friendly format on a website that is readily available to the public.

The surveys shall be conducted on a "continuous improvement" basis, as needed improvements shall be made in monitoring, analysis, assessment, and/or documentation. For example, these could include:

1. More sophisticated analysis of patterns, correlations, and cycles that may be related to the extent of kelp bed canopies; or
2. Projects to improve understanding of influences on kelp beds or of how the extent of the canopies of various kelp beds has changed since the early 20th century.

B. Southern California Bight Monitoring Program Participation Requirements

The Discharger is required to participate in the Southern California Bight Regional Monitoring Program coordinated by the Southern California Coastal Water Research Project (SCCWRP), or any other coordinator named by the San Diego Water Board, pursuant to Water Code sections 13267 and 13383, and 40 CFR section 122.48. The intent of the Southern California Bight Regional Monitoring Program is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the Southern California Bight.

During these coordinated sampling efforts, a portion of the Discharger's receiving water sampling and analytical effort, as defined in section IV of this MRP, may be reallocated to provide a regional assessment of the impact of the discharge of wastewater to the Southern California Bight. In that event, the San Diego Water Board shall notify the Discharger in writing that a portion of the requirements to perform the receiving water sampling and analytical effort defined in section IV of this MRP is suspended for the duration of the reallocation. Anticipated modifications to the monitoring program will be coordinated so as to provide a more comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollution sources. The level of resources in terms of sampling and analytical effort redirected from the receiving water monitoring program required under section IV of this MRP shall approximately equal the level of resources provided to implement the regional monitoring and assessment program, unless the San Diego Water Board and the Discharger agree otherwise. The specific scope and duration of the receiving water monitoring program reallocation and redirection shall be determined in writing by the San Diego Water Board, in consultation with the Discharger.

VI. SPECIAL STUDIES REQUIREMENTS

A. Climate Change Action Plan

The Discharger shall prepare and submit a Climate Change Action Plan (CCAP) within three years of the effective date of this Order. The Discharger may make use of existing climate-change-related plans to comply with this requirement. Changing climate conditions may fundamentally alter the way wastewater facilities are designed and operated. Climate change research indicates the overarching driver of change is increased atmospheric carbon dioxide (CO_2) from human activity. The increased CO_2 emissions trigger changes to climatic patterns, which increase the intensity of sea level rise and coastal storm surges (Δ Sea Level), lead to more erratic rainfall and local weather patterns (Δ Weather Patterns), trigger a gradual warming of freshwater and ocean temperatures (Δ Water Temperature), and trigger changes to ocean water chemistry (Δ Water pH). The CCAP shall identify projected regional impacts on the Facilities and operations due to climate change if current trends continue. The CCAP shall also identify steps being taken or planned to address greenhouse gas emissions attributable to wastewater treatment plants, solids handling, and effluent discharge processes. The CCAP shall also identify steps being taken or planned to address flooding and sea level

rise risks; volatile rain period impacts (both dry and wet weather); challenges in accommodating high and low wastewater flows; impacts on process design parameters due to higher BOD_5, ammonia (as N), and TSS influent concentrations; impacts on wastewater treatment operations and quality; the potential need to adjust NPDES permit conditions and the Discharger's pollution control program; the financing needed to pay for planned actions; schedules to update the CCAP as more information on climate change and its effect become more available; and any other factors as appropriate.

B. Plume Tracking Monitoring Program

Plume tracking is a single study or ongoing program designed to assess dispersion and fate of the wastewater plume discharged from the OOO. The Plume Tracking Monitoring Program (PTMP) may be conducted either alone or in collaboration with other agencies discharging through the OOO (e.g., Fallbrook Public Utility District, City of Oceanside, Genentech, as well as agencies that discharge through the Encina and San Elijo ocean outfalls). The PTMP shall be designed to address, at minimum, the following questions:

(1) Are the current monitoring locations and methods adequate to determine whether the wastewater plume is encroaching on water recreational areas, including, but not limited to, areas used for swimming, scuba diving, surfing, and fishing? If not, what monitoring locations and/or methods are more appropriate?

(2) How does the brine discharge from the AWT; Genentech, Inc.; the City of Oceanside's Mission Basin Groundwater Purification Facility; Fallbrook's Santa Margarita Groundwater Treatment Plant, along with increased recycled water use and decreased outfall discharge flows, affect the dynamics of the wastewater plume and initial dilution?

(3) Does the wastewater plume have the potential to interact with wastewater plumes from other ocean outfalls or other sources of pollution, such as storm water?

(4) What is the fate of the wastewater plume in typical and atypical oceanographic conditions, and when and under what conditions is the wastewater plume no longer distinguishable from ambient receiving water?

(5) What parameters are most useful for assessing the presence of the wastewater plume?

(6) What is the variability in the degree of initial dilution that occurs under typical and atypical oceanographic conditions?

(7) At what distance is the wastewater plume no longer distinguishable from the ambient receiving water?

The Discharger shall develop and submit the following:

1. **Conceptual Site Model.** The Discharger shall construct a conceptual site model (CSM) based on available site-specific data such as the effluent quality at OOO, occurrence of waste constituents in the receiving water and sediment, and direction and magnitude of surface and subsurface currents. The CSM shall include three-dimensional spatial extent and temporal variability of the waste constituents in the receiving water; and the location and exposure points of actual and potential receptors (humans and marine life).

   The CSM shall be refined and updated as data becomes available. The initial CSM shall include a discussion of the level of uncertainty of conclusions, outline data gaps in the initial CSM, and describe the additional work needed to complete the CSM. Updates to

the CSM shall be included in the plume tracking semiannual progress reports required in section VI.B.4 of this MRP. The initial CSM shall be submitted to the San Diego Water Board with the work plan described in section VI.B.2 of this MRP.

2. **Plume Tracking Monitoring Program (PTMP) Work Plan.** The Discharger shall prepare and submit to the San Diego Water Board within 180 days of the effective date of this Order, a PTMP Work Plan designed to guide the collection of information to produce the PTMP described in section VI.B.3 of this MRP. The PTMP Work Plan shall include, but is not limited to, the following:

   a. Conceptual Site Model;

   b. Evaluation of available technologies that may assist with the PTMP;

   c. Specific questions that will be answered with the PTMP;

   d. A description of the approach to be taken for conducting a feasibility analysis for:

      i. Installation and operation by the Discharger of a permanent, real-time oceanographic mooring system located near the terminal diffuser structure of the OOO;

      ii. Utilizing advanced oceanographic sampling technologies such as an autonomous underwater vehicle (AUV) or remotely operated towed vehicle (ROTV) either alone or in conjunction with an OOO real-time mooring; and

      iii. An alternative method identified during the evaluation of available technologies that may assist with the PTMP.

   e. How the work on the PTMP will be divided amongst the participating agencies; and

   f. Schedule for completion of all activities and submission of a final PTMP as described in section VI.B.3 below.

   The Discharger shall present the submitted PTMP Work Plan at the next available San Diego Water Board meeting for the Board to consider the PTMP Work Plan for approval. The Discharger shall implement the PTMP Work Plan to develop the final PTMP as directed by the San Diego Water Board sixty (60) days after Board approval of the PTMP Work Plan. The Discharger shall notify the San Diego Water Board of the intent to initiate the proposed actions included in the PTMP Work Plan; and comply with any conditions set by the San Diego Water Board.

3. **Plume Tracking Monitoring Program (PTMP).** The Discharger shall, in consultation with the San Diego Water Board, prepare and submit a final PTMP, prepared in accordance with the approved PTMP Work Plan, to evaluate dispersion and fate of the wastewater plume discharged from the OOO. The PTMP shall include, but is not limited to, the following elements:

   a. A feasibility analysis, including an assessment of advantages, disadvantages, cost, usefulness, and effectiveness of the following:

      i. Installation and operation by the Discharger of a permanent, real-time oceanographic mooring system located near the terminal diffuser structure of the OOO. The mooring system shall be designed to measure, at minimum, direction and velocity of subsurface currents, and ocean stratification. If determined to be feasible, this element shall also include:

(a) A plan for implementation of the OOO real-time mooring system, including data acquisition and processing; and

(b) Provision for networking the OOO system to be compatible with similar systems being deployed by other dischargers in the San Diego Region, as well as a third-party system operated by the University of California, San Diego, Scripps Institution of Oceanography in the coastal waters off the City of Del Mar.

ii. Utilizing advanced oceanographic sampling technologies such as an AUV or ROTV either alone or in conjunction with an OOO real-time mooring system.

iii. An alternative approach proposed by the Discharger to answer the questions posed above for the PTMP, if applicable.

b. A detailed description of recommended actions;

c. A monitoring plan to implement the recommended actions; and

d. A detailed description and schedule for completion of all activities planned to implement the recommendations in the PTMP, and the schedule for submission of the final results of the PTMP as described in section VI.B.5 of this MRP.

The PTMP shall be submitted in accordance with the timeframe outlined in the approved PTMP Work Plan described in section VI.B.2 of this MRP.

4. **PTMP Implementation.** The Discharger shall initiate implementation of the PTMP within sixty (60) days after submission in accordance with the schedule contained in the PTMP, unless otherwise directed by the San Diego Water Board. The Discharger shall notify the San Diego Water Board of the intent to initiate the proposed actions included in the PTMP; and comply with any conditions set by the San Diego Water Board. The Discharger shall submit semiannual progress reports on implementation of the PTMP to the San Diego Water Board on February 1 and August 1 of each year.

5. **Plume Tracking Monitoring Reports.** The final results of the PTMP shall be submitted with the Receiving Water Monitoring Report and be included in the State of the Ocean report required in section IV.F of this MRP. The Receiving Water Monitoring Report shall include in-depth discussion, evaluation, interpretation, and tabulation of the project data. Report interpretations and conclusions shall include the state of the receiving waters around the OOO and the estimated locations of the OOO plume during the study.

6. **Receiving Water Monitoring Recommendations Report.** The Discharger shall submit a Receiving Water Monitoring Recommendations Report that includes recommendations for future shoreline, nearshore, and offshore monitoring locations. At minimum, the Discharger shall propose monitoring locations for monitoring stations S6, S7, N6, and N7. The Discharger shall also evaluate the feasibility of event-based monitoring, including collecting samples during certain oceanographic conditions at locations where the plume is most likely to occur. The Receiving Water Monitoring Recommendations Report shall be submitted to the San Diego Water Board no later than 180 days prior to the expiration date of this Order, unless an extension is granted by the San Diego Water Board.

VII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. The Discharger shall report all instances of noncompliance not reported under sections V.E, V.G, and V.H of the Standard Provisions (Attachment D) at the time monitoring reports are submitted.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website at http://www.waterboards.ca.gov/water_issues/programs/ciwqs/. The CIWQS website will provide additional information for SMR submittal in the event there will be a planned or unplanned service interruption for electronic submittal. SMRs must be signed and certified as required by section V of the Standards Provisions (Attachment D). The Discharger shall maintain sufficient staffing and resources to ensure it submits SMRs that are complete and timely. This includes provision for training and supervision of individuals on how to prepare and submit SMRs.
2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IV. The Discharger shall submit SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. 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-10. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	First day of second calendar month following month of sampling.
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following month of sampling.
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling.
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling.

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	August 1 February 1
Once during the permit term	Permit effective date	Permit term	No later than 180 days prior to the expiration date of this Order

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable reported Minimum Level (reported ML, also known as the Reporting Level, or RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR 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. 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 (± 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. **Compliance Determination.** Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined above and in Attachment A of this Order. For purposes of reporting and administrative enforcement by the San Diego Water Board and State Water Board, 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 ML.

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

   a. 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.

   b. 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.

7. 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 waste discharge requirements; 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. The Discharger shall add all violations of the waste discharge requirements in CIWQS under the “Violations” tab.

C. Discharge Monitoring Reports (DMRs)

The DMRs are USEPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports (eSMR) module eSMR 2.5 or any upgraded version. Electronic DMRs submittal shall be in addition to electronic SMR submittal. Information about electronic DMRs submittal is available at the DMR website at:
http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring.

D. Other Reports

The following reports are required under Special Provisions (sections VI.A and VI.C of this Order), sections I, III, IV, V, and VI of this MRP, and the California Code of Regulations (CCR). The reports shall be submitted to the San Diego Water Board using the State Water Board’s CIWQS program website, unless otherwise noted. The reports must be signed and certified as required by section V of the Standards Provisions (Attachment D). The CIWQS website will provide additional information for SMR submittal in the event of a planned or unplanned service interruption for electronic submittal.

Table E-11. Other Reports

Report	Location of requirement	Due Date
ROWD (for reissuance)	Table 3 and Section VI.A.2.b	No later than 180 days before the Order expiration date[1]
Treatment Plant Capacity Report	Section VI.C.5.a	Four years prior to reaching plant design capacity[1]
Annual Industrial Waste Survey	Section VI.C.5.b.ii	Annually no later than March 1
Annual Biosolids Report	Section VI.C.5.c.viii	Annually no later than February 19
DMR-QA Study	Section I.G of this MRP	Annually no later than December 31[2]
Initial Investigation TRE Work Plan	Section III.C.6 of this MRP	Within 90 days of the effective date of this Order
Sediment Monitoring Work Plan	Section IV.C.4 of this MRP	Within 180 days of the effective date of this Order
CEDEN	Section IV.E of this MRP	Annually no later than March 1
Receiving Water Monitoring Report	Sections IV.F.1 and IV.F.2 of this MRP	No later than 180 days prior to the expiration date of this Order
State of the Ocean Report	Section IV.F.3 of this MRP	No later than 180 days prior to the expiration date of this Order
Kelp Bed Canopy Report	Section V.A of this MRP	Annually no later than October 1
CCAP	Section VI.A of this MRP	No later than three years of the effective date of this Order
Plume Tracking Monitoring Program Work Plan	Section VI.B.2 of this MRP	Within 180 days of the effective date of this Order
Plume Tracking Monitoring Program	Section VI.B.3 of this MRP	As specified in the Plume Tracking Monitoring Plan Work Plan
Plume Tracking Semiannual Progress Report	Section VI.B.4 of this MRP	After implementation of PTMP January 1 through June 30: due August 1 July 1 through December 31: due February 1
Receiving Water Monitoring Recommendations Report	Section VI.B.6 of this MRP	No later than 180 days prior to the expiration date of this Order
Sanitary Sewer Overflow (SSO) Reports	Section III.A.2, Table H-2	See Section III.A.2, Table H-2
Collection System Questionnaire	Section III.A.2, Table H-2	Every 12 Months

[1] Submit in person or by mail to the San Diego Water Board office (2375 Northside Drive. Suite 100, San Diego, CA 92108) or by email at SanDiego@waterboards.ca.gov.

[2] See section I.H. of this MRP for instructions on how to submit the study.

ATTACHMENT F – FACT SHEET

CONTENTS

TABLES

ATTACHMENT F – FACT SHEET

As described in section II.B of this Order, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) incorporates this Fact Sheet as findings of the San Diego Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	9 000001182	
Discharger	Marine Corps Base, Camp Pendleton	
Name of Facility	Southern Regional Tertiary Treatment Plant and Advanced Water Treatment Plant at Haybarn Canyon	
Facility Address	Southern Regional Tertiary Treatment Plant (SRTTP)	Building 200831 Camp Pendleton, CA 92055 San Diego County
	Advanced Water Treatment Plant at Haybarn Canyon (AWT)	Building 2470B1 Camp Pendleton, CA 92055 San Diego County
Facility Contact, Title and Phone	Joel Heywood, Assistant Director for Operations and Maintenance	
Authorized Person to Sign and Submit Reports	John O. Simpson, Director, Water Resources Division, (760) 725-1059 Joel Heywood, Assistant Director for Operations and Maintenance	
Mailing Address	Building 2291 Box 555013, Camp Pendleton, CA 92055	
Billing Address	Same as mailing address	
Type of Facility	Wastewater treatment facility for military base (federal facility, SIC No. 4952) and groundwater treatment facility	
Major or Minor Facility	Major	
Threat to Water Quality	1	
Complexity	A	
Pretreatment Program	No – source control program	
Recycling Requirements	Producer and distributor (regulated under separate waste discharge requirements (WDRs))	
Facility Permitted Flow	SRTTP and AWT: 3.6 million gallons per day (MGD)	
Facility Design Flow	SRTTP: 7.5 MGD	
Watershed	Pacific Ocean	
Receiving Water	Pacific Ocean	
Receiving Water Type	Ocean waters	

A. The Marine Corps Base, Camp Pendleton (Discharger) is the owner and operator of the SRTTP and the associated pump stations/land outfalls; together these facilities comprise a federally-owned wastewater treatment facility. The Discharger also owns and operates the AWT, which treats groundwater for municipal potable water supply, and the associated pump stations/land outfalls with the AWT brine discharge. The SRTTP, the AWT, and the associated pump stations/land outfalls are collectively referred to as the Facilities.

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 Facilities discharge tertiary-treated wastewater and waste brine to the Pacific Ocean, a water of the United States. The Discharger was previously regulated by Order No. R9-2013-0112 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0109347 adopted on November 13, 2013 and expired on December 31, 2018. Attachment B provides a map of the area around the Facilities. Attachment C provides flow schematics of the Facilities.

C. The Discharger filed a report of waste discharge (ROWD) and submitted an application for reissuance of its WDRs and NPDES permit on June 11, 2018. The application was deemed complete on July 25, 2018. The San Diego Water Board conducted a site visit on November 29, 2016 for the SRTTP; on February 15, 2017 for the SRTTP's sewage collection system; and on October 18, 2018 for the AWT, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

D. Regulations at title 40 of the Code of Federal Regulations (40 CFR) section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. However, pursuant to California Code of Regulations (CCR), title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

II. FACILITY DESCRIPTION

The SRTTP treats wastewater from the southern portion of the Marine Corps Base, Camp Pendleton (MCBCP). The source of the influent into the SRTTP is primarily domestic in nature from residences, commercial areas, and offices. The SRTTP service area has an estimated population of 60,758 which includes active duty military residents; dependents residing on-base; military personnel either training on the installation or working on the installation but living off-base; and civilian staff and visitors.

The Discharger identified two major industrial discharges to the SRTTP: the 21 Area Oily Waste System and the 31 Area Mess Hall Building 3120. Minor industrial sources have been identified as the Naval Hospital Camp Pendleton, dental clinics, food service establishments, non-closed loop wash racks, self-regenerating water softeners, and the North County Transit District Stuart Mesa Maintenance Facility. Irregular discharges into the SRTTP's sanitary sewer system are managed through the MCBCP's source control program. Such discharges can include groundwater from construction activities, treated groundwater from cleanup sites, grey water generated during military field exercises, and hydrostatic test waters.

The Discharger withdraws groundwater from within the Ysidora Hydrologic Area for treatment at the South Water System Iron/Manganese Water Treatment Plant 240162 (IM Plant 24). After the IM Plant 24, the Discharger further treats the groundwater at the AWT for potable water consumption.

A. Description of Wastewater and Biosolids Treatment and Controls

1. Southern Regional Tertiary Treatment Plant (SRTTP)

The SRTTP headworks consists of the coarse bar screens, influent pump station wet-well, flow meter, fine drum screens, grit collectors, drain pump station to receive the SRTTP return flows, and (if necessary, to neutralize phosphorous) alum feed system. As an added design enhancement, if the influent pump station should go down for any reason, flow will automatically be diverted to the Lemon Grove Impoundment Basins for containment to prevent a spill.

The effluent from the grit collectors gravity-flows into secondary treatment (sequencing batch reactors, SBR). The SBRs operate in four different sequences or steps which are fill, react/compressed air, settle, and decant. A methanol feed system is available to provide supplemental carbon to the SBRs through a dedicated line at each SBR.

The SRTTP's tertiary treatment process includes three flow equalization basins (total storage capacity of one million gallons), filter feed pumps, disk filters, sodium hypochlorite generation system, disinfection contact basins, and recycled water pumps and metering facilities. The Discharger sends the disinfected tertiary-treated wastewater into the MCBCP's recycled water distribution system for landscape irrigation under the Master Recycling Permit Order No. R9-2018-0023[1]. The MCBCP has four designated reuse sites: 11 Area Sport Activity Field – Mission hydrologic subarea (HSA) 903.10, Horse Pasture – Mission HSA 903.10, Marine Memorial Golf Course Mission HSA 903.10, and Front Gate – Lower Ysidora HSA 902.10. The Discharger also pumps the disinfected tertiary-treated wastewater to the Red Beach disposal area and the new Ysidora Flats injection field to function as a seawater intrusion barrier under the Master Recycling Permit Order No. R9-2018-0023. The Discharger also uses the tertiary-treated wastewater in the SRTTP's industrial/process water system.

Between the disk filters and the disinfection contact basins, the SRTTP has an overflow weir structure that can send the filtered/unchlorinated flow to the Oceanside Ocean Outfall Pump Station (OOOPS). However, during daily peak flow operating conditions when effluent demands exceed the SRTTP's discharge flow limit through the OOOPS and when sufficient recycled water demand is not available, the overflow weir structure sends some or all of the filtered/unchlorinated flow to Lemon Grove Impoundment Basins. From the Lemon Grove Impoundment Basins, during daily low flow periods, the Discharger can send the flow to the drain pump station/headworks, disk filters, disinfection contact basins, or the overflow weir structure/OOOPS.

The Discharger pumps grit and debris from the grit collectors to the grit classifiers located adjacent to the influent pump station. In the grit classifiers, grit and debris is washed to remove organics and then discharged to a roll-off container for disposal in the MCBCP Las Pulgas Landfill. The grit slurry supernatant is returned to the drain pump station/headworks. The SRTTP's biosolids processing facilities include a waste activated sludge holding tank, three aerobic digesters for sludge stabilization, gravity belt thickener for sludge thickening, centrifuges for sludge dewatering, and an onsite biosolids storage facility. If the sludge is non-hazardous, the Discharger send the biosolids to the municipal landfill.

[1] Order No. R9-2018-0023, Master Recycling Permit for the United States Marine Corps Base Camp Pendleton, Southern Regional Tertiary Treatment Plant, San Diego County, adopted by the San Diego Water Board on May 9, 2018.

The SRTTP design capacity is 7.5 MGD. From January 2014 to June 2019, the average influent flow to the SRTTP was 2.0 MGD and the average effluent flow from the SRTTP to the Oceanside Ocean Outfall (OOO) was 1.6 MGD. From January 2014 to June 2019, the Discharger sent an annual average 0.4 MGD to reuse sites for irrigation.

2. Advanced Water Treatment Plant at Haybarn Canyon (AWT)

The treatment systems for the AWT consists of liquid granulated activated carbon (LGAC), which is currently non-operational; cartridge filters/reverse osmosis (RO), which treats a portion of the groundwater to achieve a total dissolved solids concentration of less than 350 milligram per liter (mg/L); and corrosion control (CCT) chemical injection systems.

The brine pump station at the AWT sends the RO concentrate (waste brine) from the RO trains to the OOOPS through a 16-inch diameter land outfall that runs along Vandegrift Boulevard for approximately seven miles. The AWT also includes a 3-million-gallon emergency Brine Storage Reservoir to be used if the Discharger is unable to send the waste brine to the OOOPS. If waste brine is sent to the Brine Storage Reservoir, the waste brine is later released from the Brine Storage Reservoir directly to the 16-inch diameter land outfall, downstream from the effluent sampling point (Monitoring Location EFF-003).

The AWT has a potable water production design capacity of 8.64 MGD which results in less than 2 MGD of waste brine. The Discharge requested a maximum brine flow of 1.73 MGD. From January 2014 to June 2019, the average brine flow from the AWT to the OOO ranged from 0 to 0.38 MGD. In 2018, the Discharger produced an average 4.5 MGD of potable water from the AWT.

B. Discharge Points and Receiving Waters

The filtered/unchlorinated secondary-treated wastewater from the SRTTP and the waste brine from the AWT commingle at the OOOPS, which is located at the SRTTP. From the OOOPS, a 16-inch ductile iron land outfall conveys the effluent to the OOO, where the land outfall connects to the OOO on South Pacific Street just north of the mouth of the Loma Alta Creek. The Discharger is responsible for the operation and maintenance of the land outfall up to the border of the City of Oceanside on Harbor Boulevard at Carmello Street. The City of Oceanside (City) maintains the land outfall within the city limits.

At the OOO, the effluent from the Discharger commingles with the effluent from the City's San Luis Rey Water Reclamation Facility; the City's La Salina Wastewater Treatment Plant; the City's Mission Basin Groundwater Purification Facility; Genentech Inc.; and the Fallbrook Public Utility District's Fallbrook Water Reclamation Plant.[2]

[2] Wastewater and waste brine from the City is regulated by separate WDRs, Order No. R9-2019-0166, NPDES No. CA0107433, Waste Discharge Requirements for the City Of Oceanside, San Luis Rey Water Reclamation Facility, La Salina Wastewater Treatment Plant, and Mission Basin Groundwater Purification Facility Discharges to the Pacific Ocean via the Oceanside Ocean Outfall.
Waste brine from Genentech, Inc. is regulated by separate WDRs, Order No. R9-2019-0168, NPDES No. CA0109193, Waste Discharge Requirements for Genentech Inc., Discharge to the Pacific Ocean via the Oceanside Ocean Outfall).
Effluent from the Fallbrook Water Reclamation Plant is regulated by separate WDRs, Order No. R9-2019-0169, NPDES No. CA0108031, Waste Discharge Requirements for the Fallbrook Public Utility District Wastewater Treatment Plant No. 1 Discharge to the Pacific Ocean via the Oceanside Ocean Outfall).

The City owns and operates the OOO which starts just north of the mouth of the Loma Alta Creek and east of South Pacific Street. The OOO extends southwesterly approximately 8,850 feet offshore to a depth of approximately 100 feet. The OOO is a steel pipe with a 1-inch-thick cement mortar interior lining and 2.75-inch-thick cement mortar outer jacket. In the letter dated May 1, 2014, the City reported that the average effective internal diameter of the OOO, considering the muck and sediment buildup, is 34.3 inches. The OOO terminates with a 230-foot diffuser collinear with the rest of the outfall and extends to a depth of approximately 108 feet. The diffuser has fourteen 5-inch-diameter ports and ten 4-inch-diameter ports. The terminus of the diffuser is located at Latitude 33˚ 09' 46" North, Longitude 117˚ 23' 29" W.

As the owner/operator, the City has the ability to control discharges to the OOO. The City has a contract with the Fallbrook Public Utility District to discharge an average annual flowrate of 2.7 MGD of treated wastewater from the Fallbrook Water Reclamation Plant through the OOO, subject to WDRs contained in Order No. R9-2019-0169 (NPDES No. CA0108031). The City has a contract with the Discharger to discharge up to 3.6 MGD of disinfected secondary-treated and tertiary-treated wastewater from the Southern Regional Tertiary Treatment Plant and waste brine from the Advanced Water Treatment Plant at Haybarn Canyon to the Pacific Ocean through the OOO, subject to WDRs contained in this Order. As of 2008, the City has a contract with Genentech Inc. to discharge a wastewater flow up to 1.396 MGD to the San Luis Rey Water Reclamation Facility and to discharge brine flow up to 0.85 MGD to the OOO, subject to WDRs contained in Order No. R9-2019-0166. In the letter dated May 1, 2014, the City reported that, due to the muck, sediment, and biological growth buildup in the OOO resulting in high friction losses in the OOO, the capacity of the OOO is 41.5 MGD.

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

Effluent limitations contained in Order No. R9-2013-0112 for discharges from the Facilities and representative monitoring data obtained at Monitoring Locations EFF-001 (Discharge Point No. 001), EFF-002, EFF-003 are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data at EFF-001[1]

Parameter	Units	Effluent Limitation[2,3]				Monitoring Data (From January 2014 To June 2019)			
		Six-Month Median	30-Day Average	Maximum Daily	Instantaneous Maximum	Highest Six-Month Median Discharge	Highest 30-Day Average Discharge	Highest Maximum Daily Discharge	Highest Instantaneous Maximum
Flow	MGD	--	3.6[4]	--	--	--	2.6[4]	--	--
Chronic Toxicity[5]	Chronic Toxicity Unit (TUc)	--	--	88	--	--	--	<21.9	--
Copper, Total Recoverable	microgram per liter (µg/L)	9.00E+01	--	8.82E+02	2.47E+03	8.26E+00	--	1.11E+01	1.11E+01

Parameter	Units	Effluent Limitation[2,3]				Monitoring Data (From January 2014 To June 2019)			
		Six-Month Median	30-Day Average	Maximum Daily	Instantaneous Maximum	Highest Six-Month Median Discharge	Highest 30-Day Average Discharge	Highest Maximum Daily Discharge	Highest Instantaneous Maximum
	pound per day (lbs/day)	2.70E+00	--	2.65E+01	7.40E+01	4.7E-01	--	1.9E-01	1.2E-01
Total Chlorine Residual	µg/L	1.76E+02	--	7.04E+02	5.28E+03	<1.0E+02	--	4.6E+03	4.6E+03
	lbs/day	5.28E+00	--	2.11E+01	1.59E+02	<2.9E+00	--	6.3E+00	8.2E+01
Endrin	µg/L	1.76E-01	--	3.52E-01	5.28E-01	<1.0E-02	--	<9.7E-03	<1.0E-02
	lbs/day	5.28E-03	--	1.06E-02	1.59E-02	<1.2E-04	--	<1.2E-04	<1.2E-04
HCH	µg/L	3.52E-01	--	7.04E-01	1.06E+00	<1.0E-02	--	<9.7E-03	<1.1E-02
	lbs/day	1.06E-02	--	2.11E-02	3.17E-02	2.2E-04	--	2.2E-04	2.2E-04
Aldrin	µg/L	--	1.94E-03	--	--	--	<2.5E-03	--	--
	lbs/day	--	5.81E-05	--	--	--	<2.8E-05	--	--
Beryllium, Total Recoverable	µg/L	--	2.90E+00	--	--	--	<1.0E-01	--	--
	lbs/day	--	8.72E-02	--	--	--	<1.1E-03	--	--
Dieldrin	µg/L	--	3.52E-03	--	--	--	<5.1E-03	--	--
	lbs/day	--	1.06E-04	--	--	--	<5.6E-05	--	--
Heptachlor	µg/L	--	4.40E-03	--	--	--	<5.1E-03	--	--
	lbs/day	--	1.32E-04	--	--	--	<5.6E-05	--	--
Heptachlor Epoxide	µg/L	--	1.76E-03	--	--	--	<5.1E-03	--	--
	lbs/day	--	5.28E-05	--	--	--	<5.6E-05	--	--
Hexachloro-benzene	µg/L	--	1.85E-02	--	--	--	<5.1E-01	--	--
	lbs/day	--	5.55E-04	--	--	--	<5.1E-03	--	--
Polynuclear Aromatic Hydrocarbons (PAHs)	µg/L	--	7.74E-01	--	--	--	<5.0E+00	--	--
	lbs/day	--	2.33E-02	--	--	--	<5.6E-02	--	--
Polychlorinated Biphenyls (PCBs)	µg/L	--	1.67E-03	--	--	--	<2.5E-01	--	--
	lbs/day	--	5.02E-05	--	--	--	<2.1E-03	--	--
TCDD equivalents	µg/L	--	3.43E-07	--	--	--	8.96E-08	--	--
	lbs/day	--	1.03E-08	--	--	--	1.2E-12	--	--
Toxaphene	µg/L	--	1.85E-02	--	--	--	<1.1E-02	--	--
	lbs/day	--	5.55E-04	--	--	--	<3.9E-04	--	--

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] Mass emission rate (MER) effluent limitations are based on the permitted flow rate for the Facilities (3.6 MGD).

[3] Scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates that position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the

"E" indicate that the value is greater than 1. In this notation a value of 6.1 E-02 represents 6.1 x 10^{-2} or 0.061, 6.1E+02 represents 6.1 x 10^{2} or 610, and 6.1E+00 represents 6.1 x 10^{0} or 6.1.

[4] Applied as an Average Monthly

[5] Chronic toxicity expressed as Chronic Toxicity Units (TUc) = 100/NOEL, where NOEL (No Observed Effect Level) is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism.

Table F-3. Historic Effluent Limitations and Monitoring Data at EFF-002[1]

Parameter	Units	Effluent Limitation[2]			Monitoring Data (From January 2014 To June 2019)		
		Average Monthly	Average Weekly	Instantaneous Maximum	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Instantaneous Maximum
Biochemical Oxygen Demand (5-Day @ 20°C) (BOD_5)	milligram per liter (mg/L)	30	45	--	3.81	6.28	--
	lbs/day	901	1,351	--	63	91	--
	% Removal	85[3]	--	--	83[3]	--	--
Total Suspended Solids (TSS)	mg/L	30	45	--	4.4	9.8	--
	lbs/day	901	1,351	--	46	110	--
	% Removal	85[3]	--	--	89[3]	--	--
pH	standard units	--	--	6.0 – 9.0[4]	--	--	6.6 – 7.9[4]
Oil and Grease	mg/L	25	40	75	<1.31	<1.31	<1.31
	lbs/day	361	557	1,082	<6	<14	<6
Settleable Solids	milliliter per liter (ml/L)	1.0	1.5	3.0	<0.2	0.34	26
Turbidity	nephelometric turbidity unit (NTU)	75	100	225	3.25	53.7	53.7

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] MER effluent limitations are based on the permitted flow rate for the Facilities (3.6 MGD).

[3] Lowest average monthly percent removal.

[4] Minimum and maximum value.

Table F-4. Historic Effluent Limitations and Monitoring Data at EFF-003[1]

Parameter	Units	Effluent Limitation[2]			Monitoring Data (From January 2014 To June 2019)		
		Average Monthly	Average Weekly	Instantaneous Maximum	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Instantaneous Maximum
TSS	mg/L	60	--	--	1.3	--	--
	lbs/day	866	--	--	7.6	--	--
pH	standard units	--	--	6.0 – 9.0[3]	--	--	6.4 – 8.2[3]
Oil and Grease	mg/L	25	40	75	6.51	6.51	6.51
	lbs/day	361	557	1,082	16.3	16.3	16.3

Parameter	Units	Effluent Limitation[2]			Monitoring Data (From January 2014 To June 2019)		
		Average Monthly	Average Weekly	Instantaneous Maximum	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Instantaneous Maximum
Settleable Solids	ml/L	1.0	1.5	3.0	<0.2	<0.2	<0.2
Turbidity	NTU	75	100	225	0.3	3.74	3.74

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] MER effluent limitations are based on a flow rate of 1.73 MGD.

[3] Minimum and maximum value.

D. Compliance Summary

As of August 2019, the Discharger has reported the following violations of Order No. R9-2013-0112.

1. Order No. R9-2013-0112, section III.A prohibits the discharge of waste from the Facilities to a location other than the OOO (Discharge Point No. 001), unless specifically regulated by this Order or separate WDRs.
   a. On April 20, 2015, 25 gallons of tertiary-treated wastewater spilled from air relief valve (ARV) no. 3 at the MCBCP. The ARV was disassembled, inspected, cleaned, and returned to service that same day.
   b. On July 10, 2017, 1,496 gallons of tertiary-treated wastewater spilled from ARV No. 1 at the MCBCP. A cracked seal was repaired, and the valve was returned to service July 11, 2107
2. Order No. R9-2013-0112, section IV.A.1.a, Table 5, states that the instantaneous maximum effluent limitation for settleable solids is 3.0 ml/L at Monitoring Location EFF-002. The Discharger exceeded this limitation with reported values of 8.5 to 26 ml/L in December 2015. To address this issue, the Discharger increased the air loading and added polymer to improve solids settling within the sequence batch reactor.
3. As required by Order No. R9-2013-0112, section VI.C.2.b,iv, the Discharger is required to include a detailed summary of spills in the monthly self-monitoring report (SMR) for the month in which the spill occurred. If no spills occurred during the calendar month, the Discharger is required to report no spills in the monthly SMR for that calendar month. On October 31, 2016, the Discharger had not included any spill logs in its monthly SMRs.
4. Order No. R9-2013-0112, Attachment D, section I.D states, “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.” On February 25, 2015, 7,000 gallons of digester sludge spilled at the SRTTP Digester No. 3. The spill was recovered. The Discharger developed a standard operating procedure (SOP) for temporary pumping operations and conducted training to avoid future occurrences.
5. Order No. R9-2013-0112, Attachment E, section III, Table E-2, states that BOD_5 and TSS shall be monitored five times per week at Monitoring Location INF-001. The Discharger only reported three monitoring results for the week of May 11, 2014 at Monitoring Location INF-001 and thus did not meet the minimum monitoring

requirements. The Discharger stated that this was the result of a power unit failure and replaced the power unit.

6. Order No. R9-2013-0112, Attachment E, section IV.B, Table E-4, states that turbidity shall be monitored once per week at Monitoring Location EFF-002. During the following weeks, the Discharger did not include any turbidity monitoring results at Monitoring Location EFF-002 and thus did not meet the minimum monitoring requirements: December 6, 2015; May 8, 2016; June 5, 2016; and October 9, 2016.

7. Order No. R9-2013-0112, Attachment E, section X.B.3, Table E-15, states that the monthly SMRs are due the first day of the second calendar month following the month of sampling. The October 2016 monthly report was submitted past the due date of December 1, 2016 on December 7, 2016.

E. Planned Changes

As noted in its ROWD, the Discharger has no planned changes to the Facilities during the term of this Order.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (Water Code) (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U. S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.

B. California Environmental Quality Act (CEQA)

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

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

1. **Water Quality Control Plan.** The San Diego Water Board adopted a *Water Quality Control Plan for the San Diego Basin* (Basin Plan) on September 8, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Pacific Ocean and other receiving waters addressed through the plan. Subsequent revisions to the Basin Plan have also been adopted by the San Diego Water Board and approved by the State Water Board. Beneficial uses applicable to the Pacific Ocean specified in the Basin Plan are summarized in Table F-5 below:

Table F-5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Pacific Ocean	Industrial service supply (IND); navigation (NAV); water contact recreation (REC-1); non-contact recreation (REC-2); commercial and sport fishing (COMM); preservation of biological habitats of special significance (BIOL); wildlife habitat (WILD); rare, threatened, or endangered species (RARE); marine habitat (MAR); aquaculture (AQUA); migration of aquatic organisms (MIGR); spawning, reproduction, and/or early development (SPWN); and shellfish harvesting (SHELL).

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

2. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, 2009, 2012, 2015, and 2018. The State Water Board adopted the latest amendment on August 7, 2018, the USEPA approved the amendments on March 22, 2019, and it became effective on March 22, 2019. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized in Table F-7 below:

Table F-6. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001	Pacific Ocean	IND; REC-1; REC-2, including aesthetic enjoyment; NAV; COMM; mariculture; preservation and enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; MAR; fish migration; fish spawning; and SHELL.

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

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

4. **Antidegradation Policy.** Federal regulation 40 CFR section 131.12 requires that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is

justified based on specific findings. The San Diego Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution 68-16.

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

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

7. **Sewage Sludge and Biosolids.** This Order does not authorize any act that results in violation of requirements administered by USEPA to implement 40 CFR part 503, *Standards for the Use or Disposal of Sewage Sludge*. These standards regulate the final use or disposal of sewage sludge that is generated during the treatment of domestic sewage in a municipal wastewater treatment facility. The Discharger is responsible for meeting all applicable requirements of 40 CFR part 503 that are under USEPA's enforcement authority.

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

In August 2018, USEPA-approved the list of impaired water bodies, prepared by the State Water Board pursuant to CWA section 303(d), which are not expected to meet applicable water quality standards after implementation of technology-based effluent limitations (TBELs) for point sources. The 303(d) list for waters in the Pacific Ocean in the vicinity of the OOO include:

1. 0.3 miles of Pacific Ocean shoreline, San Luis Rey Hydrologic Unit (HU), at San Luis Rey River mouth for indicator bacteria (enterococcus for REC-1 and total coliform for SHELL);
2. 0.3 miles of Pacific Ocean shoreline, San Luis Rey HU, Oceanside Pier for trash; and
3. 0.3 miles of Pacific Ocean shoreline, Loma Alta HSA, at Loma Alta Creek mouth for indicator bacteria and trash

Currently, there is no effective total maximum daily load (TMDL) to address the specific impairments listed above. The San Diego Water Board is addressing the water quality impairments and will develop appropriate regulatory actions for each impairing pollutant in each listed waterbody. These actions may include the adoption of a TMDL.

E. Other Plans, Polices, and Regulations

1. **Secondary Treatment Regulations.** Part 133 of 40 CFR establishes the minimum levels of effluent quality to be achieved by secondary treatment. These limitations,

established by the USEPA, are incorporated into this Order, except where more stringent limitations are required by other applicable plans, policies, or regulations.

2. **Storm Water.** Pursuant to Order No 2014-0057-DWQ, NPDES Permit No. CAS000001, *General Permit for Storm Water Discharges Associated with Industrial Activities* (Storm Water Order), sewerage treatment plants are classified (per Occupational Safety and Health Administration) as Standard Industrial Classification (SIC) code 4952 or Sewerage Systems. SIC code 4952 (https://www.waterboards.ca.gov/water_issues/programs/stormwater/sicnum.shtml) falls within the Regulated SIC Code for enrollment under the Storm Water Order. The eligibility for enrollment under the Order is not based on treatment design flow or capacity of the sewerage treatment plants. It is the industrial activity that is regulated. The SRTTP have the SIC code 4952 and is enrolled under the Storm Water Order.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

A. Discharge Prohibitions

This Order retains the discharge prohibitions from Order No. R9-2013-0112 as described below. Discharges from the Facilities to surface waters in violation of prohibitions contained in this Order are violations of the CWA and therefore are subject to third party lawsuits. Discharges from the Facilities to land in violation of prohibitions contained in this Order are violations of the Water Code and are not subject to third party lawsuits under the CWA because the Water Code does not contain provisions allowing third party lawsuits.

1. Order No. R9-2013-0112 contained Discharge Prohibition III.A, which clearly defined what types of discharges are prohibited. This prohibition has been retained in this Order as Discharge Prohibitions III.A and III.B.

2. Order No. R9-2013-0112 contained Discharge Prohibitions III.B and III.C, which required compliance with the discharge prohibitions of the Ocean Plan and Basin Plan, respectively. These prohibitions have been retained in this Order as Discharge Prohibitions III.C and III.D.

B. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. TBELs are based on several levels of control, including:

a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or

subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory. BAT standards apply to toxic and nonconventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD_5, TSS, total coliform, pH, and oil and grease. The BCT standard is established after considering the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources. The Discharger is in the planning phase for new equipment for the Industrial Plant. The new equipment will treat the same wastewater and, thus, will not be a new source subject to NSPS requirements.

The CWA requires USEPA to develop effluent limitations, guidelines, and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. CWA section 402(a)(1) and 40 CFR section 125.3 authorize the use of Best Professional Judgment (BPJ) to derive TBELs on a case-by-case basis where ELGs are unavailable for certain industrial categories or pollutants of concern. Where BPJ is used, specific factors outlined in 40 CFR section 125.3 must be considered. Because the SRTTP is designed and used to treat sanitary waste, secondary treatment standards for BOD_5, TSS, and pH established at 40 CFR part 133 are appropriate and represent BPT and BCT. Based on BPJ, this Order retains the TBELs from Order No. R9-2013-0112 for BOD_5, TSS, and pH.

Table F-7. Factors Considered Pursuant to 40 CFR section 125.3(d)

Factors	Considerations
The reasonableness of costs relative to the benefits derived.	The cost of imposing these limitations is reasonable given that the Discharger can comply without modifying its existing process.
The comparison of the cost and level of reduction of such pollutants from the discharge from a federally owned treatment works to the cost and level of reduction of such pollutants from publicly-owned treatment works (POTW).	The facility provides secondary treatment of municipal and industrial wastewater; therefore, the cost of continuing its operations is comparable to the cost of operating a comparable POTW that treats sanitary wastewater.
Age of equipment and facilities.	The limitations can be met with existing equipment and facilities.
Process employed.	The limitations can be met with the existing process.
Engineering aspects of various controls.	The existing controls are capable of meeting the limitations.
Process changes.	No process changes are necessary to meet the limitations.
Non-water quality environmental impacts.	Because no process changes are necessary, no non-water quality impacts are foreseeable.

Thus, the discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR part 133. Discharges must also meet TBELs based on Ocean Plan Table 4.

In compliance with 40 CFR sections 122.45(f)(1) and 423.15, mass-based limitations have also been established in this Order for conventional, nonconventional, and toxic pollutants, with some exceptions. Section 122.45(f)(2) of 40 CFR allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass-based limitations provided in 40 CFR section 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature.

Mass-based effluent limitations were calculated using the following equation:
lbs/day = flow (MGD) x pollutant concentration (mg/L) x 8.34

2. Applicable Technology-Based Effluent Limitations

a. **Federal Regulations.** Part 133 of 40 CFR establishes the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD_5 and TSS. Consistent with Order No. R9-2013-0112, this Order includes effluent limitations for BOD_5 and TSS.

Section 133.102 of 40 CFR, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal of BOD_5 and TSS shall not be less than 85 percent. Consistent with Order No. R9-2013-0112, this Order contains limitations requiring an average of 85 percent removal of BOD_5 and TSS over each calendar month.

The secondary treatment regulations at 40 CFR part 133 also require that pH be maintained between 6.0 and 9.0 standard units.

These TBELs based on secondary treatment standards are applicable to the SRTTP prior to commingling with any other wastewater. Thus, compliance with these effluent limitations must be determined at Monitoring Location EFF-002, upstream of the location where these wastewaters commingle with other wastewaters.

Section 122.45(d) of 40 CFR require that all permit limitations be expressed, unless impracticable, as average monthly effluent limitations (AMELs) and average weekly effluent limitations (AWELs) for wastewater facilities. TBELs based on secondary treatment standards for BOD_5, TSS, and pH are summarized in Table F-8 below, applying AMELs in lieu of 30-day average and AWELs in lieu of 7-day average.

Table F-8. Summary of TBELs Based on Secondary Treatment Standards[1]

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Instantaneous Minimum	Instantaneous Maximum
BOD_5	mg/L	30	45	--	--
	% Removal	≥85	--	--	--
TSS	mg/L	30	45	--	--
	% Removal	≥85	--	--	--
pH	standard units	--	--	6.0	9.0

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

b. **Ocean Plan.** The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. Therefore, the discharge of wastewater to the Pacific Ocean at Discharge Point No. 001 is subject to the Ocean Plan.

The Ocean Plan establishes water quality objectives, general requirements for management of waste discharged to the ocean, effluent quality requirements for waste discharges, discharge prohibitions, and general provisions. Further, Table 4 of the Ocean Plan establishes TBELs for POTWs and industrial facilities for which effluent limitation guidelines (ELGs) have not been established. As stated in section IV.B.1 of this fact sheet, because the SRTTP is designed and used to treat sanitary waste, numeric effluent limitations based on Table 4 of the Ocean Plan are being carried over from Order No. R9-2013-0112 for the SRTTP, at Monitoring Location EFF-002. Because the ELGs have not been established for waste brine, numeric effluent limitations based on Table 4 of the Ocean Plan are being carried over from Order No. R9-2013-0112 for the AWT, at Monitoring Location EFF-003.

Because secondary treatment standards contain effluent limitations for TSS that are more stringent than Table 4of the Ocean Plan, the more stringent effluent limitations for TSS will be applied to discharges from the SRTTP.

Table 4 of the Ocean Plan requires dischargers to, as a monthly average, achieve a percent removal of 75 percent for suspended solids from the influent stream before discharging wastewater to the Pacific Ocean, except that the effluent limitation to be met shall not be less than 60 mg/L. The brine discharge generated at the AWT is considered an industrial discharge and is subject to Table 4 limits prior to commingling with other wastewater. The TBELs from the Ocean Plan are summarized in Table F-9:

Table F-9. Summary of TBELs on Table 4 of the Ocean Plan[1]

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Instantaneous Maximum
Oil and Grease	mg/L	25	40	75
TSS	mg/L	60[2]	--	--
	% Removal	[2]	--	--
Settleable Solids	ml/L	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH	standard units	Within the limits of 6.0 to 9.0 at all times		

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] Table 4 of the Ocean Plan requires that the Discharger shall, as a monthly average, remove 75 percent of suspended solids from the influent stream before discharging wastewater to the Pacific Ocean, except that the effluent limitation to be met shall not be less than 60 mg/L. Applicable only to the discharge of brine from the AWT.

c. **Effluent Flow.** The effluent limitations for flow have been carried over from Order No. R9-2013-0112.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

Section 122.44(d)(1)(i) of 40 CFR requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed State criterion or policy interpreting the State's narrative criterion, supplemented with other relevant information, as provided in 40 CFR section 122.44(d)(1)(vi).

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan and Ocean Plan designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives for all waters.

a. **Basin Plan.** The beneficial uses specified in the Basin Plan applicable to the Pacific Ocean are summarized in section III.C.1 of this Fact Sheet.

The Basin Plan water quality objective for dissolved oxygen applicable to ocean waters is stated as follows: "The dissolved oxygen concentration in ocean waters shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials."

The Basin Plan states, "The pH value shall not be changed at any time more than 0.2 pH units from that which occurs naturally."

b. **Ocean Plan.** The beneficial uses specified in the Ocean Plan for the Pacific Ocean are summarized in section III.C.2 of this Fact Sheet. The Ocean Plan also includes water quality objectives for the ocean receiving water for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity.

Table 3 of the Ocean Plan includes the following water quality objectives for toxic pollutants and whole effluent toxicity:

i. Six-month median, daily maximum, and instantaneous maximum objectives for 19 chemicals and chemical characteristics, including total chlorine residual, for the protection of marine aquatic life.

ii. 30-day average objectives for 20 non-carcinogenic chemicals for the protection of human health. These have been applied as AMELs.

iii. 30-day average objectives for 42 carcinogenic chemicals for the protection of human health. These have been applied as AMELs.

iv. Daily maximum objectives for acute and chronic toxicity.

3. Determining the Need for WQBELs

The San Diego Water Board evaluated the need for effluent limitations for non-conventional and toxic pollutant parameters, based on water quality objectives in Table 3 of the Ocean Plan. The evaluation was performed in accordance with 40 CFR section 122.44(d) and guidance for statistically determining the "reasonable potential" for a discharged pollutant to exceed an objective, as outlined in the revised *Technical Support Document for Water Quality-based Toxics Control* (TSD; EPA/505/2-90-001, 1991) and the Ocean Plan Reasonable Potential Analysis (RPA) Amendment that was adopted by the State Water Board on April 21, 2005. The statistical approach combines knowledge of effluent variability (as estimated by a coefficient of variation) with the uncertainty due to a limited amount of effluent data to estimate a maximum effluent value at a high level of confidence. This estimated maximum effluent value is based on a lognormal distribution of daily effluent values. Projected receiving water values (based on the estimated maximum effluent value or the reported maximum effluent value and minimum probably initial dilution) can then be compared to the appropriate objective to determine potential for an exceedance of that objective and the need for an effluent limitation. According to the Ocean Plan amendment, the RPA can yield three endpoints: 1) Endpoint 1, an effluent limitation is required and monitoring is required; 2) Endpoint 2, an effluent limitation is not required and the San Diego Water Board may require monitoring; and 3) Endpoint 3, the RPA is inconclusive, monitoring is required, and an existing effluent limitation may be retained or a permit reopener clause may be included to allow inclusion of an effluent limitation if future monitoring warrants the inclusion. Endpoint 3 is typically the result when there are fewer than 16 data points and all are censored data (i.e., below quantitation or method detection levels for an analytical procedure).

The implementation provisions for Table 3 of the Ocean Plan specify that the minimum initial dilution (Dm) is the lowest average initial dilution within any single month of the year. Dilution estimates are to be based on observed waste flow characteristics, observed receiving water density structure, and the assumption that no currents, of sufficient strength to influence the initial dilution process, flow across the discharge structure.

In 2005, the State Water Board had determined the Dm ratio for the OOO to be 87 parts seawater to 1 part wastewater (87:1). This determination was based on a total flow rate of 29.055 MGD from the Facilities; the City of Oceanside; the Fallbrook Public Utility District; and Genentech Inc. In the ROWD, the Discharger did not note any significant changes that would alter the previously determined dilution characteristics. Therefore, the previous Dm of 87 to 1 will be retained in this Order and applied to WQBELs established herein.

Conventional pollutants were not considered as part of the RPA. TBELs for these pollutants are included in this Order as described in section IV.B of this Fact Sheet.

This Order does not include effluent limitations for bacterial indicators for the following reasons:

- The discharge point (Discharge Point No. 001) is located at the terminus of the OOO, located 8,800 feet offshore at a depth of 100 feet.
- The dilution factor is 87.
- The San Diego Water Board is not aware of any shellfish harvesting within the zone of initial dilution of the OOO.
- There are no kelp beds within the zone of initial dilution of the OOO.
- The Discharger discharges tertiary treated (filtered) unchlorinated wastewater from the SRTTP.

Using the RPcalc 2.0 software tool developed by the State Water Board for conducting reasonable potential analyses, the San Diego Water Board has conducted the RPA for the constituents listed in Table F-10 below. For constituents that do not display reasonable potential, this Order includes desirable maximum effluent concentrations which were derived using effluent limitation determination procedures described below and are referred to in this Order as "performance goals." A narrative limit statement to comply with all Ocean Plan objectives requirements is provided for those parameters not displaying reasonable potential. The Discharger is required to monitor for these constituents as stated in the Monitoring and Reporting Program (MRP, Attachment E) of this Order in order to gather data for use in RPAs for future permit reissuances.

Effluent data provided in the Discharger's monitoring reports for the Facilities from January 2014 through October 2018 were used in the RPA. A Dm ratio of 87:1 was considered in this evaluation.

A summary of the RPA results is provided below:

Table F-10. RPA Results Summary[1]

Parameter	Units	N[2]	MEC[3,4]	Most Stringent Criteria	Background	RPA Endpoint[5]
Arsenic, Total Recoverable	µg/L	7	7.1	8[6]	3[7]	2
Cadmium, Total Recoverable	µg/L	7	<0.2	1[6]	0	3
Chromium (VI), Total Recoverable	µg/L	7	<0.1	2[6]	0	3
Copper, Total Recoverable	µg/L	19	10.4	3[6]	2[7]	2
Lead, Total Recoverable	µg/L	7	<0.1	2[6]	0	3
Mercury, Total Recoverable	µg/L	7	<0.1	0.04[6]	0.0005[7]	3
Nickel, Total Recoverable	µg/L	7	7	5[6]	0	2
Selenium, Total Recoverable	µg/L	7	1.3	15[6]	0	3
Silver, Total Recoverable	µg/L	7	<0.2	0.7[6]	0.16[7]	3
Zinc, Total Recoverable	µg/L	7	106	20[6]	8[7]	2
Cyanide, Total	µg/L	7	<0.005	1[6]	0	3
Total Chlorine Residual	µg/L	1,738	200	2[6]	0	1
Ammonia Nitrogen, Total (as N)	µg/L	57	10,250	600[6]	0	2
Acute Toxicity	TUa	19	0.41	0.3[8]	0	2
Chronic Toxicity	TUc	35	35.7	1[8]	0	1[11]
Phenolic Compounds[1]	µg/L	7	<5	30[6]	0	3
Chlorinated Phenolics[1]	µg/L	7	<5	1[6]	0	3
Endosulfan[1]	µg/L	7	<0.0097	0.009[6]	0	3
Endrin	µg/L	19	<0.0097	0.002[6]	0	2
HCH[1]	µg/L	76	<0.0097	0.004[6]	0	2

Parameter	Units	N[2]	MEC[3,4]	Most Stringent Criteria	Background	RPA Endpoint[5]
Radioactivity	pCi/L	7	24	[9]	0	--
Acrolein	µg/L	7	<2	220[10]	0	3
Antimony	µg/L	7	<0.5	1,200[10]	0	3
Bis(2-chloroethoxyl) Methane	µg/L	7	<5	4.4[10]	0	3
Bis(2-chloroisopropyl) Ether	µg/L	7	<0.55	1,200[10]	0	3
Chlorobenzene	µg/L	7	<1	570[10]	0	3
Chromium (III), Total Recoverable	µg/L	7	19	190,000[10]	0	3
Di-n-butyl Phthalate	µg/L	7	<5	3,500[10]	0	3
Dichlorobenzenes[1]	µg/L	7	<1	5,100[10]	0	3
Diethyl Phthalate	µg/L	7	<5	33,000[10]	0	3
Dimethyl Phthalate	µg/L	7	<5	820,000[10]	0	3
4,6-dinitro-2-methylphenol	µg/L	13	<5	220[10]	0	3
2,4-dinitrophenol	µg/L	12	<5	4.0[10]	0	3
Ethylbenzene	µg/L	7	<1	4,100[10]	0	3
Fluoranthene	µg/L	7	<5	15[10]	0	3
Hexachlorocyclopentadiene	µg/L	7	<5	58[10]	0	3
Nitrobenzene	µg/L	7	<5	4.9[10]	0	3
Thallium, Total Recoverable	µg/L	7	<0.2	2[10]	0	3
Toluene	µg/L	7	<1	85,000[10]	0	3
Tributyltin	µg/L	7	<0.0013	0.0014[10]	0	3
1,1,1-trichloroethane	µg/L	7	<1	540,000[10]	0	3
Acrylonitrile	µg/L	7	<2	0.10[10]	0	3
Aldrin	µg/L	19	<0.0025	0.000022[10]	0	3
Benzene	µg/L	7	<1	5.9[10]	0	3
Benzidine	µg/L	7	<20	0.000069[10]	0	3
Beryllium, Total Recoverable	µg/L	19	<0.1	0.033[10]	0	3
Bis(2-chloroethyl) Ether	µg/L	7	<0.51	0.045[10]	0	3
Bis(2-ethylhexyl) Phthalate	µg/L	7	46	3.5[10]	0	3
Carbon Tetrachloride	µg/L	7	<1	0.90[10]	0	3
Chlordane[1]	µg/L	7	<0.011	0.000023[10]	0	3
Chlorodibromomethane	µg/L	7	<1	8.6[10]	0	3
Chloroform	µg/L	6	<1	130[10]	0	3
DDT[1]	µg/L	7	<0.01	0.00017[10]	0	3
1,4-dichlorobenzene	µg/L	7	<1	18[10]	0	3
3,3-dichlorobenzidine	µg/L	7	<2.5	0.0081[10]	0	3
1,2-dichloroethane	µg/L	7	<1	28[10]	0	3
1,1-dichloroethylene	µg/L	7	<1	0.9[10]	0	3
Dichlorobromomethane	µg/L	7	<1	6.2[10]	0	3
Dichloromethane	µg/L	7	<2	450[10]	0	3
1,3-dichloropropene	µg/L	7	<1	8.9[10]	0	3
Dieldrin	µg/L	19	<0.0051	0.00004[10]	0	3
2,4-dinitrotoluene	µg/L	10	<5	2.6[10]	0	3
1,2-diphenylhydrazine	µg/L	7	<5	0.16[10]	0	3
Halomethanes[1]	µg/L	7	<2	130[10]	0	3
Heptachlor	µg/L	19	<0.0051	0.00005[10]	0	3
Heptachlor Epoxide	µg/L	19	<0.0049	0.00002[10]	0	3
Hexachlorobenzene	µg/L	19	<0.51	0.00021[10]	0	3
Hexachlorobutadiene	µg/L	7	<5	14[10]	0	3
Hexachloroethane	µg/L	7	<5	2.5[10]	0	3
Isophorone	µg/L	7	<5	730[10]	0	3

Parameter	Units	N[2]	MEC[3,4]	Most Stringent Criteria	Background	RPA Endpoint[5]
N-nitrosodimethylamine	µg/L	7	<5	7.3[10]	0	3
N-nitrosodi-N-propylamine	µg/L	7	<5	0.38[10]	0	3
N-nitrosodiphenylamine	µg/L	7	<5	2.5[10]	0	3
PAHs[1]	µg/L	19	<5	0.0088[10]	0	3
PCBs[1]	µg/L	19	<0.24	0.000019[10]	0	3
TCDD equivalents[1]	µg/L	19	0.00000012	0.0000000039[10]	0	3
1,1,2,2-tetrachoroethane	µg/L	7	<1	2.3[10]	0	3
Tetrachloroethylene	µg/L	7	<1	2.0[10]	0	3
Toxaphene	µg/L	19	<0.026	0.00021[10]	0	3
Trichloroethylene	µg/L	7	<1	27[10]	0	3
1,1,2-trichloroethane	µg/L	7	<1	9.4[10]	0	3
2,4,6-trichlorophenol	µg/L	13	<5	0.29[10]	0	3
Vinyl Chloride	µg/L	7	<1	36[10]	0	3

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] Number of data points available for the RPA.

[3] If there is a detected value, the highest reported value is summarized in the table. If there are no detected values, the lowest MDL is summarized in the table.

[4] Note that the reported MEC does not account for dilution. The RPA does account for dilution; therefore, it is possible for a parameter with an MEC in exceedance of the most stringent criteria not to present a reasonable potential (i.e. Endpoint 2).

[5] End Point 1 – Reasonable potential determined, limit required, monitoring required.
End Point 2 – Discharger determined not to have reasonable potential, monitoring may be established.
End Point 3 – RPA was inconclusive, carry over previous limitations if applicable, and establish monitoring.

[6] Based on the Six-Month Median in the Table 3 of the Ocean Plan.

[7] Background concentrations contained in Table 5 of the Ocean Plan.

[8] Based on the Daily Maximum in Table 3 of the Ocean Plan.

[9] Not to exceed limits specified in title 17, division 1, chapter 5, subchapter 4, group 3, article 3, section 30253 of the CCR. Levels of radioactivity that exceed the applicable criteria are not expected in the discharge.

[10] Based on 30-Day Average in Table 3 of the Ocean Plan.

[11] This Order retains chronic toxicity effluent limitations based on BPJ, Step 13 of the Ocean Plan RPA. Because discharges into wastewater facilities are ever changing, the effluent from wastewater facilities is inconsistent and may have a mixture of known and unknown pollutants that could have synergistic or additive toxic effects on receiving waters. The mixture of known and unknown pollutants may come from nonresidential and residential sources in the Discharger's service areas. Even though the toxicity monitoring data for the past several years have not exceeded the chronic toxicity effluent limitation, increased and/or unknown pollutants could be introduced into the Discharger's wastewater facilities from nonresidential and/or residential sources in the future that have synergistic or additive toxic effects. Additionally, if a toxic effect is discovered in the receiving water, the results of the whole effluent testing (WET) may be useful for identifying the source of the toxicity.

Except as discussed below, for parameters for which Endpoint 2 was concluded, reasonable potential was not established based on data collected during the previous permit cycle. For these parameters, performance goals have been established. Consistent with 40 CFR sections 303(d)(4) and 402(o), this Order replaces the effluent limitations for copper, endrin, and HCH from Order No. R9-2013-0112 with performance goals.

For parameters for which Endpoint 3 was concluded, reasonable potential was inconclusive. For parameters for which Endpoint 3 was concluded and previous effluent limitations had not been established in Order No. R9-2013-0112, performance goals have been retained. For parameters for which Endpoint 3 was concluded and previous effluent limitations had been established in Order No. R9-2013-0112, effluent limitations have been retained. Endpoint 3 was determined for aldrin, beryllium, dieldrin, heptachlor,

heptachlor epoxide, hexachlorobenzene, PAHs, PCBs, TCDD equivalents, and toxaphene. Effluent limitations for these parameters have been carried over from Order No. R9-2013-0112.

Reasonable potential to cause or contribute to an exceedance of water quality objectives contained within the Ocean Plan (i.e., Endpoint 1) was determined for total chlorine residual. Effluent limitations for this parameter have been retained from Order No. R9-2013-0112.

The MRP (Attachment E) is designed to obtain additional information for these constituents to determine if reasonable potential exists for these constituents in future permit renewals and/or updates.

4. WQBEL Calculations

a. From the Table 3 water quality objectives of the Ocean Plan, effluent limitations and performance goals are calculated according to the following equation for all pollutants, except for acute toxicity (if applicable) and radioactivity:

Ce = Co + Dm (Co – Cs) where,

Ce = the effluent limitation (µg/L)
Co = the water quality objective to be met at the completion of initial dilution (µg/L)
Cs = background seawater concentration
Dm = minimum probable initial dilution expressed as parts seawater per part wastewater

b. Initial dilution (Dm) has been determined to be 87 to 1 by the San Diego Water Board through the application of USEPA's dilution model, Visual Plumes.

c. Table 5 of the Ocean Plan establishes background concentrations for some pollutants to be used when determining reasonable potential (represented as "Cs"). In accordance with Table 3 implementing procedures, Cs equals zero for all pollutants not established in Table 5. The background concentrations provided in Table 5 are summarized in Table F-11 below:

Table F-11. Pollutants Having Background Concentrations[1]

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

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

d. As an example, effluent limitations for total chlorine residual are determined as follows:

Water quality objectives from the Ocean Plan for total chlorine residual are:

Table F-12. Example Parameter Water Quality Objectives[1]

Parameter	Units	Six-Month Median	Daily Maximum	Instantaneous Maximum
Total Chlorine Residual	µg/L	2	8	60

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

Using the equation, Ce = Co + Dm (Co – Cs), effluent limitations/performance goals are calculated as follows.

Total Chlorine Residual:

Ce = 2 + 87 (2 – 0) = 176 (Six-Month Median)
Ce = 8 + 87 (8 – 0) = 704 (Daily Maximum)
Ce = 60 + 87 (60 – 0) = 5,280 (Instantaneous Maximum)

Based on the implementing procedures described above, effluent limitations and performance goals have been calculated for all parameters in Table 3 of the Ocean Plan and incorporated into this Order.

e. Section 122.45(f)(1) of the 40 CFR requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR section 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. However, section III.C.4.j of the Ocean Plan requires that mass limitations be established for all parameters in Table 3 of the Ocean Plan. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR section 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

Mass-based effluent limitations were calculated using the following equation: lbs/day = permitted flow (MGD) x pollutant concentration (mg/L) x 8.34

f. Based on the results of the RPA and BPJ, a summary of the WQBELs established in this Order are provided in Table F-13 below:

Table F-13. Summary of WQBELs at Monitoring Location EFF-001[1]

Parameter	Unit	Water Quality-Based Effluent Limitations[2,3]			
		Six-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
Chronic Toxicity (Test of Significant Toxicity)[4,5]	"Pass"/"Fail"	--	--	"Pass"	--
Total Chlorine Residual	microgram per liter (µg/L)	1.76E+02	--	7.04E+02	5.28E+03
	pounds per day (lbs/day)	5.28E+00	--	2.11E+01	1.59E+02
Aldrin	µg/L	--	1.94E-03	--	--
	lbs/day	--	5.81E-05	--	--
Beryllium, Total Recoverable	µg/L	--	2.90E+00	--	--
	lbs/day	--	8.72E-02	--	--
Dieldrin	µg/L	--	3.52E-03	--	--
	lbs/day	--	1.06E-04	--	--
Heptachlor	µg/L	--	4.40E-03	--	--
	lbs/day	--	1.32E-04	--	--
Heptachlor Epoxide	µg/L	--	1.76E-03	--	--
	lbs/day	--	5.28E-05	--	--
Hexachlorobenzene	µg/L	--	1.85E-02	--	--
	lbs/day	--	5.55E-04	--	--
PAHs	µg/L	--	7.74E-01	--	--
	lbs/day	--	2.33E-02	--	--
Polychlorinated Biphenyls (PCBs)	µg/L	--	1.67E-03	--	--
	lbs/day	--	5.02E-05	--	--
TCDD equivalents	µg/L	--	3.43E-07	--	--
	lbs/day	--	1.03E-08	--	--
Toxaphene	µg/L	--	1.85E-02	--	--
	lbs/day	--	5.55E-04	--	--

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] Scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates that position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation a value of 6.1 E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^{2} or 610, and 6.1E+00 represents 6.1×10^{0} or 6.1.

[3] The mass emission rate (MER) limitation, in lbs/day, was calculated based on the following equation: MER (lbs/day) = 8.34 x Q x C, where Q is the permitted flow for the Facilities (3.6 MGD) and C is the concentration (mg/L).

[4] As specified in section VII.L of this Order and section III.C of the MRP (Attachment E).

[5] The chronic toxicity effluent limitation is protective of both the numeric acute and chronic toxicity Ocean Plan water quality objectives. The effluent limitation will be implemented using *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995); current *USEPA guidance in the National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010) (https://www3.epa.gov/npdes/pubs/wet_final_tst_implementation2010.pdf); and USEPA Regions 8, 9, and 10, Toxicity Training Tool (January 2010).

g. A summary of the performance goals is provided below.

Table F-14. Summary of Performance Goals at Monitoring Location EFF-001[1]

Parameter	Units	Performance Goal[2]			
		Six-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
OBJECTIVES FOR WATER CONTACT RECREATION					
Fecal Coliform	colony forming units (CFU)/100 mL	--	1.76E+04[3]	--	3.52E+04[4]
Enterococci	CFU/100 mL	--	2.64E+03[5]	--	9.68E+03[6]
OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE					
Arsenic, Total Recoverable	µg/L	4.43E+02	--	2.56E+03	6.78E+03
Cadmium, Total Recoverable	µg/L	8.80E+01	--	3.52E+02	8.80E+02
Chromium (VI), Total Recoverable[3]	µg/L	1.76E+02	--	7.04E+02	1.76E+03
Copper, Total Recoverable	µg/L	9.00E+01	--	8.82E+02	2.47E+03
Lead, Total Recoverable	µg/L	1.76E+02	--	7.04E+02	1.76E+03
Mercury, Total Recoverable	µg/L	3.48E+00	--	1.40E+01	3.52E+01
Nickel, Total Recoverable	µg/L	4.40E+02	--	1.76E+03	4.40E+03
Selenium, Total Recoverable	µg/L	1.32E+03	--	5.28E+03	1.32E+04
Silver, Total Recoverable	µg/L	4.77E+01	--	2.32E+02	6.02E+02
Zinc, Total Recoverable	µg/L	1.06E+03	--	6.34E+03	1.69E+04
Cyanide, Total	µg/L	8.80E+01	--	3.52E+02	8.80E+02
Ammonia Nitrogen, Total (as N)	µg/L	5.28E+04	--	2.11E+05	5.28E+05
Phenolic Compounds (non-chlorinated)[1]	µg/L	2.64E+03	--	1.06E+04	2.64E+04
Chlorinated Phenolics[1]	µg/L	8.80E+01	--	3.52E+02	8.80E+02
Endosulfan[1]	µg/L	7.92E-01	--	1.58E+00	2.38E+00
Endrin	µg/L	1.76E-01	--	3.52E-01	5.28E-01
HCH (BHC)[1]	µg/L	3.52E-01	--	7.04E-01	1.06E+00
Radioactivity	picocuries per liter (pCi/L)	Not to exceed limits specified in title 17, division 1, chapter 5, subchapter 4, group 3, article 3, section 30253 of the CCR, reference to section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.			
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS					
Acrolein	µg/L	--	1.94E+04	--	--
Antimony	µg/L	--	1.06E+05	--	--
Bis(2-chloroethoxy) Methane	µg/L	--	3.87E+02	--	--
Bis(2-chloroisopropyl) Ether	µg/L	--	1.06E+05	--	--
Chlorobenzene	µg/L	--	5.02E+04	--	--
Chromium (III), Total Recoverable[3]	µg/L	--	1.67E+07	--	--
Di-n-butyl Phthalate	µg/L	--	3.08E+05	--	--
Dichlorobenzenes[1]	µg/L	--	4.49E+05	--	--
Diethyl Phthalate	µg/L	--	2.90E+06	--	--
Dimethyl Phthalate	µg/L	--	7.22E+07	--	--

Parameter	Units	Performance Goal[2]			
		Six-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
4,6-dinitro-2-methylphenol	µg/L	--	1.94E+04	--	--
2,4-dinitrophenol	µg/L	--	3.52E+02	--	--
Ethylbenzene	µg/L	--	3.61E+05	--	--
Fluoranthene	µg/L	--	1.32E+03	--	--
Hexachlorocyclopentadiene	µg/L	--	5.10E+03	--	--
Nitrobenzene	µg/L	--	4.31E+02	--	--
Thallium, Total Recoverable	µg/L	--	1.76E+02	--	--
Toluene	µg/L	--	7.48E+06	--	--
Tributyltin	µg/L	--	1.23E-01	--	--
1,1,1-trichloroethane	µg/L	--	4.75E+07	--	--
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS					
Acrylonitrile	µg/L	--	8.80E+00	--	--
Benzene	µg/L	--	5.19E+02	--	--
Benzidine	µg/L	--	6.07E-03	--	--
Bis(2-chloroethyl) Ether	µg/L	--	3.96E+00	--	--
Bis(2-ethlyhexyl) Phthalate	µg/L	--	3.08E+02	--	--
Carbon Tetrachloride	µg/L	--	7.92E+01	--	--
Chlordane[1]	µg/L	--	2.02E-03	--	--
Chlorodibromomethane (Dibromochloromethane)	µg/L	--	7.57E+02	--	--
Chloroform	µg/L	--	1.14E+04	--	--
Dichlorodiphenyltrichloroethane (DDT)[1]	µg/L	--	1.50E-02	--	--
1,4-dichlorobenzene	µg/L	--	1.58E+03	--	--
3,3'-dichlorobenzidine	µg/L	--	7.13E-01	--	--
1,2-dichloroethane	µg/L	--	2.46E+03	--	--
1,1-dichloroethylene	µg/L	--	7.92E+01	--	--
Dichlorobromomethane	µg/L	--	5.46E+02	--	--
Dichloromethane	µg/L	--	3.96E+04	--	--
1,3-dichloropropene	µg/L	--	7.83E+02	--	--
2,4-dinitrotoluene	µg/L	--	2.29E+02	--	--
1,2-diphenylhydrazine	µg/L	--	1.41E+01	--	--
Halomethanes[1]	µg/L	--	1.14E+04	--	--
Hexachlorobutadiene	µg/L	--	1.23E+03	--	--
Hexachloroethane	µg/L	--	2.20E+02	--	--
Isophorone	µg/L	--	6.42E+04	--	--
N-nitrosodimethylamine	µg/L	--	6.42E+02	--	--
N-nitrosodi-N-propylamine	µg/L	--	3.34E+01	--	--
N-nitrosodiphenylamine	µg/L	--	2.20E+02	--	--
1,1,2,2-tetrachloroethane	µg/L	--	2.02E+02	--	--
Tetrachloroethylene (Tetrachloroethene)	µg/L	--	1.76E+02	--	--

Parameter	Units	Performance Goal[2]			
		Six-Month Median	Average Monthly	Maximum Daily	Instantaneous Maximum
Trichloroethylene (Trichloroethene)	µg/L	--	2.38E+03	--	--
1,1,2-trichloroethane	µg/L	--	8.27E+02	--	--
2,4,6-trichlorophenol	µg/L	--	2.55E+01	--	--
Vinyl Chloride	µg/L	--	3.17E+03	--	--

[1] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

[2] Scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates that position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation a value of 6.1 E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^{2} or 610, and 6.1E+00 represents 6.1×10^{0} or 6.1.

[3] Dischargers may, at their option, apply this performance goal as a total chromium performance goal.

5. Whole Effluent Toxicity (WET)

a. The WET testing protects receiving waters from the aggregate toxic effect of a mixture of pollutants in the effluent. Because of the nature of discharges into the wastewater facilities, it is possible that toxic constituents could be present in the Facilities effluent or could have synergistic or additive effects.

b. For chronic toxicity, Order No. R9-2013-0112 contained an effluent limitation of 88 TUc. During the term of Order No. R9-2013-0112, the highest reported effluent chronic toxicity was 35.7 TUc (February 9, 2014). However, as stated in section IV.C.3 of this Fact Sheet, this Order adds an effluent limitation for chronic toxicity based on BPJ, Step 13 of the RPA procedures from the Ocean Plan.

Order No. R9-2013-0112 initially contained monthly monitoring for chronic toxicity. After one year of monthly monitoring, the San Diego Water Board Executive Officer determined that the effluent complied with the effluent limitation for chronic toxicity in Order No. R9-2013-0112 and provided written notification to decrease the minimum test frequency for chronic toxicity from monthly to quarterly.[3] This Order retains quarterly effluent monitoring for chronic toxicity.

For this Order, chronic toxicity in the discharge is evaluated using USEPA's 2010 Test of Significant Toxicity (TST) hypothesis testing approach at the discharge "in-stream" waste concentration (IWC), as described in section VII.L of this Order and section III.C of the MRP (Attachment E). The TST statistical approach is described in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1. The TST null hypothesis shall be "mean discharge IWC response ≤ 0.75 × mean control response." A test that rejects this null hypothesis shall be reported as "Pass." A test that does not reject this null hypothesis shall be reported as "Fail." The chronic toxicity effluent limitation is expressed as "Pass" for each maximum daily individual result. The Discharger shall also report the "Percent Effect" as part of chronic toxicity result.

[3] By letter dated March 3, 2016, the San Diego Water Board Executive Officer approved the Discharger's request to reduce the required sampling frequency for chronic toxicity effluent monitoring from monthly to quarterly.

This Order contains a reopener to require the San Diego Water Board to modify the effluent limitations for toxicity, if necessary, to make it consistent with any new policy, law, or regulation.

c. For acute toxicity, Order No. R9-2013-0112 established performance goals and quarterly effluent monitoring. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a short or a longer period of time and may measure mortality, reproduction, and growth. A chemical at a low concentration could have chronic effects but no acute effects until the chemical was at a higher concentration. Thus, chronic toxicity is a more stringent requirement than acute toxicity. To ensure the aggregated impacts of pollutants present within the Discharger's effluent does not result in the presence of toxicity within the receiving water, this Order maintains effluent limitations for chronic toxicity. This Order removes acute toxicity performance goals. Removal of numeric acute toxicity performance goals does not constitute backsliding because chronic toxicity is a more stringent requirement than acute toxicity.

d. Section III.F of the Ocean Plan provides for more stringent requirements if necessary to protect the designated beneficial uses of ocean waters. Diamond et al. (2013) examined the side-by-side comparison of No Observed Effect Concentration (NOEC) and TST results using California chronic toxicity test data (including data from wastewater facilities) for the West Coast marine methods and test species required under this Order. See Table 1 (method types 1 through 5) on page 1103 in Diamond J., Denton D., Roberts J., Zheng L. 2013. *Evaluation of the Test of Significant Toxicity for Determining the Toxicity of Effluents and Ambient Water Samples*. Environ Toxicol Chem 32:1101-1108. This comparison shows that while the TST and NOEC statistical approaches perform similarly most of the time, the TST performs better in identifying toxic and nontoxic samples, a desirable characteristic for chronic toxicity testing conducted under this Order. This examination also signals that the test methods' false positive rate (β no higher than 0.05 at a mean effect of 10%) and false negative rate (α no higher than 0.05 (0.25 for topsmelt) at a mean effect of 25%) are indeed low. This highlights that using the TST in this Order - in conjunction with other Ocean Plan requirements (West Coast WET method/test species for monitoring and limiting chronic toxicity, the IWC representing the critical condition for water quality protection, the initial dilution procedure, and a single test for compliance)—provides increased assurance that statistical error rates are more directly addressed and accounted for in decisions regarding chronic toxicity in the discharge. As a result, and in accordance with Ocean Plan section III.F, the San Diego Water Board is exercising its discretion to use the TST statistical approach for this discharge.

In January 2010, USEPA published a guidance document entitled; *USEPA Regions 8, 9 and 10 Toxicity Training Tool*, which among other things discusses permit limitation expression for chronic toxicity. The document acknowledges that NPDES regulations at 40 CFR section 122.45(d) require that all permit limits be expressed, unless impracticable, as an AWEL and AMEL for POTWs. Because the SRTTP is federal owned, it is not a POTW. However, the SRTTP is designed and operated to treat sanitary wastewater to secondary treatment standards. As such, recommendations and guidance for POTWs are reasonable for the SRTTP. Following section 5.2.3 of the Technical Support Document (TSD), the use of an AWEL and AMEL are not appropriate for WET. In lieu of an AWEL and AMEL for POTWs, USEPA recommends establishing a maximum daily effluent limitation

(MDEL) for toxic pollutants and pollutants in water quality permitting, including WET. This is appropriate for two reasons. The basis for the average weekly and average monthly requirements for POTWs derives from secondary treatment regulations and is not related to the requirement to ensure achievement of water quality standard. Moreover, an average weekly and monthly requirement comprising up to seven and 31 daily samples, respectively, could average out daily peak toxic concentrations for WET and, therefore, the discharge's potential for causing acute and chronic effects would be missed. It is impracticable to use an AWEL and AMEL, because short-term spikes of toxicity levels that would be permissible under the 7-day and 31-day average scheme, respectively, would not be adequately protective of all beneficial uses. The MDEL is the highest allowable value for the discharge measured during a calendar day or 24-hour period representing a calendar day.

Later in June 2010, USEPA published another guidance document titled, *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010), in which they recommend the following: "Permitting authorities should consider adding the TST approach to their implementation procedures for analyzing valid WET data for their current NPDES WET Program." The TST approach is another statistical option for analyzing valid WET test data. Use of the TST approach does not result in any changes to USEPA's WET test methods. Section 9.4.1.2 of *USEPA's Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995), current *USEPA Guidance in the National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010), recognizes that, "the statistical methods in this manual are not the only possible methods of statistical analysis." The TST approach can be applied to acute (survival) and chronic (sublethal) endpoints and is appropriate to use for both freshwater and marine USEPA WET test methods.

The USEPA's WET testing program and acute and chronic WET methods rely on the measurement result for a specific test endpoint, not upon achievement of specified concentration-response patterns to determine toxicity. USEPA's WET methods do not require achievement of specified effluent or ambient concentration-response patterns prior to determining that toxicity is present.[4] Nevertheless, USEPA's acute and chronic WET methods require that effluent and ambient concentration-response patterns generated for multi-concentration acute and chronic toxicity tests be reviewed—as a component of test review following statistical analysis—to ensure that the calculated measurement result for the toxicity test is interpreted appropriately. (EPA-821-R-02-012, section 12.2.6.2; EPA-821-R-02-013, section 10.2.6.2). In 2000, USEPA provided guidance for such reviews to ensure that test endpoints for determining toxicity based on the statistical approaches utilized at the time the guidance was written (NOEC), percent waste giving 50 percent survival of test organisms (lethal concentration 50, LC 50), effects concentration at 25 percent (EC25) were calculated appropriately (EPA 821-B-00-004).

USEPA designed its 2000 guidance as a standardized step-by step review process that investigates the causes for ten commonly observed concentration-response

[4] See, Supplementary Information in support of the Final Rule establishing WET test methods at 67 Fed. Reg. 69952, 69963, Nov. 19, 2002.

patterns and provides for the proper interpretation of the test endpoints derived from these patterns for NOECs, LC 50, and EC25, thereby reducing the number of misclassified test results. The guidance provides one of three determinations based on the review steps: that calculated effect concentrations are reliable and should be reported, that calculated effect concentrations are anomalous and should be explained, or that the test was inconclusive and should be repeated with a newly collected sample. The standardized review of the effluent and receiving water concentration-response patterns provided by USEPA's 2000 guidance decreased discrepancies in data interpretation for NOEC, LC 50, and EC25 test results, thereby lowering the chance that a truly nontoxic sample would be misclassified and reported as toxic.

Appropriate interpretation of the measurement result from USEPA's TST statistical approach ("Pass"/"Fail") for effluent and receiving water samples is, by design, independent from the concentration-response patterns of the toxicity tests for those samples. Therefore, when using the TST statistical approach, application of USEPA's 2000 guidance on effluent and receiving waters concentration-response patterns will not improve the appropriate interpretation of TST results as long as all Test Acceptability Criteria (TAC) and other test review procedures—including those related to quality assurance for effluent and receiving water toxicity tests, reference toxicity tests, and control performance (mean, standard deviation, and coefficient of variation)—described by the WET test methods manual and TST guidance, are followed. The 2000 guidance may be used to identify reliable, anomalous, or inconclusive concentration-response patterns and associated statistical results to the extent that the guidance recommends review of test procedures and laboratory performance already recommended in the WET test methods manual. The guidance does not apply to single-concentration (IWC) and control statistical t-tests and does not apply to the statistical assumptions on which the TST is based. The San Diego Water Board will not consider a concentration-response pattern as sufficient basis to determine that a TST t- test result for a toxicity test is anything other than valid, absent other evidence. In a toxicity laboratory, unexpected concentration-response patterns should not occur with any regular frequency and consistent reports of anomalous or inconclusive concentration-response patterns or test results that are not valid will require an investigation of laboratory practices.

Any Data Quality Objectives or Standard Operating Procedure used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent or receiving water toxicity test measurement results from the TST statistical approach which include a consideration of concentration-response patterns and/or Percent Minimum Significant Differences (PMSDs) must be submitted for review by the San Diego Water Board, in consultation with USEPA, and the State Water Board's Quality Assurance Officer and Environmental Laboratory Accreditation Program (ELAP) (40 CFR section 122.44(h)). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the PMSD criteria only apply to compliance for NOEC and the sublethal endpoints of the NOEC, and therefore are not used to interpret TST results.

D. Final Effluent Limitation Considerations

1. Anti-Backsliding Requirements

NPDES permits must conform with Anti-backsliding requirements discussed in section III.C.5 of this Fact Sheet. 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. This permit complies with all applicable federal and State Anti-backsliding regulations.

The effluent limitations in this Order are at least as stringent as the effluent limitations in Order No. R9-2013-0112, with the exception of effluent limitations for copper, endrin, and HCH. This Order removes the effluent limitations for these parameters. This removal of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

CWA section 402(o)(1) and 303(d)(4). CWA section 402(o)(1) prohibits the establishment of less stringent WQBEL's "except in compliance with section 303(d)(4)." CWA section 303(d)(4) has two parts: paragraph (A) which applies to nonattainment waters and paragraph (B) which applies to attainment waters. For waters where standards are not attained, CWA section 304(d)(4)(A) specifies that any effluent limitation based on a TMDL or other WLA may be revised only if the cumulative effect of all such revised effluent limitations based on such TMDL's or WLA's will assure the attainment of such water quality standards. For attainment waters, CWA section 303(d)(4)(B) specifies that a limitation based on a water quality standard may be relaxed where the action is consistent with the antidegradation policy.

The receiving water in the vicinity of the discharge is considered an attainment water for copper, endrin, and HCH because the receiving water is not listed as impaired on the 303(d) list for these parameters.[5] As discussed in section IV.D.2, below, removal of the effluent limitations for copper, endrin, and HCH comply with federal and state antidegradation requirements. Thus, the removal of these effluent limitations from Order No. R9-2013-0112 meets the exception in CWA section 303(d)(4)(B).

As described further in section IV.D.2 of this Fact Sheet, updated information that was not available at the time Order No. R9-2013-0112 was issued indicates that copper, endrin, and HCH do not exhibit reasonable potential to cause or contribute to an exceedance of applicable water quality objectives in the receiving water. The updated information that supports the removal of effluent limitations for copper, endrin, and HCH includes the following: Effluent and receiving water monitoring data collected between April 2013 and June 2018 indicates that copper, endrin, and HCH in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the Ocean Plan objective for copper, endrin, and HCH.

2. Antidegradation Policies

The WDRs for the Discharger must conform with antidegradation requirements discussed in section III.C.4 of this Fact Sheet. The antidegradation policies require that beneficial uses and the water quality necessary to maintain those beneficial uses in the receiving waters of the discharge shall be maintained and protected, and, if existing water quality is better than the quality required to maintain beneficial uses, the existing

[5] "The exceptions in Clean Water Act section 303(d)(4) address both waters in attainment with water quality standards and those not in attainment, i.e. waters on the section 303(d) impaired waters list." State Water Board Order WQ 2008-0006, Berry Petroleum Company, Poso Creek/McVan Facility.

water quality shall be maintained and protected unless allowing a lowering of water quality is necessary to accommodate important economic and social development or consistent with maximum benefit to the people of California. When a significant lowering of water quality is allowed by the San Diego Water Board, an antidegradation analysis is required in accordance with the State Water Board's Administrative Procedures Update (July 2, 1990), *Antidegradation Policy Implementation for NPDES Permitting*.

This Order complies with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution No. 68-16.

This Order removes effluent limitations for copper, endrin, and HCH based on updated information, as described in sections IV.C.3 and IV.D.1 of this Fact Sheet. The removal of WQBEL's for copper, endrin, and HCH will not result in a decrease in the level of treatment or control, or a reduction in water quality. Therefore, the San Diego Water Board finds that the removal of the effluent limitations for copper, endrin, and HCH does not result in an allowed increase in pollutants or any additional degradation of the receiving water. Thus, the removal of effluent limitations is consistent with the antidegradation provisions of 40 CFR section 131.12 and the State Antidegradation Policy.

3. Stringency of Requirements for Individual Pollutants

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

WQBELs have been 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. The procedures for calculating the individual WQBELs are based on the Ocean Plan, which was approved by USEPA on February 14, 2006 and has since been further amended. 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 section 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.

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications – Not Applicable

G. Recycling Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Receiving water limitations of this Order are derived from the water quality objectives for ocean waters established by the Basin Plan and the Ocean Plan.

Prior to 2009, the San Diego Water Board interpreted the Bacterial Characteristics Water-contact Standards of the Ocean Plan to apply only in the zone bounded by the shoreline and a distance 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline,

and within kelp beds. The Ocean Plan provides that these Bacteriological Standards also apply in designated areas outside this zone used for water contact sports, as determined by the Regional Water Boards (i.e., all waters designated with the contact water recreation (REC-1) beneficial use). These designated areas must be specifically defined in the Basin Plan. Because the San Diego Water Board has designated the ocean waters with the REC-1 beneficial use in the Basin Plan, the Ocean Plan Bacterial Standards apply throughout State of California territorial marine waters in the San Diego Region, which extend from surface to bottom, out to three nautical miles from the shoreline. This interpretation has been confirmed by USEPA.

The Ocean Plan Bacterial Standards for total coliform, fecal coliform, and enterococcus were exceeded approximately 79 times at the offshore receiving water monitoring locations (including the offshore monitoring locations used as a reference) between 2011 and 2019. However, there is currently not enough information to confirm that the discharge from the Discharger was the cause of these exceedances in the receiving waters. Also, the Discharger discharges tertiary treated (filtered) unchlorinated wastewater from the SRTTP.

This Order includes the new bacterial provisions contained in the 2018 amendment to the Ocean Plan adopted by the State Water Board on August 7, 2018, approved by the USEPA on March 22, 2019, and effective on March 22, 2019.

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

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

Sections 122.41(a)(1) and (b) through (n) of 40 CFR 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. Section 123.25(a)(12) of 40 CFR allows the State to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR sections 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

This Order may be re-opened and modified, revoked and reissued, or terminated for cause in accordance with the provisions of 40 CFR parts 122, 123, 124, and 125. The San Diego Water Board may reopen the permit to modify permit conditions and requirements. Causes for modification include, but are not limited to, revisions to effluent limitations, receiving water requirements, and monitoring and reporting requirements; participation in the Southern California Coastal Water Research Project (SCCWRP) monitoring program or other regional or water body monitoring coalition as determined by the San Diego Water Board; revisions to sludge use or disposal practices; or adoption of new or revised regulations, water quality control plans, or policies by the State Water Board or the San Diego Water Board, including revisions to the Basin Plan or Ocean Plan.

2. Special Studies, Technical Reports, and Additional Monitoring Requirements

a. **Spill Prevention and Response Plans**

The CWA largely prohibits any discharge of pollutants from point sources to waters of the United States except as authorized under an NPDES permit. In general, any point source discharge of sewage effluent to waters of the United States must comply with technology-based, secondary treatment standards, at a minimum, and any more stringent requirements necessary to meet applicable water quality standards and other requirements. The unpermitted discharge of wastewater to waters of the United States is illegal under the CWA. Further, the Basin Plan prohibits discharges of waste to land, except as authorized by WDRs or the terms described in Water Code section 13264. The Basin Plan also prohibits the unauthorized discharge of treated or untreated sewage to waters of the State or to a storm water conveyance system. Further, Discharge Prohibitions III.A and III.B of this Order prohibits the discharge of waste from the Facilities to a location other than Discharge Point No. 001.

Sanitary collection and treatment systems experience periodic failures resulting in discharges that may affect waters of the United States and/or State. There are many factors which may affect the likelihood of a spill. To ensure appropriate funding, management, and planning to reduce the likelihood of a spill, and to increase the level of response if a spill does occur, this Order requires the Discharger to maintain and implement Spill Prevention and Response Plans.

b. **Spill Reporting Requirements**

To determine compliance with Discharge Prohibitions III.A and III.B and provide appropriate notification to the general public for the protection of public health, spill reporting requirements have been established in section VI.C.2.b of this Order.

3. Best Management Practices and Pollution Prevention

The Pollutant Minimization Program is based on the requirements of the section III.C.9 of the Ocean Plan.

4. Construction, Operation, and Maintenance Specifications

a. This Order carries over provisions from Order No. R9-2013-0112 to ensure that new treatment facilities and expansions of existing treatment facilities are completely constructed and operable prior to initiation of the discharge from the new or expanded facilities.

b. This Order carries over a provision from Order No. R9-2013-0112 to ensure the Facilities are protected against the impact of storm events.

c. This Order adds a provision to ensure the Facilities are protected against regional impacts due to climate change (e.g., sea level rise and floods).

d. This Order adds a provision based on the requirements of 40 CFR section 122.41(e) to ensure the Facilities have adequate power.

5. Special Provisions for Wastewater Facilities

a. **Ensuring Adequate Treatment Plant Capacity**

Order No. R9-2013-0112 required the Discharger to submit a written report to the Executive Officer within 90 days after the monthly average influent flow rate equals

or exceeds 75 percent of the secondary treatment design capacity of the SRTTP. In lieu of a written report for each time the monthly average influent flow rate equals or exceeds 75 percent of the secondary treatment design capacity, the requirement has been changed to require the report be submitted four years prior to the time wastewater flows are projected to reach plant capacity, as stated in title 23, section 2232 of the CCR. The revised requirement states:

Four years prior to reaching the SRTTP design capacity, the Discharger shall submit a Treatment Plant Capacity Report to the San Diego Water Board showing how flow volumes will be prevented from exceeding existing capacity or how capacity will be increased.

If the San Diego Water Board finds that the technical report indicates adequate steps are not being taken to address the capacity problem, the San Diego Water Board will adopt a time schedule order or other enforcement order. Such action will be preceded by notice and a hearing.

b. **Source Control Program**

A source control program is necessary to prevent the introduction of pollutants, which will interfere with treatment plant operations or sludge disposal, and prevent pass through of pollutants that exceed water quality objectives, standards, or permit limitations. The source control program requirements are carried over from Order No. R9-2013-0112.

c. **Sludge (Biosolids) Requirements**

The use and disposal of biosolids within the U.S. is regulated under State and federal laws and regulations, including permitting requirements and technical standards included in 40 CFR part 503. The Discharger is required to comply with the standards and time schedules contained in 40 CFR part 503 for biosolids used or disposed of within the U.S.

Title 27, division 2, subdivision 1, section 20005 of the CCR establishes approved methods for the disposal of collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes. Requirements to ensure the Discharger disposes of solids in compliance with State and federal regulations have been included in this Order.

The Discharger produces sludge that is hazardous for copper by California Department of Toxic Substances Control standards, but not per USEPA's Toxicity Characteristics Leaching Process (TCLP) limits. The Discharger has been shipping the sludge to a landfill in Arizona, where only USEPA's TCLP limits apply. The copper levels in the sludge also exceed the 40 CFR part 503 Table 3 standards for land application, and the sludge could only be land applied in Arizona following an extensive review of the receiving fields. Thus land application is not recommended. This permit requires 90-days pre-notification prior to changing the current disposal practice. If the sludge remains in California, the sludge must be disposed of in Kettleman Landfill.

d. **Collection System**

Sanitary sewer overflows (SSOs) often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen-demanding organic compounds, oil and grease, and other pollutants. SSOs may cause a public

nuisance, particularly when raw untreated wastewater is discharged to areas with high public exposure, such as streets or surface waters used for drinking, fishing, or body contact recreation. SSOs may pollute surface or ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters.

Minimum requirements to reduce, eliminate, and prevent SSOs are established as a condition of this Order and are included in Attachment H to this Order. Minimum SSO monitoring and reporting requirements have also been established in Attachment H to this Order.

e. **Requirements for Receipt of Anaerobically Digestible Material**

Some wastewater facilities choose to accept organic material such as food waste, fats, oils, and grease into their anaerobic digesters for co-digestion to increase production of methane and other biogases for energy production and to prevent such materials from being discharged into the collection system, which could cause sanitary sewer overflows. The California Department of Resources Recycling and Recovery has proposed an exemption from requiring Process Facility/Transfer Station permits where this activity is regulated under WDRs or NPDES permits. The proposed exemption is restricted to anaerobically digestible material that has been prescreened, slurried, and processed/conveyed in a closed system to be co-digested with regular wastewater sludge. The proposed exemption requires that a wastewater facility develop Standard Operating Procedures (SOPs) for the proper handling, processing, tracking, and management of the anaerobically digestible material before it is received by the wastewater facility.

The SOPs are required for wastewater facilities that accept hauled food waste, fats, oil, and grease for injection into anaerobic digesters. The development and implementation of SOPs for management of these materials is intended to allow the California Department of Resources Recycling and Recovery to exempt this activity from separate and redundant permitting programs. If the wastewater facility does not accept food waste, fats, oil, or grease for resource recovery purposes, it is not required to develop and implement SOPs.

6. Other Special Provisions – Not Applicable

7. Compliance Schedules – Not Applicable

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 CFR sections 122.41(h), (j)-(*l*), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the San Diego Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The MRP (Attachment E of this Order) establishes monitoring, reporting, and recordkeeping requirements that implement federal and State requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for these Facilities. The burdens, including costs, of the MRP (Attachment E) required by this Order bear a reasonable relationship to the need for and benefits to be obtained from the MRP (Attachment E) to ensure compliance the Order, protect beneficial uses, and obtain other benefits as described in this Fact Sheet.

A. Core Monitoring Requirements

1. Influent Monitoring

Influent monitoring is required to determine the effectiveness of the source control program, to assess the performance of treatment facilities, and to evaluate compliance with effluent limitations. Influent monitoring frequencies and sample types for flow, BOD_5, TSS, and oil and grease have been retained from Order No. R9-2013-0112.

Refer to section III.A of the MRP (Attachment E).

2. Effluent Monitoring

Effluent monitoring is required to determine compliance with the conditions of this Order, to identify operational problems, to improve plant performance, and to conduct reasonable potential analyses for subsequent orders. Effluent monitoring also provides information on wastewater characteristics for use in interpreting water quality and biological data. Effluent monitoring requirements have been carried over from Order No. R9-2013-0112, with the following exceptions.

a. This Order adds monthly monitoring requirements for specific electric conductivity to Monitoring Location EFF-001 to evaluate whether the dilution credit established in 2005 is still applicable and appropriate and to re-assess the dilution credit if the brine discharges from the AWT; Genentech Inc.; the City of Oceanside; and future brine discharges (along with increased recycled water use and decreased outfall discharge flows) changes effluent quality discharged at Discharge Point No. 001.

b. This Order adds quarterly monitoring requirements for fecal coliform and enterococci to document the effluent's relationship with the receiving water monitoring data.

c. This Order adds quarterly monitoring requirements for total nitrogen and total phosphorus to gather data on the contribution nutrients to the receiving water, which has implications for ocean acidification, hypoxia, and harmful algal blooms.

d. As noted in section IV.C.5 of this Fact Sheet, this Order retains the reduced quarterly effluent monitoring for chronic toxicity.

e. This Order decreases the monitoring frequency for copper, endrin, and HCH from quarterly to semiannually consistent with monitoring programs in other wastewater facility permits recently adopted by the San Diego Water Board for parameters without reasonable potential (see section IV.C.3 of this Fact Sheet for more information).

f. For this Order, the Discharger may apply the performance goal for both chromium (VI) and chromium (III) as a total chromium performance goal. The Ocean Plan allows dischargers to meet the objective for chromium (VI) as a total chromium objective (footnote a, of Table 3 of the Ocean Plan). Total chromium includes both chromium (VI) and chromium (III) and applicable federal regulations in 40 CFR 136 under the CWA do not specify an analytical method for chromium (III)[6]. Thus, this Order allows the Discharger to also meet the objective for chromium (III) as a total chromium objective. If the Discharger only monitors for total chromium to meet the

[6] In order to obtain a value for chromium (III), two separate methods must be used: one for total chromium determination and one for chromium (VI) determination. The value for chromium (III) is obtained by subtracting the chromium (VI) value from the total chromium value.

requirements for both chromium (VI) and chromium (III), the total chromium data will be used to determine if reasonable potential exists for both chromium (VI) and chromium (III) in future permit reissuances and/or updates.

Refer to section III.B of the MRP (Attachment E).

3. Whole Effluent Toxicity Testing Requirements

This Order contains chronic toxicity effluent limitations as described in section IV.C.5 of this Fact Sheet.

Consistent with the requirements of the Ocean Plan, section III.C.6 of the MRP (Attachment E) requires the Discharger to develop an Initial Investigation Toxicity Reduction Evaluation (TRE) Work Plan and submit the Initial Investigation TRE Work Plan within 90 days of the effective date of this Order. The Initial Investigation TRE Work Plan must describe steps the Discharger intends to follow if the effluent limitation for chronic toxicity is exceeded.

Section III.C.10 of the Ocean Plan requires a TRE if a discharge consistently exceeds an effluent limitation based on a toxicity objective in Table 3 of the Ocean Plan. To determine if the discharge consistently exceeds the toxicity effluent limitation, this Order requires the Discharger to notify the San Diego Water Board and to accelerate toxicity testing if the effluent limitation for chronic toxicity is exceeded in any one test. If any of the additional tests demonstrate toxicity, in accordance with section III.C.10 of the Ocean Plan, the Discharger is required to submit a Detailed TRE Work Plan in accordance with its submitted Initial Investigation TRE Work Plan and USEPA guidance[7] which shall include: further steps taken by the Discharger to investigate, identify, and correct the causes of toxicity; actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and a schedule for these actions. The Discharger must also implement a Toxicity Identification Evaluation (TIE), as necessary, based upon the magnitude and persistence of toxicity effluent limitation exceedances. Once the source of toxicity is identified, the Discharger must take all reasonable steps to reduce the toxicity to meet the chronic toxicity effluent limitation identified in section IV.A of this Order.

The above accelerated monitoring (a minimum of four succeeding tests performed at 14-day intervals) is based on the probability of encountering at least one toxicity exceedance assuming a true, but unknown level of occurrence.

Within 30 days of completion of the TRE, the Discharger must submit the results of the TRE, including a summary of the findings, data generated, a list of corrective actions taken or planned to achieve consistent compliance with the toxicity effluent limitation of this Order and prevent recurrence of exceedances of those effluent limitation, and a time schedule for implementation of any planned corrective actions. The Discharger must implement any planned corrective actions in the TRE Final Report in accordance with the specified time schedule, unless otherwise directed in writing by the San Diego Water

[7] See (a) TRE Guidance for Municipal Wastewater Treatment Plants (EPA 833-B-99-002, 1999); (b) Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (EPA/600/2-88/070); Toxicity Identification Evaluation, Phase I (EPA/600/6-91/005F); (c) Methods for Aquatic Toxicity Identification Evaluations, Phase II (EPA/600/R-92/080); (d) Methods for Aquatic Toxicity Identification Evaluations, Phase III (EPA/600/R-92/081); and (e) Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document (EPA/600/R-96-054,1996).

Board. The corrective actions and time schedule must be modified at the direction of the San Diego Water Board.

Refer to section III.B of the MRP (Attachment E).

B. Receiving Water Monitoring

The receiving water and sediment monitoring requirements set forth below are designed to measure the effects of the OOO discharge on the receiving water. These monitoring requirements will remain in effect on an interim basis, pending development of a new and updated monitoring and assessment program.

Refer to section IV of the MRP (Attachment E).

1. Surf Zone Water Quality Monitoring Requirements

Surf zone water quality monitoring is required to determine if the effluent is causing or contributing to exceedances of the water quality standards in the surf zone, the area where the ocean surface waves come closer to shore and break. For monitoring locations S1 through S5, monitoring for enterococcus bacteria has been changed to monitoring for enterococci bacteria; weekly monitoring for fecal coliform and enterococcus has been increased to five times per month; and weekly monitoring for total coliform has been decreased to three times per month. These changes reflect the new bacterial provisions contained in the 2018 amendment to the Ocean Plan. The 2018 amendment to the Ocean Plan also removes the requirement to conduct repeat sampling if a single sample exceeds any of the bacterial single sample maximum standards. Thus, this repeat sampling requirement has not been carried over from Order No. R9-2013-0112. Monitoring locations S6 and S7 were not specified in Order No. R9-2012-0004 and will be determined by the San Diego Water Board based on the results of the Plume Tracking Monitoring Program.

Refer to section IV.A of the MRP (Attachment E).

2. Nearshore and Offshore Water Quality Monitoring Requirements

Nearshore and offshore water quality monitoring is required to determine if the effluent is causing or contributing to exceedances of the water quality standards outside of the ZID, to determine the fate of the effluent plume, evaluate the contribution of the discharge to ocean acidification, and to gather data for future permit reissuances. Nearshore and offshore monitoring requirements have been carried over from Order No. R9-2011-0016 with the following exceptions:

a. For nearshore monitoring requirements, this Order adds monitoring requirements for temperature, depth, dissolved oxygen, light transmittance, pH, and salinity to better understand the characteristics of the wastewater plume, evaluate compliance with receiving water limitations, and incorporate the requirements of Ocean Plan. This Order also adds monitoring requirements for nitrogen and phosphorus to evaluate the contribution of nutrients to the receiving water, which has implications for ocean acidification, hypoxia, and harmful algal blooms.

b. For offshore monitoring requirements, this Order changes the pH monitoring from a grab sample at the surface to profile monitoring; the temperature, dissolved oxygen, and light transmittance monitoring from surface, mid-depth, and bottom to profile monitoring; and the conductivity surface, mid-depth, and bottom monitoring to salinity profile monitoring. These changes are also made to better understand the characteristics of the wastewater plume. This Order also adds monitoring

requirements for nitrogen and phosphorus to evaluate the contribution of nutrients to the receiving water, which has implications for ocean acidification, hypoxia, and harmful algal blooms.

c. For nearshore and offshore monitoring requirements, monitoring for enterococcus bacteria has been changed to monitoring for enterococci and monitoring requirements for total coliform has been removed. These changes reflect the new bacterial provisions contained in the 2018 amendment to the Ocean Plan.

d. This Order requires the Discharger to collect samples for the Human Marker HF183 concurrently with samples collected for fecal coliform at the offshore monitoring locations. The Human Marker HF183, derived from the 16S rRNA gene of *Bacteroides,* has been widely used to identify sewage pollution in coastal waters. For this Order, monitoring for the Human Marker HF813 is used to confirm the presence of human fecal material when the single sample maximum receiving water limitation for fecal coliform is exceeded. Analysis of the Human Marker HF183 is only required if the sample for fecal coliform exceeds the single sample maximum receiving water limitation. Results for the Human Marker HF183 is used for informational purposes only, there is no receiving water limitation for the Human Marker HF183. This requirement was included due to approximately 73 exceedances of bacteria receiving water limitations between the years 2011 through 2019 at the offshore monitoring locations located near the OOO (i.e., monitoring locations A1 through A5). During 2011 to 2019, only six exceedances of bacteria receiving water limitations occurred at the reference stations (i.e., monitoring locations B1 and B2).

e. Monitoring frequency at nearshore and offshore stations has been reduced from monthly to quarterly to help offset the costs of additional monitoring requirements and the development of a Plume Tracking Monitoring Program.

f. Monitoring locations N6 and N7 were not specified in Order No. R9-2011-0016 and will be determined by the San Diego Water Board based on the results of the Plume Tracking Monitoring Program.

Refer to sections IV.B of the MRP (Attachment E).

3. Benthic Monitoring Requirements

Sediments integrate constituents that are discharged to the ocean. Most particles that come from the OOO discharge, and any associated contaminants, will eventually settle to the seafloor where they are incorporated into the existing sediments. Sediments can accumulate these particles over the years until the point where sediment quality has degraded and beneficial uses are impaired.

Consistent with Appendix III, section 6 of the Ocean Plan, section IV.C of the MRP (Attachment E) requires periodic assessment of sediment quality to evaluate potential effects of the OOO discharge and compliance with narrative water quality standards specified in the Ocean Plan. The required assessment consists of the measurement and integration of three lines of evidence: 1) physical and chemical properties of seafloor sediments, 2) seafloor sediment toxicity to assess bioavailability and toxicity of sediment contaminants, and 3) ecological status of the biological communities (benthos) that live in or on the seafloor sediments.

The benthic community is strongly affected by sediment composition (e.g., sand, silt, and clay distributions), sediment quality (e.g., chemistry, toxicity), and water quality. Because

benthic macroinvertebrates (e.g., infauna) are dependent on their surroundings, they often serve as important biological indicators that reflect the overall conditions of the marine environment.

Benthic monitoring requirements have been updated from Order No. R9-2013-0112 to provide more detail on monitoring frequency, methods, and analyses. This Order adds monitoring requirements for selenium, iron, tin, aluminum, total nitrogen, total organic carbon, pesticides, DDT, PCBs, and PAHs to help determine if concentrations of pollutants in marine sediments are at levels that would degrade the benthic community. This Order removes the monitoring requirements for BOD, chemical oxygen demand, cyanide, and radioactivity. While the Ocean Plan requires annual monitoring for sediment chemistry, the San Diego Water Board reduced the frequency to once per permit term to offset costs of the Plume Tracking Monitoring Program and other monitoring requirements.

This Order also requires sediment toxicity analyses at each offshore station. Sediment toxicity is a measure of the response of invertebrates exposed to surficial sediments under controlled laboratory conditions. The sediment toxicity line of evidence is used to assess both pollutant-related biological effects and exposure and provides a measure of exposure to all pollutants present, including non-traditional or unmeasured chemicals.

To help facilitate collaboration with other agencies conducting receiving water sediment monitoring (e.g., dischargers to the Encina Ocean Outfall and/or San Elijo Ocean Outfall) or participation in a regional monitoring program, receiving water sediment monitoring may be conducted anytime within the permit term, with the results due no later than 180 days before the expiration of this Order. This Order requires the development of a Benthic Monitoring Work Plan, which includes a schedule for completion of sediment sampling and submission of the results, protocols for sediment sample collection and processing, and the proposed methods for analyzing the sediment data and integrating the three lines of evidence.

Refer to section IV.C of the MRP (Attachment E).

4. Fish and Macroinvertebrate Monitoring Requirements

Marine aquatic invertebrates are excellent indicators of ecosystem health because they are ubiquitous, abundant, diverse, and typically sedentary. The growth, survival, and reproduction of aquatic invertebrates are all sensitive to declines in environmental health, making analysis of assemblage structure a good ecosystem monitoring tool. Additionally, many pollutants discharged into receiving waters have the potential to bioaccumulate and persist in the tissues of aquatic organisms, including marine fishes. Chemical pollutants that bioaccumulate tend to magnify in concentration as they pass through the aquatic food chain. Fish monitoring data is required to assess the human health risks for individuals who may consume fish and to assess trends of contaminants levels in the receiving water over time.

Fish and invertebrate monitoring requirements have been updated from Order No. R9-2013-0112. This Order replaces the requirement to conduct diver surveys with a requirement to conduct benthic trawls at three trawling locations once per permit term. Benthic trawls are a standard method to evaluate the impact of ocean outfall discharges. Unlike diver surveys, benthic trawls are not restricted by depth, which allows evaluation of the benthic community at the same depth contour as the outfall. Additionally, benthic trawls allow for greater data comparability to other ocean outfalls in the San Diego region and the Southern California Bight.

Consistent with appendix III, section 9 of the Ocean Plan, this Order also requires the analyses of fish tissue samples once per permit term to determine if concentrations of pollutants are bioaccumulating to levels that are harmful to human health or degrade marine communities. The fish targeted for tissue analysis are: 1) flatfish, which have greater exposure to pollutants sources such as sediment and sediment-dwelling prey; and 2) rockfish, which are commonly targeted by commercial and recreational fishers. Flatfish tissue samples will be collected at or near the trawl stations. The three trawl stations are classified into three zones for the purpose of collecting sufficient numbers of fish for tissue analyses. Trawl Zone 1 represents the nearfield zone, defined as the area within a 0.5-km radius of trawl station T3; Trawl Zone 2 is considered the down coast zone, defined as the area within a 1-km radius of trawl station T4; and Trawl Zone 3 is considered the up coast zone, and is defined as the area centered within a 1-km radius of trawl station T5. The fish shall be collected by hook and line or by setting baited lines from within zones surrounding rig fishing stations RF1, RF2, and RF3 listed in Table E-1. Rig Fishing Zone 2 is the nearfield area centered within a 0.5-km radius of station RF2; Rig Fishing Zone 1 represents the northern farfield area centered within 1-km radius of station RF1; and Rig Fishing Zone 3 represents the southern farfield area centered within a 1-km radius of station RF3.

5. Groundwater – Not Applicable

C. Regional Monitoring Requirements

Regional ocean water monitoring provides information about the sources, fates, and effects of anthropogenic contaminants in the coastal marine environment necessary to make assessments over large areas. The large-scale assessments provided by regional monitoring describe and evaluate cumulative effects of all anthropogenic inputs and enable better decision-making regarding protection of beneficial uses of ocean waters. Regional monitoring data assists in the interpretation of core monitoring studies by providing a more accurate and complete characterization of reference conditions and natural variability. Regional monitoring also leads to methods standardization and improved quality control through inter-calibration exercise. The coalitions implementing regional monitoring enable sharing of technical resources, trained personnel, and associated costs. Focusing these resources on regional issues and developing a broader understanding of pollutants effects in ocean waters enables the development of more rapid and effective response strategies. Based on all of these considerations the San Diego Water Board supports regional approaches to monitoring ocean waters.

The Discharger shall, as directed by the San Diego Water Board, participate with other regulated entities, other interested parties, and the San Diego Water Board in development and implementation of new and improved monitoring and assessment programs for ocean waters in the San Diego Region and discharges to those waters.

Refer to section V of the MRP (Attachment E).

1. Kelp Bed Canopy Monitoring Requirements

Kelp consists of a number of species of brown algae. Along the central and southern California coast, giant kelp (*Macrocystis pyrifera*) is the largest species colonizing rocky, and in some cases sandy, subtidal habitats. Giant kelp is an important component of coastal and island communities in southern California, providing food and habitat for numerous animals.

Refer to section V.A of the MRP (Attachment E).

2. Southern California Bight Regional Monitoring Program Participation Requirements

The Southern California Bight (Bight), defined as the concave bend of the shoreline extending from Point Conception to Punta Colonet in Mexico, is host to unique, biologically diverse marine ecosystems that have long been vulnerable to the impacts of human activity. The coastal zone of the Bight hosts nearly 22 million U.S. residents that engage in a wide variety of industrial, military, and recreational activities. Approximately 5,600 miles of watersheds, half of which is highly developed, drain into the Bight. The Southern California Bight Regional Monitoring Program brings together researchers and water-quality managers to pool their resources and work together to investigate the condition of marine ecosystems both spatially and temporally, and extend greater protections to the Bight's diverse habitats and natural resources.

The Discharger is required to participate in the Southern California Bight Regional Monitoring Program coordinated by SCCWRP, or any other coordinator named by the San Diego Water Board, pursuant to Water Code sections 13267 and 13383, and 40 CFR section 122.48. The intent of the Southern California Bight Regional Monitoring Program is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the Bight.

During these coordinated sampling efforts, the Discharger's receiving water sampling and analytical effort, as defined in section IV of the MRP (Attachment E), may be reallocated to provide a regional assessment of the impact of the discharge of municipal wastewater to the Bight. In that event, the San Diego Water Board shall notify the Discharger in writing that the requirement to perform the receiving water sampling and analytical effort defined in section IV of the MRP (Attachment E) is suspended for the duration of the reallocation. Anticipated modifications to the monitoring program will be coordinated so as to provide a more comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollution sources. The level of resources in terms of sampling and analytical effort redirected from the receiving water monitoring program required under section IV of the MRP (Attachment E) shall equal the level of resources provided to implement the regional monitoring and assessment program, unless the San Diego Water Board and the Discharger agree otherwise. The specific scope and duration of the receiving water monitoring program reallocation and redirection shall be determined and set by the San Diego Water Board, in consultation with the Discharger.

Refer to section V.B of the MRP (Attachment E).

D. Special Studies Requirements

1. **Climate Change Action Plan.** Changing climate conditions may fundamentally alter the way wastewater facilities are designed and operated. Climate change research indicates the overarching driver of change is increased atmospheric carbon dioxide (CO_2) from human activity. The increased CO_2 emissions trigger changes to climatic patterns, which increase the intensity of sea level rise and coastal storm surges (Δ Sea Level), lead to more erratic rainfall and local weather patterns (Δ Weather Patterns), trigger a gradual warming of freshwater and ocean temperatures (Δ Water Temperature), and trigger changes to ocean water chemistry (Δ Water pH). The changes to the sea level and weather patterns may affect the Facilities (e.g., flooding, increased influent flows during wet weather, and heat waves). The changes to the water temperature and pH may affect how the receiving waters reacts to the discharges.

The California Public Resources Code (Public Resources Code) recognizes that anthropogenic greenhouse gas emissions responsible for climate change are also driving major shifts in the chemical properties of the world's oceans (Public Resources Code section 35630(c)). Furthermore, Governor Newsom's Executive Order N-10-1920 directs state agencies to prepare a water resiliency portfolio that meets the needs of California's communities, economy, and environment. The State Water Board's Resolution No. 2017-0012, Comprehensive Response to Climate Change, and the San Diego Water Board's Resolution No. R9-2018-0051, Addressing Threats to Beneficial Uses from Climate Change, also require a proactive approach to climate change in all state and regional actions.

Based on all of these considerations, this Order requires the Discharger to prepare and submit a Climate Change Action Plan (CCAP) within three years of the effective date of this Order.

2. **Plume Tracking Monitoring Program.** This Order includes a requirement to implement a Plume Tracking Monitoring Program. Plume tracking is necessary to determine if the plume is moving towards the shore or surface where it may encroach upon water recreation areas. Additionally, plume direction and mixing have a direct effect on sediment loading as the direction of the plume determines where the discharged particles will eventually settle. While nearshore and offshore monitoring can identify if the plume is encroaching upon the water recreation area during typical oceanographic conditions, infrequent sampling at preset intervals is unable to capture atypical oceanographic conditions that may lead to abnormal plume behavior. The Plume Tracking Monitoring Program will be used to evaluate whether the monitoring methods and locations established in Order No. R9-2013-0112 and reinstated in this Order are still appropriate and applicable.

E. Other Monitoring Requirements

Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program. Under the authority of section 308 of the CWA (33 U.S.C. section 1318), USEPA requires major and selected minor permittees under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by USEPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to USEPA's DMR-QA Coordinator and Quality Assurance Manager.

Refer to section I.H of the MRP (Attachment E)

VIII. PUBLIC PARTICIPATION

The San Diego Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the Facilities. As a step in the WDR adoption process, the San Diego Water Board staff

has developed tentative WDRs and has encouraged public participation in the WDR adoption process by providing a period of a minimum of 30 days for public review and comment on the Tentative Order.

A. Notification of Interested Parties

The San Diego Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided by posting a Notice of Public Hearing and Comment and the tentative WDRs on the San Diego Water Board's website for the duration of the public comment period. The Tentative Order was posted on the San Diego Water Board website and emailed to the Discharger and all known interested parties on September 27, 2019.

The public also had access to the meeting agenda including all supporting documents and any changes in meeting dates and locations through the San Diego Water Board's website at: http://www.waterboards.ca.gov/sandiego/.

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the San Diego Water Board at 2375 Northside Drive, Suite 100, San Diego, CA 92108.

To be fully responded to by staff and considered by the San Diego Water Board, the written comments were due at the San Diego Water Board office by 5:00 p.m. on October 28, 2019.

C. Public Hearing

The San Diego Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following dates and time and at the following location:

Date: December 11, 2019 and February 12, 2020
Time: 9:00 AM
Location: San Diego Regional Water Quality Control Board, San Diego Water Board Meeting Room, 2375 Northside Drive, Suite 108, San Diego, California 92108

Interested persons were invited to attend. At the public hearing, the San Diego Water Board heard testimony, pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

D. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and CCR, title 23, sections 2050. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or State holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Petitions may be sent in as follows:

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

In Person:
State Water Resources Control Board
Office of Chief Counsel
1001 I Street
Sacramento, California 95814

By email:	By fax:
waterqualitypetitions@waterboards.ca.gov	(916) 341-5199

For instructions on how to file a petition for review, see:
http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

E. Information and Copying

The ROWD, other supporting documents, and comments received 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 San Diego Water Board by calling (619) 516-1990.

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 San Diego Water Board, reference these Facilities, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Joann Lim by email at Joann.Lim@waterboards.ca.gov or by phone at (619) 521-3362.

ATTACHMENT G – DISCHARGE PROHIBITIONS CONTAINED IN THE OCEAN PLAN AND BASIN PLAN

I. Ocean Plan Discharge Prohibitions

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

B. Waste shall not be discharged to designated Areas of Special Biological Significance except as provided in chapter III.E. of the Ocean Plan.

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

D. The by-passing of untreated wastes containing concentrations of pollutants in excess of those of Table 3 or Table 4 [of the Ocean Plan] to the ocean is prohibited, except as allowed by Federal Standard Provisions I.G and I.H (Attachment D).

E. The discharge of trash to surface waters of the State or the deposition of trash where it may be discharged into surface waters of the State is prohibited.

II. Basin Plan Discharge Prohibitions

A. The discharge of waste to waters of the State in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in Water Code section 13050, is prohibited.

B. The discharge of waste to land, except as authorized by WDRs of the terms described in Water Code section 13264 is prohibited.

C. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by an NPDES permit or a dredged or fill material permit (subject to the exemption described in Water Code section 13376) is prohibited.

D. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless the San Diego Water Board issues an NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State of California Department of Public Health and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.

E. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the San Diego Water Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.

F. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the San Diego Water Board.

G. The dumping, deposition, or discharge of waste directly into waters of the State, or adjacent to such waters in any manner which may permit it's being transported into the waters, is prohibited unless authorized by the San Diego Water Board.

H. Any discharge to a storm water conveyance system that is not composed entirely of storm water is prohibited unless authorized by the San Diego Water Board. [The federal regulations, 40 CFR section 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR section 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to an NPDES permit and discharges resulting from firefighting activities.] [section 122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

I. The unauthorized discharge of treated or untreated sewage to waters of the State or to a storm water conveyance system is prohibited.

J. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in Water Code section 13264, is prohibited.

K. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the State is prohibited.

L. The discharge of any radiological, chemical, or biological warfare agent into waters of the State is prohibited.

M. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the San Diego Water Board.

N. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the State or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

ATTACHMENT H – SANITARY SEWER SYSTEM REQUIREMENTS

I. BASIN PLAN DISCHARGE PROHIBITIONS

Any sanitary sewer overflow (SSO) from a sanitary sewer system at any point upstream of a sewage treatment plant is prohibited to the extent permitted by federal law.

II. PROVISIONS

A. The Discharger shall take all feasible steps to eliminate SSOs. In the event that an SSO does occur, the Discharger shall take all feasible steps to contain and mitigate the impacts of an SSO.

B. In the event of an SSO, the Discharger shall take all feasible steps to prevent untreated or partially treated wastewater from discharging from storm drains into flood control channels or waters of the United States by blocking the storm drainage system and by removing the wastewater from the storm drains.

C. All SSOs must be reported in accordance with section III below.

D. In any enforcement action, the State and/or San Diego Water Board will consider the appropriate factors under the duly adopted State Water Board Enforcement Policy. And, consistent with the Enforcement Policy, the State and/or San Diego Water Board must consider the Discharger's efforts to contain, control, and mitigate SSOs when considering the California Water Code section 13327 factors. In assessing these factors, the State and/or San Diego Water Board will also consider whether:

1. The Discharger has complied with the requirements of this Order, including requirements for reporting and developing and implementing a Sewer System Management Plan (SSMP).
2. The Discharger can identify the cause or likely cause of the discharge event.
3. There were no feasible alternatives to the discharge, such as temporary storage or retention of untreated wastewater, reduction of inflow and infiltration, use of adequate backup equipment, collecting and hauling of untreated wastewater to a treatment facility, or an increase in the capacity of the system as necessary to contain the design storm event identified in the SSMP. It is inappropriate to consider the lack of feasible alternatives, if the Discharger does not implement a periodic or continuing process to identify and correct problems.
4. The discharge was exceptional, unintentional, temporary, and caused by factors beyond the reasonable control of the Discharger.
5. The discharge could have been prevented by the exercise of reasonable control described in a certified SSMP for:
    a. Proper management, operation, and maintenance;
    b. Adequate treatment facilities, sanitary sewer system facilities, and/or components with an appropriate design capacity, to reasonably prevent SSOs (e.g., adequately enlarging treatment or collection facilities to accommodate growth, inflow and infiltration, etc.);

c. Preventive maintenance (including cleaning and fats, oils, and grease (FOG) control);

d. Installation of adequate backup equipment; and

e. Inflow and infiltration prevention and control to the extent practicable.

6. The sanitary sewer system design capacity is appropriate to reasonably prevent SSOs.

7. The Discharger took all reasonable steps to stop and mitigate the impact of the discharge as soon as possible.

E. When an SSO occurs, the Discharger shall take all feasible steps and necessary remedial actions to: 1) control or limit the volume of untreated or partially treated wastewater discharged, 2) terminate the discharge, and 3) recover as much of the wastewater discharged as possible for proper disposal, including any wash down water.

The Discharger shall implement all remedial actions to the extent they may be applicable to the discharge and not inconsistent with an emergency response plan, including the following:

1. Interception and rerouting of untreated or partially treated wastewater flows around the wastewater line failure;

2. Vacuum truck recovery of SSOs and wash down water;

3. Cleanup of debris at the overflow site;

4. System modifications to prevent another SSO at the same location;

5. Adequate sampling to determine the nature and impact of the release; and

6. Adequate public notification to protect the public from exposure to the SSO.

F. The Discharger shall properly, manage, operate, and maintain all parts of the sanitary sewer system owned or operated by the Discharger, and shall ensure that the system operators (including employees, contractors, or other agents) are adequately trained and possess adequate knowledge, skills, and abilities.

G. The Discharger shall allocate adequate resources for the operation, maintenance, and repair of its sanitary sewer system, by establishing accounting mechanisms, and auditing procedures to ensure an adequate measure of revenues and expenditures. These procedures must be in compliance with applicable laws and regulations and comply with generally acceptable accounting practices.

H. The Discharger shall provide adequate capacity to convey base flows and peak flows, including flows related to wet weather events. Capacity shall meet or exceed the design criteria as defined in the Discharger's System Evaluation and Capacity Assurance Plan for all parts of the sanitary sewer system owned or operated by the Discharger.

I. The Discharger shall develop (or revise as necessary) and implement a written SSMP and make it available to the State and/or San Diego Water Board upon request. A copy of this document must be publicly available at the Discharger's office and/or available on the Internet.

J. California Business and Professions Code sections 6735, 7835, and 7835.1 require that engineering and geologic evaluations and judgments be performed by or under the direction of registered professionals. All engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. Specific elements of the SSMP that require

professional evaluation and judgments shall be prepared by or under the direction of appropriately qualified professionals and shall bear the professional(s)' signature and stamp.

K. The mandatory elements of the SSMP are specified below. However, if the Discharger believes that any element of this section is not appropriate or applicable to the Discharger's sanitary sewer system, the SSMP program does not need to address that element. The Discharger must justify why that element is not applicable.

Sewer System Management Plan (SSMP)

1. **Goal.** The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent SSOs, as well as mitigate any SSOs that do occur.
2. **Organization.** The SSMP must identify:
    a. The name of the responsible or authorized representative as described in section V.B of the Standard Provisions (Attachment D of this Order);
    b. The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation; and
    c. The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and San Diego Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, and/or California Emergency Management Agency).
3. **Legal Authority.** The Discharger must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:
    a. Prevent illicit discharges into its sanitary sewer system (examples may include inflow and infiltration, stormwater, chemical dumping, unauthorized debris and cut roots, etc.);
    b. Require that sewers and connections be properly designed and constructed;
    c. Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Discharger;
    d. Limit the discharge of fats, oils and grease, and other debris that may cause blockages; and
    e. Enforce any violation of its sewer ordinances.
4. **Operation and Maintenance Program.** The SSMP must include those elements listed below that are appropriate and applicable to the Discharger's system:
    a. Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;
    b. Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at

known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;

c. Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan (CIP) that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the CIP;

d. Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and

e. Provide equipment and replacement part inventories, including identification of critical replacement parts.

5. **Design and Performance Provisions.**

   a. Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances, and for the rehabilitation and repair of existing sanitary sewer systems; and

   b. Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

6. **Overflow and Emergency Response Plan.** Each Discharger shall develop and implement an Overflow and Emergency Response Plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

   a. Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;

   b. A program to ensure an appropriate response to all overflows;

   c. Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, San Diego Water Board, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with this attachment, section III. All SSOs shall be reported in accordance with this attachment, section III, the California Water Code, other State law, and other applicable San Diego Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification;

   d. Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Overflow and Emergency Response Plan and are appropriately trained;

   e. Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and

f. A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

7. **Fats, Oil, and Grease (FOG) Control Program.** The Discharger shall evaluate its service area to determine whether a FOG control program is needed. If a Discharger determines that a FOG program is not needed, the Discharger must provide justification for why it is not needed. If FOG is found to be a problem (e.g., causes or contributes to SSOs), the Discharger must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system. This plan shall include the following as appropriate:

   a. An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;

   b. A plan and schedule for the disposal of FOG generated within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of FOG generated within a sanitary sewer system service area;

   c. The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG;

   d. Requirements to install grease removal devices (e.g., traps or interceptors), design standards for the removal devices, maintenance requirements, best management practices (BMP) requirements, record keeping and reporting requirements;

   e. Authority to inspect grease producing facilities, enforcement authorities, and whether the Discharger has sufficient staff to inspect and enforce the FOG ordinance;

   f. An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and

   g. Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in section II.K.7.f above.

8. **System Evaluation and Capacity Assurance Plan.** The Discharger shall prepare and implement a CIP that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include:

   a. **Evaluation:** Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events;

   b. **Design Criteria:** Where design criteria do not exist or are deficient, undertake the evaluation identified in section II.K.8.a above to establish appropriate design criteria;

c. **Capacity Enhancement Measures:** The steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, inflow and infiltration reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding; and

d. **Schedule**: The Discharger shall develop a schedule of completion dates for all portions of the CIP developed in sections II.K.8.a through II.K.8.c above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in section II.L below.

9. **Monitoring, Measurement, and Program Modifications.** The Discharger shall:

a. Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;

b. Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;

c. Assess the success of the preventative maintenance program;

d. Update program elements, as appropriate, based on monitoring or performance evaluations; and

e. Identify and illustrate SSO trends, including frequency, location, and volume.

10. **SSM Program Audits.** As part of the SSMP, the Discharger shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every two years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Discharger's compliance with the SSMP requirements, including identification of any deficiencies in the SSMP and steps to correct them.

11. **Communication Program.** The Discharger shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Discharger as the program is developed and implemented.

L. Both the SSMP and the Discharger's program to implement the SSMP must be certified by the Discharger to be in compliance with the requirements set forth above. The Discharger shall certify that the SSMP, and subparts thereof, are in compliance with the requirements of this attachment.

In order to complete this certification, the Discharger's authorized representative must complete the certification portion in the Online SSO Database Questionnaire by checking the appropriate milestone box, printing and signing the automated form, and sending the form to:

State Water Resources Control Board
Division of Water Quality
Attn: SSO Program Manager
P.O. Box 100
Sacramento, CA 95812

The SSMP must be updated every five (5) years and must include any significant program changes. Re-certification by the Discharger is required when significant updates to the SSMP

are made. To complete the re-certification process, the Discharger shall enter the data in the Online SSO Database and mail the form to the State Water Board, as described above.

III. SSO REPORTING REQUIREMENTS

A. Summary of monitoring and reporting requirements

1. The following tables defines the SSO spill categories:

Table H-1. SSO Spill Categories

Categories	Definitions
Category 1	Discharges of untreated or partially treated wastewater of any volume resulting from the Discharger's sanitary sewer system failure or flow condition that: • Reach surface water and/or reach a drainage channel tributary to a surface water; or • Reach a Municipal Separate Storm Sewer System (MS4) and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).
Category 2	Discharges of untreated or partially treated wastewater of 1,000 gallons or greater resulting from the Discharger's sanitary sewer system failure or flow condition that do not reach surface water, a drainage channel, or a MS4 unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.
Category 3	All other discharges of untreated or partially treated wastewater resulting from the Discharger's sanitary sewer system failure or flow condition.
Private Lateral Sewage Discharge (PLSD)	Discharges of untreated or partially treated wastewater resulting from blockages or other problems **within a privately-owned sewer lateral** connected to the Discharger's sanitary sewer system or from other private sewer assets. PLSDs that the Discharger becomes aware of shall be reported to the California Integrated Water Quality System (CIWQS) Online SSO Database.

2. The following table summarizes the notification, reporting, monitoring, and record keeping requirements.

Table H-2. SSO Notification, Reporting, Monitoring, and Record Keeping Requirements

Element	Requirement	Method
Notification (see section III.B below)	Within two hours of becoming aware of any Category 1 SSO greater than or equal to 1,000 gallons discharged to surface water or spilled in a location where it probably will be discharged to surface water, notify the California Office of Emergency Services (Cal OES) and obtain a notification control number.	Call Cal OES at: (800) 852-7550
Reporting (see section III.C below)	• Category 1 SSO: Submit draft report within three business days of becoming aware of the SSO and certify within 15 calendar days of SSO end date.	Enter data into the CIWQS Online SSO Database (http://ciwqs.waterboards.ca.gov/), certified by Discharger's Legally Responsible Official(s).

	• Category 2 SSO: Submit draft report within 3 business days of becoming aware of the SSO and certify within 15 calendar days of the SSO end date. • Category 3 SSO: Submit certified report within 30 calendar days of the end of month in which SSO the occurred. • SSO Technical Report: Submit within 45 calendar days after the end date of any Category 1 SSO in which 50,000 gallons or greater are spilled to surface waters. • "No Spill" Certification: Certify that no SSOs occurred within 30 calendar days of the end of the month. • Collection System Questionnaire: Update and certify every 12 months.	
Water Quality Monitoring (see section III.D below)	Conduct water quality sampling within 48 hours after initial SSO notification for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.	Water quality results are required to be uploaded into CIWQS for Category 1 SSOs in which 50,000 gallons or greater are spilled to surface waters.
Record Keeping (see section III.E below)	• SSO event records. • Records documenting SSMP implementation and changes/updates to the SSMP. • Records to document Water Quality Monitoring for SSOs of 50,000 gallons or greater spilled to surface waters. • Collection system telemetry records if relied upon to document and/or estimate SSO volume.	Self-maintained records shall be available during inspections or upon request.

B. Notification Requirements

Although California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) and the State Water Resources Control Board (State Water Board) staff do not have duties as first responders, these monitoring and reporting requirements are an appropriate mechanism to ensure that the agencies that have first responder duties are notified in a timely manner in order to protect public health and beneficial uses.

1. For any Category 1 SSO greater than or equal to 1,000 gallons that results in a discharge to a surface water or spilled in a location where it probably will be discharged to surface water, either directly or by way of a drainage channel or MS4, the Discharger shall, as soon as possible, but not later than two (2) hours after (A) the Discharger has knowledge of the discharge, (B) notification is possible, and (C) notification can be provided without substantially impeding cleanup or other emergency measures, notify the Cal OES and obtain a notification control number.

2. To satisfy notification requirements for each applicable SSO, the Discharger shall provide the information requested by Cal OES before receiving a control number. Spill information requested by Cal OES may include:

a. Name of person notifying Cal OES and direct return phone number.

b. Estimated SSO volume discharged (gallons).

c. If ongoing, estimated SSO discharge rate (gallons per minute).

d. SSO Incident Description:

i. Brief narrative.

ii. On-scene point of contact for additional information (name and cell phone number).

iii. Date and time the Discharger became aware of the SSO.

iv. Name of sanitary sewer system agency causing the SSO.

v. SSO cause (if known).

e. Indication of whether the SSO has been contained.

f. Indication of whether surface water is impacted.

g. Name of surface water impacted by the SSO, if applicable.

h. Indication of whether a drinking water supply is or may be impacted by the SSO.

i. Any other known SSO impacts.

j. SSO incident location (address, city, state, and zip code).

3. Following the initial notification to Cal OES and until such time that the Discharger certifies the SSO report in the CIWQS Online SSO Database, the Discharger shall provide updates to Cal OES regarding substantial changes to the estimated volume of untreated or partially treated sewage discharged and any substantial change(s) to known impact(s).

C. Reporting Requirements

1. **CIWQS Online SSO Database Account:** The Discharger shall obtain a CIWQS Online SSO Database account and receive a “Username” and “Password” by registering through CIWQS. These accounts allow controlled and secure entry into the CIWQS Online SSO Database.

2. **SSO Mandatory Reporting Information:** For reporting purposes, if one SSO event results in multiple appearance points in a sewer system asset, the Discharger shall complete one SSO report in the CIWQS Online SSO Database which includes the GPS coordinates for the location of the SSO appearance point closest to the failure point, blockage or location of the flow condition that caused the SSO, and provide descriptions of the locations of all other discharge points associated with the SSO event.

3. **SSO Categories**

a. **Category 1** – Discharges of untreated or partially treated wastewater of any volume resulting from the Discharger’s sanitary sewer system failure or flow condition that:

i. Reach surface water and/or reach a drainage channel tributary to a surface water; or

ii. Reach a MS4 and are not fully captured and returned to the sanitary sewer system or not otherwise captured and disposed of properly. Any volume of wastewater not recovered from the MS4 is considered to have reached surface

water unless the storm drain system discharges to a dedicated storm water or groundwater infiltration basin (e.g., infiltration pit, percolation pond).

b. **Category 2** – Discharges of untreated or partially treated wastewater greater than or equal to 1,000 gallons resulting from the Discharger's sanitary sewer system failure or flow condition that does not reach a surface water, a drainage channel, or the MS4 unless the entire SSO volume discharged to the storm drain system is fully recovered and disposed of properly.

c. **Category 3** – All other discharges of untreated or partially treated wastewater resulting from the Discharger's sanitary sewer system failure or flow condition.

4. **Sanitary Sewer Overflow Reporting to CIWQS - Timeframes**

a. Category 1 and Category 2 SSOs – All SSOs that meet the above criteria for Category 1 or Category 2 SSOs shall be reported to the CIWQS Online SSO Database:

i. Draft reports for Category 1 and Category 2 SSOs shall be submitted to the CIWQS Online SSO Database within three (3) business days of the Discharger becoming aware of the SSO. Minimum information that shall be reported in a draft Category 1 SSO report shall include all information identified in section III.C.8.a.i below. Minimum information that shall be reported in a Category 2 SSO draft report shall include all information identified in section III.C.8.a.iii below.

ii. A final Category 1 or Category 2 SSO report shall be certified through the CIWQS Online SSO Database within 15 calendar days of the end date of the SSO. Minimum information that shall be certified in the final Category 1 SSO report shall include all information identified in section III.C.8.a.ii below. Minimum information that shall be certified in a final Category 2 SSO report shall include all information identified in section III.C.8.a.iv below.

b. Category 3 SSOs – All SSOs that meet the above criteria for Category 3 SSOs shall be reported to the CIWQS Online SSO Database and certified within 30 calendar days after the end of the calendar month in which the SSO occurs (e.g., all Category 3 SSOs occurring in the month of February shall be entered into the database and certified by March 30). Minimum information that shall be certified in a final Category 3 SSO report shall include all information identified in section III.C.8.a.v below.

c. "No Spill" Certification – If there are no SSOs during the calendar month, the Discharger shall either certify, within 30 calendar days after the end of each calendar month, a "No Spill" certification statement in the CIWQS Online SSO Database certifying that there were no SSOs for the designated month.

If there are no SSOs during a calendar month but the Discharger reported a PLSD, the Discharger shall still certify a "No Spill" certification statement for that month.

d. Amended SSO Reports – The Discharger may update or add additional information to a certified SSO report within 120 calendar days after the SSO end date by amending the report or by adding an attachment to the SSO report in the CIWQS Online SSO Database. After 120 days, the Discharger may contact the SSO Program Manager to request to amend an SSO report if the Discharger also submits

justification for why the additional information was not available prior to the end of the 120 days.

5. **SSO Technical Report**

The Discharger shall submit an SSO Technical Report in the CIWQS Online SSO Database within 45 calendar days of the SSO end date for any SSO in which 50,000 gallons or greater are spilled to surface waters. This report, which does not preclude the San Diego Water Board from requiring more detailed analyses if requested, shall include at a minimum, the following:

a. **Causes and Circumstances of the SSO:**

i. Complete and detailed explanation of how and when the SSO was discovered.

ii. Diagram showing the SSO failure point, appearance point(s), and final destination(s).

iii. Detailed description of the methodology employed and available data used to calculate the volume of the SSO and, if applicable, the SSO volume recovered.

iv. Detailed description of the cause(s) of the SSO.

v. Copies of original field crew records used to document the SSO.

vi. Historical maintenance records for the failure location.

b. **Discharger's Response to SSO:**

i. Chronological narrative description of all actions taken by the Discharger to terminate the spill.

ii. Explanation of how the SSMP Overflow Emergency Response Plan was implemented to respond to and mitigate the SSO.

iii. Final corrective action(s) completed and/or planned to be completed, including a schedule for actions not yet completed.

c. **Water Quality Monitoring:**

i. Description of all water quality sampling activities conducted including analytical results and evaluation of the results.

ii. Detailed location map illustrating all water quality sampling points.

6. **PLSDs**

Discharges of untreated or partially treated wastewater resulting from blockages or other problems within a privately-owned sewer lateral connected to the Discharger's sanitary sewer system or from other private sanitary sewer system assets shall be reported to the CIWQS Online SSO Database.

a. The Discharger shall also provide notification to Cal OES per section III.B above when a PLSD greater than or equal to 1,000 gallons has or may result in a discharge to surface water. For any PLSD greater than or equal to 1,000 gallons regardless of the spill destination, the Discharger shall also file a spill report as required by Health and Safety Code section 5410 et. seq. and Water Code section 13271, or notify the responsible party that notification and reporting should be completed as specified above and required by State law.

b. In the CIWQS Online SSO Database, the Discharger must identify the sewage discharge as occurring and caused by a private sanitary sewer system asset and should identify a responsible party (other than the Discharger), if known. Certification of PLSD reports by Discharger is not required.

7. **CIWQS Online SSO Database Unavailability**

In the event that the CIWQS Online SSO Database is not available, the Discharger shall send an email to SanDiego@waterboards.ca.gov in accordance with the time schedules identified herein. In such event, the Discharger must also enter all required information into the CIWQS Online SSO Database when the database becomes available.

8. **Mandatory Information to be Included in CIWQS Online SSO Reporting**

The Discharger shall obtain a CIWQS Online SSO Database account and receive a "Username" and "Password" by registering through CIWQS which can be reached at CIWQS@waterboards.ca.gov or by calling (866) 792-4977, M-F, 8 A.M. to 5 P.M. These accounts will allow controlled and secure entry into the CIWQS Online SSO Database. Additionally, within thirty (30) days of initial enrollment and prior to recording SSOs into the CIWQS Online SSO Database, the Discharger must complete a Collection System Questionnaire (Questionnaire). The Questionnaire shall be updated at least once every 12 months.

a. SSO Reports

At a minimum, the following mandatory information shall be reported prior to finalizing and certifying an SSO report for each category of SSO:

i. **Draft Category 1 SSOs**: At a minimum, the following mandatory information shall be reported for a draft Category 1 SSO report:

(a) SSO Contact Information: Name and telephone number of the Discharger contact person who can answer specific questions about the SSO being reported.

(b) SSO Location Name.

(c) Location of the SSO by entering GPS coordinates. If a single overflow event results in multiple appearance points, provide GPS coordinates for the appearance point closest to the failure point and describe each additional appearance point in the SSO appearance point explanation field.

(d) Whether or not the SSO reached surface water, a drainage channel, or entered and was discharged from a drainage structure.

(e) Whether or not the SSO reached a municipal separate storm drain system.

(f) Whether or not the total SSO volume that reached a MS4 was fully recovered.

(g) Estimate of the SSO volume, inclusive of all discharge point(s).

(h) Estimate of the SSO volume that reached surface water, a drainage channel, or was not recovered from a storm drain.

(i) Estimate of the SSO volume recovered (if applicable).

(j) Number of SSO appearance point(s).

(k) Description and location of SSO appearance point(s). If a single sanitary sewer system failure results in multiple SSO appearance points, each appearance point must be described.

(l) SSO start date and time.

(m) Date and time the Discharger was notified of, or self-discovered, the SSO.

(n) Estimated operator arrival time.

(o) For spills greater than or equal to 1,000 gallons, the date and time Cal OES was called.

(p) For spills greater than or equal to 1,000 gallons, the Cal OES control number.

ii. **Certified Category 1 SSOs:** At a minimum, the following mandatory information shall be reported for a certified Category 1 SSO report, in addition to all fields in section III.C.8.a.i. above:

(a) Description of SSO destination(s).

(b) SSO end date and time.

(c) SSO causes (e.g., mainline blockage, roots, etc.).

(d) SSO failure point (e.g., main, lateral, etc.).

(e) Whether or not the spill was associated with a storm event.

(f) Description of spill corrective action, including steps planned or taken to reduce, eliminate, and prevent reoccurrence of the overflow; and a schedule of major milestones for those steps.

(g) Description of spill response activities.

(h) Spill response completion date.

(i) Whether or not there is an ongoing investigation, the reasons for the investigation and the expected date of completion.

(j) Whether or not a beach closure occurred or may have occurred as a result of the SSO.

(k) Whether or not health warnings were posted as a result of the SSO.

(l) Name of beach(es) closed and/or impacted. If no beach was impacted, not applicable (NA) shall be selected.

(m) Name of surface water(s) impacted.

(n) If water quality samples were collected, identify parameters the water quality samples were analyzed for. If no samples were taken, NA shall be selected.

(o) If water quality samples were taken, identify which regulatory agencies received sample results (if applicable). If no samples were taken, NA shall be selected.

(p) Description of methodology(ies) and type of data relied upon for estimations of the SSO volume discharged and recovered.

(q) SSO Certification: Upon SSO Certification, the CIWQS Online SSO Database will issue a final SSO identification (ID) number.

iii. **Draft Category 2 SSOs:** At a minimum, the following mandatory information shall be reported for a draft Category 2 SSO report: Items 1-14 in section III.C.8.a.i above for Draft Category 1 SSO.

iv. **Certified Category 2 SSOs:** At a minimum, the following mandatory information shall be reported for a certified Category 2 SSO report: Items 1-14 in section III.C.8.a.i above for Draft Category 1 SSO and Items 1-9, and 17 in section III.C.8.a.ii above for Certified Category 1 SSO.

v. **Certified Category 3 SSOs:** At a minimum, the following mandatory information shall be reported for a certified Category 3 SSO report: Items 1-14 in section III.C.8.a.i above for Draft Category 1 SSO and Items 1-5, and 17 in section III.C.8.a.ii above for Certified Category 1 SSO.

b. **Reporting SSOs to Other Regulatory Agencies**

These reporting requirements do not preclude the Discharger from reporting SSOs to other regulatory agencies pursuant to State law. In addition, these reporting requirements do not replace other San Diego Water Board notification and reporting requirements for SSOs.

c. **Collection System Questionnaire**

The required Questionnaire (see section III.C.8 above) provides the San Diego Water Board with site-specific information related to the Discharger's sanitary sewer system. The Discharger shall complete and certify the Questionnaire at least every 12 months to facilitate program implementation, compliance assessment, and enforcement response.

d. **SSMP Availability**

The Discharger shall provide the publicly available internet web site address to the CIWQS Online SSO Database where a downloadable copy of the Discharger's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP is posted. If all of the SSMP documentation listed in this subsection is not publicly available on the Internet, the Discharger shall comply with the following procedure:

Upload an electronic copy of the Discharger's approved SSMP, critical supporting documents referenced in the SSMP, and proof of local governing board approval of the SSMP to CIWQS, within 30 days of that approval and within 30 days of any subsequent SSMP re-certifications, to the following mailing address:

State Water Resources Control Board
Division of Water Quality
Attn: SSO Program Manager
1001 I Street, 15th Floor, Sacramento, CA 95814

D. Water Quality Monitoring Requirements:

To comply with section II.E.5 above, the Discharger shall develop and implement an SSO Water Quality Monitoring Program to assess impacts from SSOs to surface waters in which 50,000 gallons or greater are spilled to surface waters. The SSO Water Quality Monitoring Program, shall, at a minimum:

1. Contain protocols for water quality monitoring.
2. Account for spill travel time in the surface water and scenarios where monitoring may not be possible (e.g. safety, access restrictions, etc.).
3. Require water quality analyses for ammonia and bacterial indicators to be performed by an accredited or certified laboratory.
4. Require monitoring instruments and devices used to implement the SSO Water Quality Monitoring Program to be properly maintained and calibrated, including any records to document maintenance and calibration, as necessary, to ensure their continued accuracy.
5. Within 48 hours of the Discharger becoming aware of the SSO, require water quality sampling for, at a minimum, the following constituents:
    a. Ammonia
    b. Appropriate bacterial indicator(s) per the applicable Basin Plan water quality objective or San Diego Water Board direction which may include total and fecal coliform, enterococcus, and e-coli.

E. Record Keeping Requirements:

The following records shall be maintained by the Discharger for a minimum of five (5) years and shall be made available for review by the San Diego Water Board during an onsite inspection or through an information request:

1. General Records: The Discharger shall maintain records to document compliance with all provisions of this attachment (Attachment H, Sanitary Sewer System Requirements) including any required records generated by the Discharger's sanitary sewer system contractor(s).
2. SSO Records: The Discharger shall maintain records for each SSO event, including but not limited to:
    a. Complaint records documenting how the Discharger responded to all notifications of possible or actual SSOs, both during and after business hours, including complaints that do not result in SSOs. Each complaint record shall, at a minimum, include the following information:
        i. Date, time, and method of notification.
        ii. Date and time the complainant or informant first noticed the SSO.
        iii. Narrative description of the complaint, including any information the caller can provide regarding whether or not the complainant or informant reporting the potential SSO knows if the SSO has reached surface waters, drainage channels, or storm drains.
        iv. Follow-up return contact information for complainant or informant for each complaint received, if not reported anonymously.

v. Final resolution of the complaint.

b. Records documenting steps and/or remedial actions undertaken by the Discharger, using all available information, to comply with section II.E above.

c. Records documenting how all estimate(s) of volume(s) discharged and, if applicable, volume(s) recovered were calculated.

3. Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP was changed and/or updated and who authorized the change or update. These records shall be attached to the SSMP.

4. Electronic monitoring records relied upon for documenting SSO events and/or estimating the SSO volume discharged, including, but not limited to records from:

a. Supervisory Control and Data Acquisition (SCADA) systems

b. Alarm system(s)

c. Flow monitoring device(s) or other instrument(s) used to estimate wastewater levels, flow rates, and/or volumes.

F. Certification

1. All information required to be reported into the CIWQS Online SSO Database shall be certified by a person designated as described in section V of the Standard Provisions (Attachment D of this Order). This designated person is also known as a Legally Responsible Official (LRO). The Discharger may have more than one LRO.

2. Any designated person (i.e., an LRO) shall be registered with the State Water Board to certify reports in accordance with the CIWQS protocols for reporting.

3. Data Submitter (DS): Any Discharger employee or contractor may enter draft data into the CIWQS Online SSO Database on behalf of the Discharger if authorized by the LRO and registered with the State Water Board. However, only LROs may certify reports in CIWQS.

4. The Discharger shall maintain continuous coverage by an LRO. Any change of a registered LRO or DS (e.g., retired staff), including deactivation or a change to the LRO's or DS's contact information, shall be submitted by the Discharger to the State Water Board within 30 days of the change by calling (866) 792-4977 or e-mailing help@ciwqs.waterboards.ca.gov.

5. A registered designated person (i.e., an LRO) shall certify all required reports under penalty of perjury laws of the State as stated in the CIWQS Online SSO Database at the time of certification.

APPENDIX B

Example Warning Sign

WARNING !

CONTACT WITH THIS WATER
MAY CAUSE ILLNESS
BACTERIA LEVELS EXCEED
HEALTH STANDARDS

¡ AVISO !

EL CONTACTO CON ESTA AGUA
PUEDE CAUSAR ENFERMEDADES LA
CANTIDAD DE BACTERIAS EXCEDE
LOS NIVELES DE SALUD

COUNTY OF SAN DIEGO
DEPT. OF ENVIRONMENTAL HEALTH
PARA MAS INFORMACION
LLAME AL (619) 338-2073

APPENDIX C

Methods for Estimating Spill Volumes

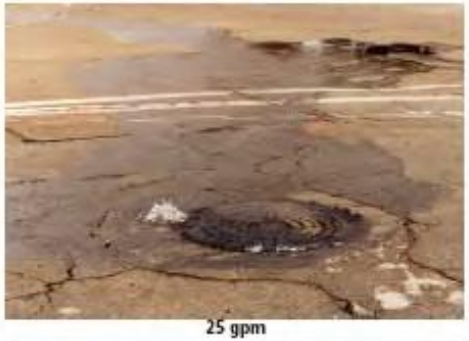
City of San Diego
Metropolitan Wastewater Department

Reference Sheet for Estimating Sewer Spills from Overflowing Sewer Manholes

All estimates are calculated in gallons per minute (gpm)

Wastewater Collection Division
(619) 654-4160

5 gpm



25 gpm

50 gpm

100 gpm

150 gpm

200 gpm

225 gpm

250 gpm

275 gpm

All photos were taken during a demonstration using metered water from a hydrant in cooperation with the City of San Diego's Water Department.

rev. 4/99

Appendix C: From the California State Water Resources Control Board ***A Guide for Developing and Updating of Sewer System Management Plans (SSMPs)*** – Sept 2015

The following methodologies for estimating spill volume are used by MCB CPEN WRD:

SPILL VOLUME WORKSHEET

The purpose of this worksheet is to capture the data and method(s) used in estimating the volume of an SSO. Since there are many variables and often unknown values involved, this calculation is just an estimate. Additionally, it is useful to use more than one method, if possible, to validate your estimate.

The following methods and tools are the approved methods in the SOP CS-103 *SSO Response*. Check all methods and tools that you used:

- ☐ Eyeball Estimate Method
- ☐ Measured Volume Method
- ☐ Duration and Flow Rate Method (Account for diurnal flow pattern for long duration)
- ☐ USD SSO Flow Rate Estimating Tool
- ☐ Other (explain) i.e.; estimated daily use per capita upstream or meter @ Pump Station.

_____

_____

_____

Eyeball Estimate Method- Imagine a bucket(s) or barrel(s) of water tipped over.

Size of bucket(s) or barrel(s)	How many of this Size?	Multiplier	Total Volume Estimated
1 gal. water jug		X 1	
5 gal. bucket		X 5	
32 gal. trash can		X 32	
55 gal drum		X 55	
Total Volume Estimated Using Eyeball Method			

SSO Volume by Area Estimation Work Sheet

GEOMETRY

For the purposes of this work sheet, the unit of measurement will be in feet for formula examples.

Area is two-dimensional - represented in square feet. (Length x Width)

Volume is three-dimensional - represented in cubic feet. (Length x Width x depth) or (Diameter Squared) D^2 x 0.785 x depth.

A Note about Depth

Wet Stain on a Concrete Surface - For a stain on concrete, use 0.0026'. This number is 1/32" converted to feet. For a stain on asphalt use 0.0013' (1/64"). These were determined to be a reasonable depth to use on the respective surfaces through a process of trial and error by SPUD staff. A known amount of water (one gallon) was poured onto both asphalt and concrete surfaces. Once the Area was determined as accurately as possible, different depths were used to determine the volume of the wetted footprint until the formula produced a result that (closely) matched the one gallon spilled. 1/32" was the most consistently accurate depth on concrete and 1/64" for asphalt. This process was repeated several times.

Sewage "Ponding" or Contained – Measure actual depth of standing sewage whenever possible. When depth varies, measure several (representative) points, determine the average and use that number in your formula to determine volume.

Area/Volume Formulas

Area is two dimensional and is represented as Square Feet (Sq. Ft.)

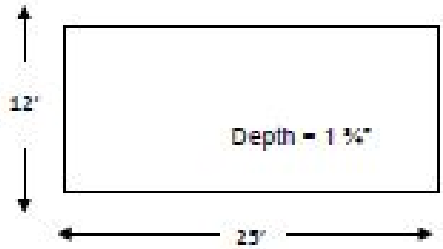
Volume is three dimensional and is represented as Cubic Feet (Cu. Ft.)

One Cubic Foot = 7.48 gallons

SSO Volume by Area Estimation Work Sheet

AREA/VOLUME OF A RECTANGLE OR SQUARE

Formula: **Length x Width x Depth = Volume in Cubic Feet**



Length (25') x Width (12') x Depth (0.14')

25' x 12' x 0.14' = 42 Cubic Feet.

Now the Volume in Cubic Feet is known.

There are 7.48 Gallons in one Cubic Foot

So, 42 Cubic Feet x 7.48 gallons/cubic feet = 314 Gallons

Chart A

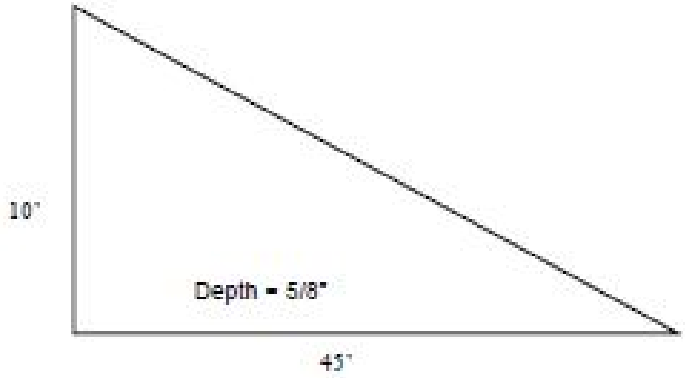
Conversion:

Inches		Feet
1/8"	=	0.01'
1/4"	=	0.02'
3/8"	=	0.03'
1/2"	=	0.04'
5/8"	=	0.05'
3/4"	=	0.06'
7/8"	=	0.07'
1"	=	0.08'
2"	=	0.17'
3"	=	0.25'
4"	=	0.33'
5"	=	0.42'
6"	=	0.50'
7"	=	0.58'
8"	=	0.67'
9"	=	0.75'

Page 6

AREA/VOLUME OF A RIGHT TRIANGLE

Base x Height x 0.5 x Depth = Volume In Cubic Feet



Base (45') x Height (10') x 0.5 x Depth (.05') x 7.48 gallons/cubic foot = 84 gallons

For Isosceles Triangles (two sides are equal lengths),
Break it down into two Right Triangles and compute area
as you would for the Right Triangle above.

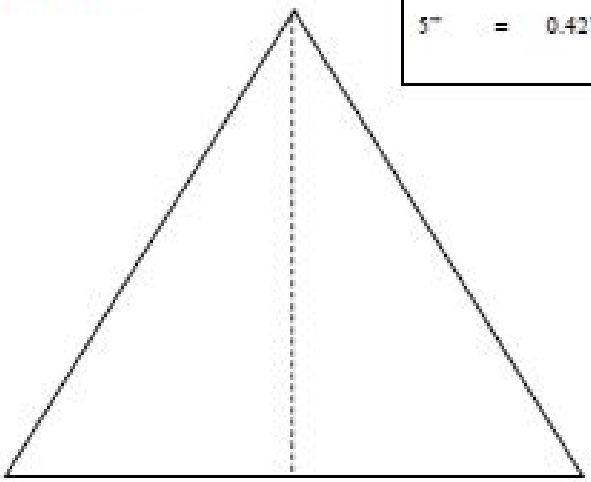


Chart A

Conversion:

Inches		Feet
1/8"	=	0.01'
1/4"	=	0.02'
3/8"	=	0.03'
1/2"	=	0.04'
5/8"	=	0.05'
3/4"	=	0.06'
7/8"	=	0.07'
1"	=	0.08'
2"	=	0.17'
3"	=	0.25'
4"	=	0.33'
5"	=	0.42'

Page 7

AREA/VOLUME OF A CIRCLE/CYLINDER

$D^2 \times 0.785 \times d$

Diameter Squared x 0.785 x Depth = Volume in cubic feet.

Diameter = Any straight line segment that passes through the center of a circle.

For our purposes, it is the measurement across the widest part of a circle.

D2 x 0.785 x depth = Volume in cubic feet

Example:

27" x 27" x 0.785 x 0.03 = 17.17 cubic feet

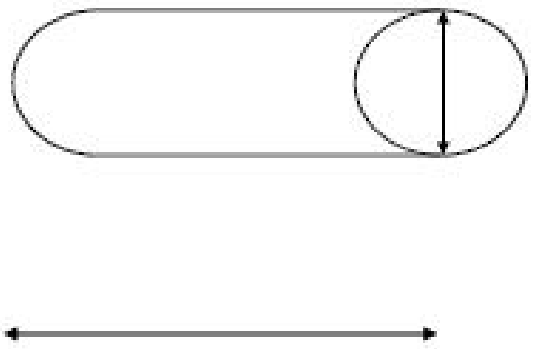
17.17 cubic feet x 7.48 gallons/cubic feet = 128 gallons

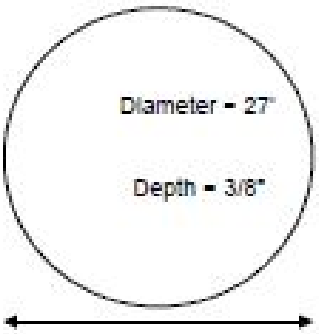
Chart - A

Conversion:

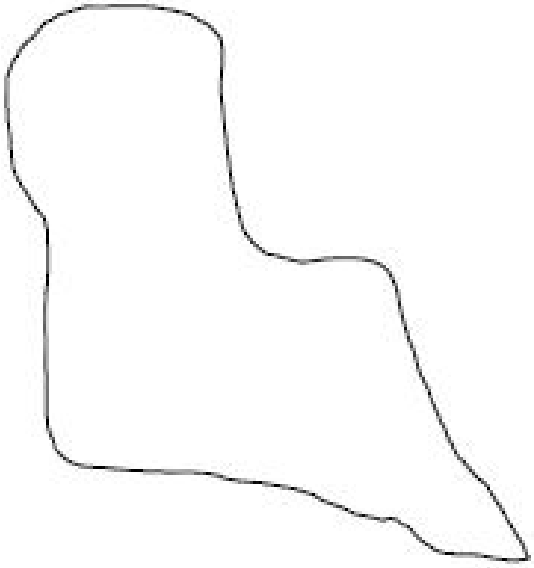
Inches to Feet

1/8"	=	0.01'
1/4"	=	0.02'
3/8"	=	0.03'
1/2"	=	0.04'
5/8"	=	0.05'
3/4"	=	0.06'
7/8"	=	0.07'
1"	=	0.08'
2"	=	0.17'
3"	=	0.25'
4"	=	0.33'





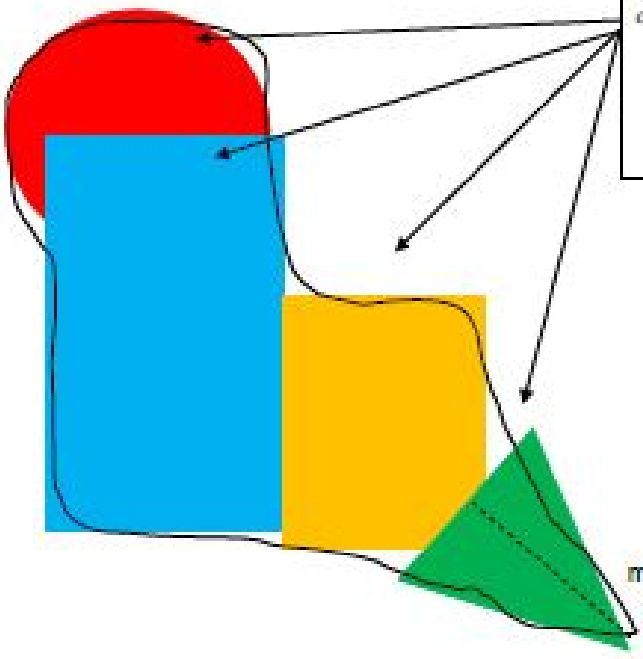
Find the geometric shapes within the shape. If this was the shape of your spill, break it down, as best you can, with the shapes we know.



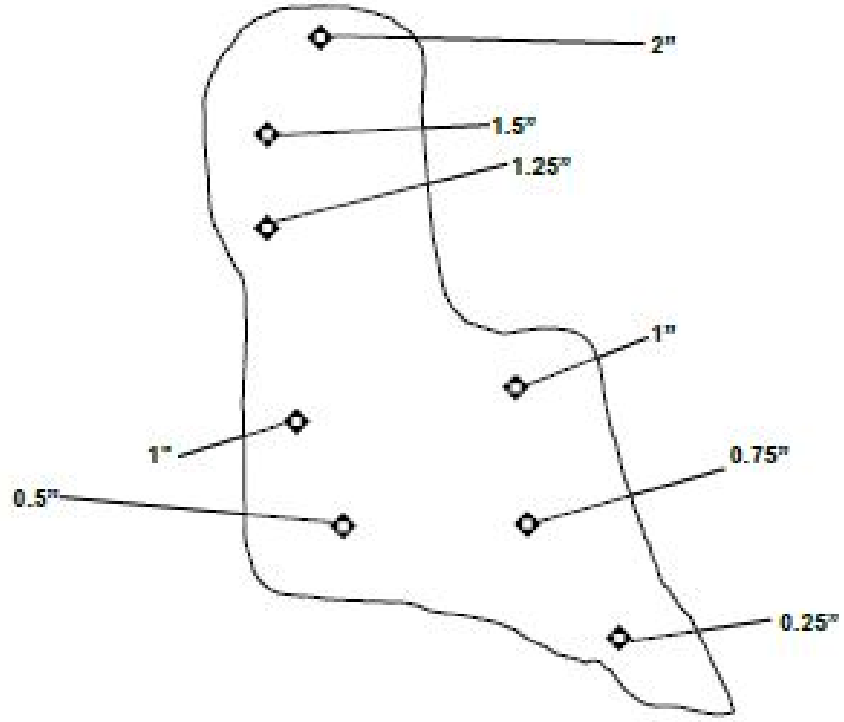
1. Determine the volumes of each shape.

In this example, after the volume of the circle is determined, multiply it by 55% (+/-) so that the overlap area won't be counted twice.

2. Add all the volumes to determine total spill volume.



If the spill depth is of varying depths, take several measurements at different depths and find the average.



2" + 1.5" + 1.25" + 1" + 1" + 0.75" + 0.5" + 0.25" = 8.25"

8.25" / 8 measurements = 1.03"

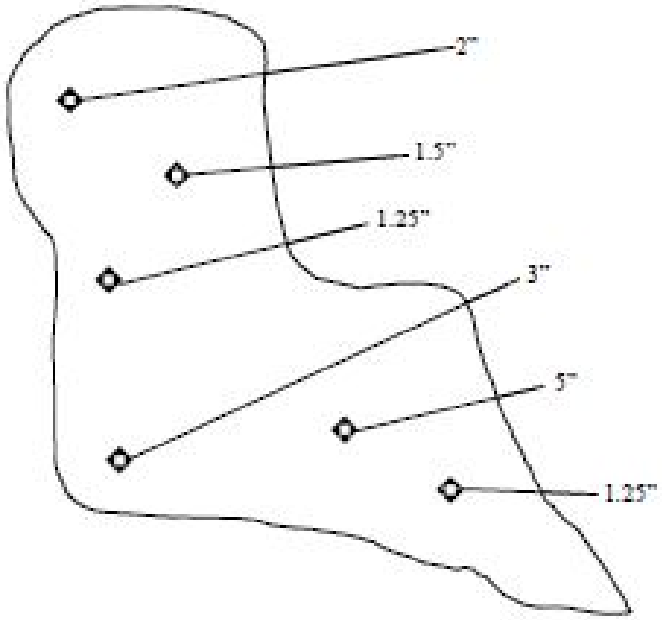
Average Depth = 1.03"

Step 1

If the spill affects a dry, unimproved area such as a field or dirt parking lot, determine the *Area* of the wetted ground in the same manner as you would on a hard surface. Using a round-point shovel, dig down into the soil until you find dry soil. Do this in several locations within the wetted area and measure the depth of the wet soil. Average the measurement/thickness of the wet soil and determine the average depth of the wet soil.

NOTE: This can be used in a (Dry) dirt or grassy area that is not regularly irrigated like a field or a dirt parking lot.

Wet weather would make this method ineffective.



Step 2

Take a Test Sample

2" + 1.5" + 1.25" + 3" + 5" + 1.25" = 14.0"

14.0" / 6 measurements = 2.33"

Average Depth = 2.33" (0.194')

EXAMPLE:

If the *Area* of the spill was determined to be 128 Sq/Ft and the average depth of the wet soil is 2.33 inches:

128 Sq/Ft x 0.194' = 24.83 Cu/Ft

24.83 Cu/Ft x 7.48 Gals/Cu/Ft = 185.74 gallons

185.74 x 18% = 33 Gallons (water in soil)

APPENDIX D

Spill Quick Report Form

MCBCP SEWER SYSTEM OVERFLOW, PERIOD OF NON*COMPLIANCE

OR INPLANT OVERFLOW- QUICK REPORT .

USE FOR IMMEDIATE VERBAL NOTIFICATION FOR OVERFLOW

IF UNKNOWN AT THE TIME, THEN PLEASE WRITE UNKNOWN OR N/A

TO SATISFY NOTIFICATION REQUIRMENTS FOR EACH APPLICABLE SSO, THE ENROLLEE SHALL PROVIDE THE INFORMATION REQUESTED BY CAL OES BEFORE RECEIVING A CONTROL NUMBER	
1. Estimated SSO VOLUME DISCHARGED AND RECOVERED, (GALLONS)	
2. IF ONGOING ESTIMATED SSO DISCHARGED RATE (GALLONS PER MINUTES)	
3. SSO INCIDENT DESCRIPTION: a) BRIEF NARRATIVE:	
b) DATE / TIME ENROLLEE BECAME AWARE OF SSO	
C) STOP DATE / TIME OF SSO	
c) SSO CAUSE (IF KNOWN)	
3. HAS SSO BEEN CONTAINED? METHOD OF CONTAINMENT?	
5. FINAL DESTINATION OF OVERFLOW:	
6. IS SURFACE WATER IMPACTED? NAME IF APPLICABLE.	
7. INDICATION OF WHETHER A DRINKING WATER SUPPLY IS OR MAY BE IMPACTED BT THE SSO .	
8. DID SPILL REACH STORM DRAIN SYSTEM?	
9. SSO INCIDENT LOCATION:	

(PRINT) Name of on scene POC_____Phone Number_____

NAME/PHONE # of person notifying Cal OES If required (see below) (Leave Blank if not required)

_____ control # _____ TIME_____

CAL QES PHONE # 800-852-7550 NAME OF PERSON WHO TOOK REPORT_____

ATTACHMENT E2 – SUMMARY OF NOTIFICATION, MONITORING AND REPORTING REQUIREMENTS

This Attachment provides a summary of notification, monitoring and reporting requirements, by spill category, and for Enrollee-owned and/or operated laterals as required in Attachment E1 of this General Order, for quick reference purposes only.

Table E2-1

Spill Category 1: Spills to Surface Waters

Spill Requirement	Due	Method
Notification	**Within two (2) hours** of the Enrollee's knowledge of a Category 1 spill of 1,000 gallons or greater, discharging or threatening to discharge to surface waters: Notify the California Office of Emergency Services and obtain a notification control number.	California Office of Emergency Services at: (800) 852-7550 (Section 1 of Attachment E1)
Monitoring	• Conduct spill-specific monitoring; • Conduct water quality sampling of the receiving water within **18 hours** of initial knowledge of spill of 50,000 gallons or greater to surface waters.	(Section 2 of Attachment E1)
Reporting	• Submit Draft Spill Report **within three (3) business days** of the Enrollee's knowledge of the spill; • Submit Certified Spill Report **within 15 calendar days** of the spill end date; • Submit Technical Report **within 45 calendar days** after the spill end date for a Category 1 spill in which **50,000 gallons or greater** discharged to surface waters; and • Submit Amended Spill Report **within 90 calendar days** after the spill end date.	(Section 3.1 of Attachment E1)

Table E2-2
Spill Category 2: Spills of 1,000 Gallons or Greater That Do Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	**Within two (2) hours** of the Enrollee's knowledge of a Category 2 spill of 1,000 gallons or greater, discharging or threatening to discharge to waters of the State: Notify California Office of Emergency Services and obtain a notification control number.	California Office of Emergency Services at: (800) 852-7550 (Section 1 of Attachment E1)
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	• Submit Draft Spill Report **within three (3) business days** of the Enrollee's knowledge of the spill; • Submit Certified Spill Report **within 15 calendar days** of the spill end date; and • Submit Amended Spill Report **within 90 calendar days** after the spill end date.	(Section 3.2 of Attachment E1)

Table E2-3
Spill Category 3: Spills of Equal or Greater than 50 Gallons and Less than 1,000 Gallons That Does Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	• Submit monthly Certified Spill Report to the online CIWQS Sanitary Sewer System Database within **30 calendars days** after the end of the month in which the spills occur; and • Submit Amended Spill Reports **within 90 calendar days** after the Certified Spill Report due date.	(Section 3.3 and 3.5 of Attachment E1)

Table E2-4
Spill Category 4: Spills Less Than 50 Gallons That Do Not Discharge to Surface Waters

Spill Requirements	Due	Method
Notification	Not Applicable	Not Applicable
Monitoring	Conduct spill-specific monitoring.	(Section 2 of Attachment E1)
Reporting	• If, during any calendar month, Category 4 spills occur, certify monthly, the estimated total spill volume exiting the sanitary sewer system, and the total number of all Category 4 spills into the online CIWQS Sanitary Sewer System Database, within 30 days after the end of the calendar month in which the spills occurred. • Upload and certify a report, in an acceptable digital format, of all Category 4 spills to the online CIWQS Sanitary Sewer System Database, by February 1st after the end of the calendar year in which the spills occur.	(Section 3.4, 3.6, 3.7 and 4.4 of Attachment E1)

APPENDIX E

Sewage Overflow Report Form

Sewage Overflow Report Long Form
Marine Corps Base Camp Pendleton

Spill/Overflow Findings

First person on the scene information:	**Spill/Overflow Location**	
Full Name:	Street Address:	
Date:	Building #:	Actual Structure:
Time:	Structure description:	
Telephone Number:		

Date/Time UNITY received emergency call:	Date/Time Emergency Response Crew arrived on scene:

Spill/Overflow Volumes and Recovery Volumes

Date/Time Spill Started:	Est. Spill Volume to Land: (gallons) 0 gallons	Est. Spill Volume to Surface Water: (gallons) 0 gallons	Est. Spill Volume to Storm Drain: (gallons) 0 gallons	Est. Spill Volume to Drainage Channel: (gallons) 0 gallons
Date/Time Spill Ended:	Spill Volume Recovered From Land: (gallons) 0 gallons	Spill Volume Recovered from Surface Water: (gallons) gallons	Spill Volume Recovered from Storm Drain: (gallons) gallons	Spill Volume Recovered from Drainage Channel: (gallons) gallons

If spill reached surface waters?	**Yes or No** ☐ ☐	Number of appearance points and structure type: One	
Did spill pond?	**Yes or No** ☐ ☐	Did spill percolate?	**Yes or No** ☐ ☐

Explanation of volume estimation methods used (Vactor truck volume, spill area, time and flow):

Path of Spill/Overflow

Was there measurable precipitation during 72 hours period to the spill\overflow?	**Yes or No** ☐ ☐	Was the cause of the spill/overflow associated with a storm event?	**Yes or No** ☐ ☐

Spill path and final destination location:

Did the spill result in a beach closure and if so, which beach: N/A

Did the spill reach a body of water or river tributary and if so, identify:

Sewage Overflow Report Long Form
Marine Corps Base Camp Pendleton

Detailed Cause of Spill/Overflow

Cause of Spill/Overflow (check all the apply)

☐ Blockage	☐ Infiltration	☐ Rocks	☐ Roots	☐ Construction	☐ Debris	☐ Grease	☐ Vandalism	☒ Line Break
☐ Flood Damage	☐ Manhole Failure	☐ Power Failure	☐ Pump Station Failure	☒ Other				

Root Issue of Spill/Overflow (check all that apply)

☐ Blockage	☐ Root Control Applied	☐ Red Flag Notification	☐ Tree Removal	☐ If Tree Removal, then MAXIMO No.	☐ Other

Action and Response to Spill/Overflow

Method to stop spill:		
Method to contain spill:		
Method to disinfect spill:		
No. of signs posted at spill site?		No. of days signs posted:
If signs posted, identify locations:		
Was surface water quarantined?	**Yes or No** ☐ ☐	No. of signs posted at quarantined site?
Description of corrective actions taken/planned:		
Description of preventative actions taken/planned:		

Report Processing Spill/Overflow

Name & Signature of responsible party:	Date/Time

Sewage Overflow Report Long Form
Marine Corps Base Camp Pendleton

Longitude:	Latitude: -
Additional Remarks:	

OES Notification		**RWQCB Notification**		**DEH Notification**	
Oral Report Yes or No ☐ ☐	FAX Yes or No ☐ ☐	Oral Report Yes or No ☐ ☐	FAX Yes or No ☐ ☐	Oral Report Yes or No ☐ ☐	
Date:	Time:	Date:	Time:	Date	Time
Control Number/POC:		POC:		POC:	
Reported by:		Reported by:		Reported by:	