c. For the visual observations described in sections IX.A.1 and IX.A.2, the Discharger shall observe the presence or absence of floating and suspended materials, oil and grease, discoloration, turbidity, odors, and source of any observed pollutants.

d. Monthly, the Discharger shall visually observe storm water storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

e. The Discharger shall record all storm events that occur during daylight scheduled Facility operating hours that do no produce a discharge.

f. The Discharger shall maintain records of all visual observations, personnel performing the observations, observation dates, observed locations, and corrective actions taken in response to the observations. The SWPPP shall be revised, as necessary, in accordance with Attachment G of this Order.

3. Sampling and Analysis

a. The Discharger shall collect storm water samples during the first hour of discharge from the first two qualifying storm events of the wet season. All storm water discharge locations shall be sampled. Sampling of stored or contained storm water shall occur at the time the stored or contained storm water is discharged. If samples are not collected from either or both the first two qualifying storm events of the wet season, the Discharger shall collect samples from the next qualifying storm events of the wet season and shall explain in the annual report why either or both of the first two qualifying storm events were not sampled.

b. Sample collection of storm water discharges is required only during scheduled Facility operating hours and only when the storm water discharge is preceded by at least 7 days without a storm water discharge.

c. The industrial storm water discharges from Discharge Point Nos. NAS-001 through NAS-058 (except NAS-038), NAB-001 through NAB-052 (except NAB-024), and NOLF-001 through NOLF-004 shall be sampled and analyzed as follows:

**Table E-13. Monitoring Requirements for Industrial Storm Water Discharges**

| Parameter | Unit | Sample Type | Minimum Frequency* | Required Analytical Test Method |
|---|---|---|---|---|
| Discharge Volume | gallons | Estimate[1] | 2 storms per year | Estimate |
| ***Conventional Pollutants*** | | | | |
| Oil and Grease | mg/L | Grab | 2 storms per year | [2] |
| pH | pH Units | Grab | 2 storms per year | [2] |
| Total Suspended Solids | mg/L | Grab | 2 storms per year | [2] |

| Parameter | Unit | Sample Type | Minimum Frequency* | Required Analytical Test Method |
|---|---|---|---|---|
| ***Priority Pollutants*** | | | | |
| Copper, Total Recoverable | µg/L | Grab | 2 storms per year | 2,3 |
| Zinc, Total Recoverable | µg/L | Grab | 2 storms per year | 2 |
| | | | | |
| ***Non-Conventional Pollutants*** | | | | |
| Acute Toxicity | Pass or Fail | Grab | 2 storms per year | 2 |
| Electrical Conductivity | µmho/cm | Measurement | 2 storms per year | 2 |
| Settleable Solids | ml/L | Grab | 2 storms per year | 2 |
| Total Organic Carbon | mg/L | Grab | 2 storms per year | 2 |
| Total Petroleum Hydrocarbons | mg/L | Grab | 2 storms per year | 2 |
| Other Pollutants[4] | µg/L | Grab | 2 storms per year | 2 |
| | | | | |
| ***Remaining Priority Pollutants*** | | | | |
| Remaining CTR Priority Pollutants[5] | µg/L | Grab | 2 storms in year one<br>2 storms in year five | 2 |

* Sampling shall occur during storm events, or if collected, prior to release to receiving water. If there are no storm events during the year, then sampling shall occur as soon as possible. If there are no storm events during the fifth year and conditions for administrative extension are met, then sampling shall occur as soon as possible.

1 The volume of storm water discharge can be estimated by multiplying: amount of rainfall in feet × square feet of surface area × impervious factor. There are 7.5 gallons per cubic foot.

2 As specified in 40 CFR 136.3.

3 Effluent samples shall be analyzed for copper according to method 1638 or 1640. The commonly used methods 6010B (Inorganics by ICP-Atomic Emission Spectroscopy) and 200.7 (Trace Elements-ICP) have been found to give inaccurate copper readings in saline-matrix samples due to interference with the sodium-argon complex, which has a molecular weight similar to copper. Method 1638 (ICP/MS) or 1640 (On-Line Chelation) will eliminate the sodium-argon complex before the sample is tested for copper. No inaccurate readings for other metals in a saline-matrix sample is analyzed by methods 6010B or 200.7 are known.

4 Pollutants that are likely to be present in storm water discharges in significant quantities shall be sampled. The pollutants shall be selected based upon the pollutant source assessment required in section VII of the SWPPP requirements contained in Attachment G, visual observations, and inspection records. If these pollutants are not detected in significant quantities after two consecutive sampling events, the Discharger may eliminate the pollutant from future analysis until the pollutant is likely to be present again. The Discharger shall select appropriate analytical test methods that indicate the presence of pollutants in storm water discharges in significant quantities.

5 As specified in the Table of Paragraph (b)(1) of 40 CFR 131.38.

d. When sampling results indicate the presence of significant quantities of pollutants in storm water discharges, the Discharger shall implement corrective actions that include:

i. A site evaluation to determine the pollutant source(s);
ii. An assessment of the Facility's SWPPP to identify additional BMPs to prevent or reduce pollutants in storm water discharges; and
iii. A certification that the SWPPP has been revised to include the additional BMPs identified above.

4. Storm Water Discharge Sample Locations

a. The Discharger shall visually observe and collect samples of storm water discharges from all drainage areas. The storm water discharge collected and observed shall be representative of the storm water discharge in each drainage area.

b. The Discharger shall identify alternate visual observation and sample collection locations if the Facility's drainage areas are affected by storm water run-on from surrounding areas. The storm water discharge collected and observed shall be representative of the Facility's storm water discharge in each drainage area.

c. If visual observation and sample collection locations are difficult to observe or sample (e.g., sheet flow and submerged discharge outlets), the Discharger may identify other alternative locations representative of the Facility's storm water discharges.

d. If the Discharger determines and documents within its annual report that the industrial activities and BMPs within two or more drainage areas are substantially identical, the Discharger may either:

i. Collect samples from a reduced number of substantially identical drainage areas; or
ii. Collect samples from each substantially identical drainage area and analyze a combined sample. The combined sample shall consist of equal volumes of sample collected from each substantially identical drainage area.

5. Visual Observation and Sample Collection Exceptions

The Discharger shall be prepared to collect samples and conduct visual observations at the beginning of the wet season (October 1 through May 31) and throughout the wet season until the minimum requirements of sections IX.A.2 and IX.A.3. of this MRP are completed with the following exception:

a. The Discharger is not required to collect samples or conduct visual observations under the following conditions:

i. During dangerous weather conditions such as flooding and electrical storms;
ii. Oustide of scheduled Facility operating hours; or
iii. When a storm event in the proceeding 7 days produced a storm water

discharge.

b. If the Discharger does not collect the required samples or conduct the visual observations during a wet season due to these exceptions, then the Discharger shall include an explanation in the annual report why the sampling or visual observations were not conducted.

c. The Discharger may conduct visual observations and sample collection more than 1 hour after discharge begins if the Discharger determines that the storm water discharge will be more representative of the Facility's storm water discharge. The Discharger shall include a technical justification in the annual report explaining why the visual observations and sample collection should be conducted after the first hour of discharge.

6. Storm Water Annual Report

The Discharger shall submit a Storm Water Annual Report by September 1 of each year to this Regional Water Board. The report shall include the following:

a. Identification of high-risk areas at NASNI and NAB;

b. A summary of visual observations and sampling and analysis results;

c. An evaluation of the visual observation and sampling and analysis results;

d. Annual Comprehensive Site Compliance Evaluation Report as required by section IX of the SWPPP requirements contained in Attachment G;

e. Laboratory reports;

f. Records specified in section IX.A of this MRP.

The Discharger shall prepare and submit the Storm Water Annual Report using the annual report forms provided by the State Water Board or Regional Water Board or shall submit their information on a form that contains equivalent information.

7. Monitoring Methods

a. The SWPPP shall include a description of the following items:

i. Visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures.
ii. Sampling locations and sample collection procedures. This shall include procedures for sample collection, storage, preservation, and shipping to the testing lab to assure that consistent quality control and quality assurance is maintained.
iii. Identification of the analytical methods and related method detection limits (if applicable) used to detect pollutants in storm water discharges, including a

justification that the method detection limits are adequate.

# X. REPORTING REQUIREMENTS

## A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

## B. Self Monitoring Reports (SMRs)

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

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table E-14. Monitoring Periods and Reporting Schedule**

| Sampling Frequency | Monitoring Period Begins On... | Monitoring Period | SMR Due Date |
|---|---|---|---|
| 1/Month | First day of calendar month following permit effective date or on permit effective date if that date is first day of the month | First day of calendar month through last day of calendar month | Quarterly on:<br>May 1<br>August 1<br>November 1<br>February 1 |
| 1/Quarter | Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date | January 1 through March 31<br>April 1 through June 30<br>July 1 through September 30<br>October 1 through December 31 | May 1<br>August 1<br>November 1<br>February 1 |
| 2/Year | Closest of January 1 or July 1 following (or on) permit effective date | January 1 through June 30<br>July 1 through December 31 | August 1<br>February 1 |
| 1/Year | Permit Effective Date | July 1 through June 30 | September 1 |
| Annual Storm Water Report (IX.A.6 of this MRP) | First day of calendar month following permit effective date or on permit effective date if that date is first day of the month | July 1 through June 30 | September 1<br>Separate report submitted with Annual Report |

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 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 RL, but greater than or equal to the laboratory' s MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

      For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ 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 priority pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

6. **Multiple Sample Data.** When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, 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 WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

Regional Water Quality Control Board, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123

## C. Discharge Monitoring Reports (DMRs)

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

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

| STANDARD MAIL | FEDEX/UPS/ OTHER PRIVATE CARRIERS |
|---|---|
| State Water Resources Control Board<br>Division of Water Quality<br>c/o DMR Processing Center<br>PO Box 100<br>Sacramento, CA 95812-1000 | State Water Resources Control Board<br>Division of Water Quality<br>c/o DMR Processing Center<br>1001 I Street, 15th Floor<br>Sacramento, CA 95814 |

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

**D. Other Reports**

1. **Progress Reports.** As specified in the compliance time schedules required in Special Provisions VI, progress reports shall be submitted in accordance with the following reporting requirements. At minimum, the progress reports shall include a discussion of the status of final compliance, whether the Discharger is on schedule to meet the final compliance date, and the remaining tasks to meet the final compliance date.

**Table E-15. Reporting Requirements for Special Provisions Progress Reports**

| Special Provision | Reporting Requirements |
|---|---|
| Compliance Schedules for Final Effluent Limitations for Steam Condensate Discharges of Copper, Lead, TCDD-Equivalents, and Bis (2-Ethylhexyl) Phthalate (section VI.C.7.a) | July 10, 2009, and by the end of every other subsequent month, until final compliance |
| Compliance Schedules for Final Effluent Limitations for Diesel Engine Cooling Water Discharges of Copper, Lead, Mercury, Zinc, TCDD-Equivalents, and 4,4-DDE (section VI.C.7.b) | July 10, 2009, and by the end of every other subsequent month, until final compliance |
| Compliance Schedules for Final Effluent Limitations for Diesel Engine Cooling Water Discharges of Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Zinc, DDT, and TCDD-Equivalents (section VI.C.7.c) | July 10, 2009, and by the end of every other subsequent month, until final compliance |

2. The Discharger shall report the results of any acute toxicity testing, TRE/TIE, or Pollution Prevention Plan required by Special Provisions – VI.C.2 and VI.C.3 of this Order. The Discharger shall report the progress in satisfaction of compliance schedule dates specified in Special Provisions – VI.C.7 of this Order. The Discharger shall submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date.

# ATTACHMENT F – FACT SHEET

## Table of Contents

**List of Tables**

## ATTACHMENT F – FACT SHEET

As described in section II 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** | |
| **Discharger** | United States Department of the Navy |
| **Name of Facility** | Naval Base Coronado |
| **Facility Address** | 937 N. Harbor Drive<br>San Diego, CA 92132-0058<br>San Diego County |
| **Facility Contact, Title and Phone** | Luis Perez, Installation Environmental Program Manager, (619) 545-3429 |
| **Authorized Person to Sign and Submit Reports** | Luis Perez, Installation Environmental Program Manager, (619) 545-3429 or Brian Gordon, Water Program Manager, (619) 532-2273 |
| **Mailing Address** | Same as Facility Address |
| **Billing Address** | Same as Facility Address |
| **Type of Facility** | Naval Base |
| **Major or Minor Facility** | Major |
| **Threat to Water Quality** | 1 |
| **Complexity** | A |
| **Pretreatment Program** | Not Applicable |
| **Reclamation Requirements** | Not Applicable |
| **Facility Permitted Flow** | Not Applicable |
| **Facility Design Flow** | Not Applicable |
| **Watershed** | San Diego Bay |
| **Receiving Water** | Pacific Ocean, San Diego Bay, and Tijuana River (within the Tijuana River Estuary) |
| **Receiving Water Type** | Ocean, Enclosed Bay, Estuary |

**A.** The United States Department of the Navy (hereinafter Discharger) is the owner and operator of Naval Base Coronado (hereinafter Facility), a U.S. naval base.

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

**B.** The Facility discharges wastewater from multiple discharge points to the Pacific Ocean, the San Diego Bay, and the Tijuana River, all waters of the United States. The Facility is currently regulated by Order No. R9-2003-0008, which was adopted on May 14, 2003 and expired on May 14, 2008. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order.

**C.** The Discharger filed a report of waste discharge and submitted an application for renewal of its WDRs and NPDES permit in November 2007. A site visit was conducted on December 12, 2007 to observe operations and collect additional data to develop permit limitations and conditions.

## II. FACILITY DESCRIPTION

The Discharger manages several installations in the San Diego area. These installations are aligned into three major naval bases, including the Facility, Naval Base Point Loma (NBPL), and Naval Base San Diego (NBSD). The Facility is comprised of the following installations: Naval Air Station, North Island (NASNI); Naval Amphibious Base, Coronado (NAB); Naval Outlying Landing Field, Imperial Beach (NOLF); Naval Radio Receiving Facility (NRRF); Naval Auxiliary Landing Field, San Clemente Island (NALF); Survival, Evasion, Resistance, and Escape Training School (SERE); La Posta Mountain Warfare Training Center (La Posta MWTC); and Camp Morena.

Of the eight installations aligned under the Facility, only NASNI, NAB, NOLF, NRRF, and NALF have discharges subject to NPDES permitting. NALF is located in the Los Angeles Regional Water Quality Control Board jurisdictional area and, therefore, is not regulated by this Order.

**NASNI.** The mission of NASNI is to arm, repair, provision, service, and support the U.S. Pacific Fleet and other operating forces. It is the only aviation industrial complex on the West Coast and the only naval air station in California with an airfield having 24-hour support capabilities. The installation houses the California Least Tern Preserve and Nesting area.

NASNI is also the only military installation in southern California capable of berthing and maintaining a *Nimitz* Class aircraft carrier. The Discharger's largest Naval Aviation Depot and the Defense Distribution Center are located at NASNI. It is distinguished as headquarters for several major military flag staffs, including Commander, U.S. Naval Air Forces (CNAF); Commander, Strike Force Training Pacific (CSFTP); Commander, Carrier Strike Group SEVEN (CCSG7); and Commander, Naval Air Force Reserve.

NASNI provides aviation support shore facilities, three aircraft carrier piers, industrial maintenance support, aircraft maintenance, bachelor quarters and dining facilities, training facilities, and the attendant support infrastructure of utilities, roads, and grounds. The airport at NASNI has two runways which are 7,500 feet and 8,000 feet long. Approximately 70 percent of the total area is impervious to storm water infiltration.

The three piers at NASNI are used to berth aircraft carriers, support vessels, and barges which receive various ship support services such as supplies and minor maintenance. Ship support services on the three piers include loading supplies and equipment onto the ships. Berth-side ship maintenance may include abrasive blasting, hydro-blasting, metal grinding, painting, tank cleaning, removal of bilge and ballast water, removal of anti-fouling paint, sheet metal work, electrical work, mechanical repair, engine repair, hull repair, and sewage disposal. Berth-side ship repair activities are generally less complex than the ship repair activities conducted at commercial shipyards or at the Discharger's graving dock or floating dry-dock. Berth-side maintenance may be conducted by Naval personnel, civil service personnel, or civilian contractors.

Ship maintenance may also be conducted on the piers. Boats, ship sections, or parts can be placed on the piers or adjacent lands for repairs. The ship maintenance activities may be conducted by Naval personnel, civil service personnel, or by civilian contractors. The breadth of work performed by the civilian contractors is typically greater than the work performed by Naval personnel. Some complex ship repair work is conducted inside various support buildings near the piers. Typically, civilian contractors will store materials and supplies on the piers while working aboard the ships.

NASNI has an Industrial Wastewater Treatment Plant (IWTP), which discharges treated industrial wastewater to the San Diego Metropolitan Sanitary Sewer System (SDMSSS). The discharge primarily includes wastewater from metal plating facilities. The IWTP is permitted by the City of San Diego to discharge up to 3,097 gallons per day (GPD) to the sanitary sewer.

NASNI also has an Oil Recovery Plant (ORP), which discharges treated oily wastewater to the SDMSSS. The oily wastewater is from the ships, ballast and bilge water, and other facilities at NASNI. The ORP is permitted by the City of San Diego to discharge up to 26,100 GPD to the sanitary sewer.

The IWTP and ORP are located on the same facility plot. The storm water at the IWTP and ORP facility is collected and diverted to the sanitary sewer system. The IWTP and ORP are operated by Shaw Group, Inc., a third party contractor.

Industrial activities at NASNI are classified into the following major industrial categories: aircraft/helicopter repair and maintenance, airport/heliport, cleaning and degreasing, cogeneration plant, electric utilities, electronic assembly and testing, fuel storage and dispensing, gasoline service station, hazardous substance storage, materials storage, metal finishing/electroplating, ordnance storage, painting and sandblasting, pumping station, repair and maintenance (general), ship support services, small boat maintenance and repair, vehicle repair and maintenance, water/wastewater treatment plant, and miscellaneous.

Point source discharges from NASNI are classified as steam condensate, diesel engine cooling water, pier boom cleaning, utility vault and manhole dewatering, pier cleaning, and miscellaneous discharges associated with facility maintenance.

**NAB.** NAB is a major shore command. The mission of NAB is to provide on-base facilities and services for the support of U.S. and allied forces engaged in amphibious, inshore, clandestine, and unconventional and special warfare training operations. The primary land uses include the administrative areas, training beaches, California Least Tern Preserve, recreational marina, and housing. There are 21 piers located at NAB which are used to berth coastal patrol boats, MK-5 boats, Mike 8 boats, LCU boats, and ferry barges.

State Highway 75 separates NAB into two areas known as surfside (oceanside) and bayside. The bayside administrative area consists of over 170 buildings for housing, administration, operations, recreation, community support facilities, utilities, and maintenance facilities. The surfside administrative area houses the Naval Special Warfare Command. Approximately 60 percent of the total area is impervious to storm water infiltration.

Industrial activities at NAB are classified into the following major industrial categories: fire station, fuel storage and dispensing, general repair and maintenance, hazardous substance storage, materials storage, metal processing, painting and sandblasting, recycling collection center, services for boat support, small boat maintenance and repair, utilities, vehicle and equipment maintenance, vehicle and boat storage, and water/wastewater treatment.

Point source discharges from NAB are classified as utility vault and manhole dewatering, pier cleaning, reverse osmosis water purification unit (ROWPU) product water, boat rinsing, swimmer rinsing, and miscellaneous discharges associated with facility maintenance.

**NRRF.** NRRF is primarily used for Naval Special Warfare training. There are a few structures on the installation, although only a maintenance shop is used on a daily basis. A *Wullenweber* antenna is located at NRRF, though it is not operational.

Point source discharges from NRRF are classified as utility vault and manhole dewatering and miscellaneous discharges associated with facility maintenance.

**NOLF.** The mission of NOLF, as an extension of NASNI, is to provide a practice field for helicopter operations and miscellaneous personnel support facilities that serve the military population in the Imperial Beach area. Naval helicopters from NASNI conduct daily landing practice and lift-training operations at NOLF. Helicopters are not stationed at NOLF. Approximately 30 percent of the total area is impervious to storm water infiltration.

Industrial activities at NOLF are classified into the following major industrial categories: fire station, hazardous substance storage, and materials storage.

Point source discharges from NOLF are classified as miscellaneous discharges associated with facility maintenance.

## A. Description of Wastewater

Discharges at the Facility consist of the following:

### 1. Industrial Storm Water Discharges

The industrial storm water discharges from NASNI are associated with the runways and flight lines, the industrial facilities, and the berthing areas. A total of 58 outfalls drain storm water runoff from industrial areas at NASNI into San Diego Bay and the Pacific Ocean. Seven *Aqua Shield*™, *AquaSwirl* storm water treatment systems are installed at the Joliet (J) Pier as required by the California Coastal Commission. These treatment systems are a rotational deflective type system used to treat storm water for removal of sediment and free-floating oil and debris. The storm water enters the treatment vault and is spun to remove the trash or oil. The storm water treatment systems are located beneath the surface of the pier and may be subject to tidal influence. A map of the industrial storm water discharge locations at NASNI is shown in Attachment B (Figure B-2).

A total of 54 outfalls drain storm water runoff from industrial areas at NAB into San Diego Bay. Storm water treatment systems using filter-absorption technology are installed at the causeway repair area in the vicinity of Buildings 332 (Boatfitting/Sail Loft Facility) and 350 (Abrasive Blast Facility). Storm water runoff at the causeway repair area drains through treatment units before discharge through NAB-007 and NAB-008. Pollutants such as metals and sediment are removed as storm water flows through a multi-media filter treatment unit comprised of gravel, bone char, and activated alumina. The maximum design flow rate through the system is 250 gallons per minute (GPM). The filter media is expected to last at least 11 years. The expended media is anticipated to be disposed of as non-hazardous waste. A map of the industrial storm water discharge locations at NAB is shown in Attachment B (Figure B-3).

Storm water discharges from NRRF are considered non-industrial and are not subject to regulation by this Order. South and southwest of the installation is Camp Surf, a YMCA aquatic activities and education camp for youth on land leased from the Discharger. On Camp Surf is a wetland that fills with storm water runoff during the rainy season. A concrete-lined swale drains the wetland area of excess rainwater to the ocean. This swale also brings storm water runoff from an Imperial Beach residential area south of Camp Surf. Because the wetland area and swale are below sea level, a water level-controlled pump house is activated to pump the storm water to an ocean outfall at approximately 20 GPM. The storm water outfall is located on the beach adjacent to Camp Surf.

Three outfalls drain storm water runoff from industrial areas at NOLF into the Tijuana River. The storm drain systems for two of the outfalls merge and then separate again. The storm drain for the third outfall is separate. A map of the industrial storm water discharge locations at NOLF is shown in Attachment B (Figure B-4).

**2. Steam Condensate**

The Discharger uses a pressurized steam system for both shore and afloat operations. Within the Facility, only NASNI has an on-base steam system.

Steam is produced by an on-site cogeneration plant operated by Sithe Energy. During the production of steam, one or more of the following chemical additives are injected: Trident 3506 (into boiler feed water), Trident 2301 (into boiler feed water), Trident 1003 (into boiler), and Trident 1103 (into boiler). Only Trident 2301 leaves the boiler and can be found in the steam condensate. These additives are added to assist in the control of pH to avoid the creation of acids in the steam distribution system. Specific chemicals that may be present in the steam condensate as a result of the additives include cyclohexylamine, diethylaminoethanol, diethylhydroxylamine, hydroquinone, and morpholine.

After leaving the plant, the steam enters the distribution system, which consists of high- and low-pressure steam lines, pressure reducing valve stations, and expansion joints. The steam is provided to buildings and surface ships. The steam system has traps in the steam lines designed to discharge steam condensate to ensure the steam supplied to users meets quality assurance specifications and is free of condensate.

There are 66 steam discharge points at NASNI, nine of which are located on the quay wall bordering San Diego Bay. At most locations, the system releases steam condensate from traps in a cloud of steam that has a temperature in excess of 100°C. A portion of this steam discharge evaporates prior to forming a condensate and discharging to the land or to San Diego Bay through Discharge Point Nos. SC-001 through SC-066.

The pier discharge points, in addition to releasing steam, drip small amounts of water to the San Diego Bay between steam discharges. The estimated discharge rate for the steam lines is 1 ounce per minute (oz/min) per discharge point. Steam condensate shore side is discharged into steam vaults and steam manholes. Steam condensate discharges are routed to the sanitary system in many cases. Based on a 1 oz/min release rate for 66 outfalls, the total discharge volume for the steam lines is approximately 750 GPD.

Pollutants that may be found in the discharges include pollutants in the potable water supplied to the steam boilers, chemicals added during the steam generation process, contaminants that the steam condensate comes into contact with as it circulates through the steam distribution system, and heat from the steam itself. A map of the steam condensate discharge locations at NASNI is shown in Attachment B (Figure B-5). A line drawing for the steam condensate discharges is shown in Attachment C (Figure C-1).

### 3. Diesel Engine Cooling Water

The emergency fire sprinkler stations at NASNI use diesel motors to supply water to the fire suppression system (sprinklers). Pump tests are performed at each station to ensure that the fire sprinkler pumps are operational. During the pump tests, non-contact cooling water is used to cool the diesel engines that power the fire sprinkler pumps. During an emergency, the pumps supply water to the fire sprinkler system in adjacent buildings. During the tests, the cooling water is discharged directly into the storm drain system or onto the ground surface where it may flow and enter a storm drain system that discharges to the San Diego Bay or the Pacific Ocean.

Order No. R9-2003-0008 regulated diesel engine cooling water from the pump stations at NASNI in Buildings 499, 812, 1357, 348, and 554 and gasoline engine cooling water from the pump station at NOLF in Building 186. Cooling water from the station at Building 499 is now treated with chlorine and diverted to the sewer system. The diesel engines in Buildings 348 and 554 at NASNI and the gasoline engine in Building 186 at NOLF have been replaced with electric motors and these stations no longer discharge cooling water. Therefore, cooling water from the stations at Buildings 499, 348, and 554 at NASNI and Building 186 at NOLF are no longer regulated in this Order. However, two additional discharges of diesel engine cooling water from pump stations in Buildings 1362 and 1440 were discovered over the term of Order No. R9-2003-0008. Therefore, the point source discharges of diesel engine cooling water at NASNI from the pump stations in Buildings 812, 1357, 1362, and 1440 (Discharge Point Nos. CW-001 through CW-004, respectively) will be regulated by this Order.

Pollutants that may be found in discharges of diesel engine cooling water include pollutants in the San Diego Bay water supplied to the pump station at Building 812 or pollutants in the potable water supplied to the pump stations in Buildings 1357, 1362, and 1440; pollutants that the water contacts as it flows through the system; and heat from the diesel engines. A map of the diesel engine cooling water discharge locations at NASNI is shown in Attachment B (Figure B-6).

Building 812 houses one diesel engine-powered pump and discharges to the San Diego Bay at Discharge Point No. CW-001. The pump has not been operational for several years and is awaiting repair or replacement. However, when operational, test water (non-contact seawater) is pumped from San Diego Bay through a steel pipe that is approximately 48 feet long and 15 inches in diameter during the weekly pump tests. The pump discharges non-contact cooling seawater through a 2-inch steel pipe that runs approximately 12 feet into a sump that flows into the storm drain and channels into San Diego Bay. The pump is rated at 1,500 GPM and the weekly pump tests are approximately 15 minutes. The maximum weekly discharge volume for this station is up to 22,500 gallons. However, the non-contact cooling seawater only flows through the engine at 20-30 GPM during pump tests. Therefore the estimated actual weekly discharge volume for this station is 450 gallons. A line drawing for the diesel engine cooling water discharge from Building 812 is shown in Attachment C (Figure C-2).

Building 1357 houses five diesel engine-powered pumps and discharges to the Pacific Ocean at Discharge Point No. CW-002. During the weekly pump test, single-pass non-contact cooling water from the potable water system flows through a 72-inch diameter, 25-foot long steel pipe to the five pumps. According to Order No. R9-2003-0008, when the fire sprinkler system is not actuated, this test water is pumped through 10-inch diameter, 48 feet long PVC piping to a discharge outlet outside the building onto a paved surface which then flows along the street and is absorbed into the ground or discharged into a storm drain. However, an evaluation by the Discharger of the storm water conveyance system servicing Building 1357 indicated that the cooling water is discharged to the storm drain system and routed to a holding pond used as a water feature on the golf course at NASNI. The pond discharges to the Pacific Ocean only when it overflows during prolonged rain events. Each of the five pumps is rated at 1,500 GPM and the weekly pump test is approximately 15 minutes. The maximum weekly discharge volume for this station is up to 112,500 gallons. However, the non-contact cooling water only flows through the engine at 20-30 GPM during pump tests. Therefore the estimated actual weekly discharge volume for this station is 2,250 gallons. A line drawing for the diesel engine cooling water discharge from Building 1357 is shown in Attachment C (Figure C-3).

Building 1362 houses one diesel engine-powered pump and discharges to the Pacific Ocean at Discharge Point No. CW-003. During the weekly pump test, single-pass non-contact cooling water from the potable water system flows to the pump. The pump is rated at 1,500 GPM and the weekly pump tests are approximately 15 minutes. The maximum weekly discharge volume for this station is up to 22,500 gallons. However, the non-contact cooling water only flows through the engine at 20-30 GPM during pump tests. Therefore the estimated actual weekly discharge volume for this station is 450 gallons. The piping for the non-contact cooling water leads into the floor inside the building. As-built drawings are currently not available for the Building 1362 piping system. Therefore, the discharge location for the single-pass potable water has not been identified. Based on the location of the building, the Pacific Ocean is the most probable receiving water if discharge flows to the storm drain system. A line drawing for diesel engine cooling water discharge from Building 1362 is shown in Attachment C (Figure C-4).

Building 1440 houses one diesel-engine-powered pump and discharges to the San Diego Bay at Discharge Point No. CW-004. During the weekly pump test when the pump is operational, single-pass non-contact cooling water from the potable water system flows to the pump. The pump is rated at 1,500 GPM and the weekly pump tests are approximately 15 minutes. The maximum weekly discharge volume for this station is up to 22,500 gallons. However, the non-contact cooling water only flows through the engine at 20-30 GPM during pump tests. Therefore the estimated actual weekly discharge volume for this station is 450 gallons. This water is pumped through piping to a discharge outlet outside the building onto a paved surface where it ponds and is absorbed into the ground or evaporates. If the engine is run for an extended period of time, there is the potential that the cooling water discharge would sheet flow into a storm drain inlet along the nearby roadway that drains into San

Diego Bay. A line drawing for the diesel engine cooling water discharge from Building 1440 is shown in Attachment C (Figure C-5).

**4. Pier Boom Cleaning**

The security and oil containment booms placed around the vessels and piers at the Facility have marine growth and guano on them. Marine growth on oil booms placed around the ships and piers at the Facility can cause the booms to sink. Accumulated bird guano can be a health hazard. The marine growth and bird guano are washed off with high-pressure potable water or seawater.

All booms are cleaned twice per year with half cleaned each quarter. The pressure washer discharges 5 GPM and is run 6 hours per day for 2 to 3 weeks per quarter. The daily discharge when boom cleaning is performed is 1,800 gallons, with a total annual discharge of approximately 108,000 gallons.

After a response to an oil spill, oily booms are removed from the San Diego Bay by barge and transported to a designated cleaning area at NBSD for cleaning. The cleaning water from the designated cleaning area discharges to the ORP and then to the SDMSSS. Discharge points for boom cleaning at the Facility are primarily around the quay wall and the other two aircraft carrier piers at NASNI, but can occur anywhere oily booms are installed.

Pollutants that may be found in the discharge include pollutants in the potable water or San Diego Bay water used in the pressure wash, any pollutants that the water comes into contact with as it passes through the pressure-wash equipment, and contaminants washed from the surfaces of the pier booms. A map of the pier boom cleaning discharge locations at NASNI is shown in Attachment B (Figure B-7). A line drawing for the pier boom cleaning discharges is shown in Attachment C (Figure C-6).

**5. Utility Vault and Manhole Dewatering**

The Facility has electrical and steam utility vaults and manholes that may discharge wastes to surface waters from Discharge Point Nos. UV-001 through UV-036. The utility vaults and manholes are located at NASNI, NAB, and NRRF. Only NASNI has steam vaults. NAB and NRRF have only electrical switch or substation vaults.

Utility companies, or agencies, such as the Naval Facilities Engineering Command Southwest (NAVFAC SW) Public Works (formerly known as the Public Works Center or PWC) for the Discharger, supply resources, excluding water, as necessary for day-to-day living and operations. This includes, but is not limited to, supplies of gas, electricity, and telephone service. Electrical and steam utilities at the Facility are owned and maintained by the NAVFAC SW.

Typically, utility companies must dewater the vaults and underground structures prior to performing any repair, maintenance, and/or installation of equipment when the volume of water interferes with safety or quality of the work to be done. The volume of discharge could vary from a few gallons to thousands of gallons. The duration of discharge and pump rates for the discharge could also vary greatly.

The Discharger's installations in San Diego require electrical power for both shore and afloat operations. The on-base electrical power is carried through an extensive underground conduit system. Electrical utility vaults and manholes contain high voltage electrical equipment, transformers, switchgear, and/or below ground cables.

The steam utility manholes can also accumulate steam condensate water. High-pressure steamlines are also located in underground conduit systems and are accessed through utility manholes.

There are 28 electrical vaults located at NASNI that can have point source discharges. Of the 28 vaults, 20 are located on the quay walls at the piers. The quay wall vaults are subject to bay water intrusion. At high tide, bay water routinely flows into and out of the vaults. The quay wall vaults do not have dewatering or sump pumps.

The remaining eight vaults are located on land at NASNI, inside buildings, and are associated with electrical switching or substations. These vaults can also accumulate groundwater and storm water and are dewatered using automatic sump pumps. The sump pumps discharge the water directly to the sanitary sewer, or in some instances, onto the ground surface around the vault building. Depending on the volume, these discharges could reach a storm drain inlet that drains to San Diego Bay.

In addition to the vaults, electrical and steam utility manholes are located at all of the installations at the Facility. Both the electrical and steam utility manholes can accumulate groundwater and storm water that must be removed when maintenance or emergency work is required. Steam utility vaults are located at NASNI. The steam utility vaults can also accumulate steam condensate water.

There are two electrical switch or substation vaults located at NAB. These vaults are located inside buildings and are away from the quay walls and piers. These vaults can also accumulate groundwater and storm water and are dewatered using automatic sump pumps. Depending on the volume, these discharges could reach a storm drain inlet that drains to San Diego Bay. There are also electrical utility manholes at NAB.

There is one electrical switch or substation at NRRF. This substation is located inside a building and has an automated sump pump to dewater the vaults of groundwater seepage and storm water. The sump pump prevents the water from contacting the electrical equipment. The sump discharges to the ground surface around the building. Depending on volume, these discharges could reach a storm drain that drains to the San Diego Bay. There are also various electrical manholes at NRRF.

Vaults without sump pumps and manholes at the Facility are manually dewatered when necessary using a portable pump or pump truck. The Discharger has implemented procedures to eliminate dewatering discharges to surface waters from vaults without sump pumps or manholes. The Discharger either pumps the water into an adjacent utility manhole or transfers the water to the sanitary sewer system. However, there could be rare emergency situations that would require dewatering vaults without sump pumps or manholes onto the ground surface.

Pollutants that may be found in the discharge include pollutants in the San Diego Bay water that accumulates in pier vaults, pollutants in ground water that accumulates in shoreside vaults and manholes, pollutants in storm water that accumulates in the utility vaults and manholes, and pollutants from electrical and steam equipment (e.g., oils, grease, metals) located in the vaults and manholes. Maps of the utility vault and manhole dewatering discharge locations at NASNI, NAB, and NRRF are shown in Attachment B (Figures B-8 through B-11). A line drawing for the utility vault and manhole dewatering discharges is shown in Attachment C (Figure C-7).

Prior to the adoption of Order No. R9-2003-0008, discharges from utility vaults and manholes were regulated by the statewide General Order for Discharges from Utility Vaults and Underground Structures to Surface Waters (Order No. 96-12-DWQ, NPDES No. CAG990002). At the time of adoption of Order No. R9-2003-0008, the State Water Board was awaiting USEPA approval of the re-issued General Order (Order No. 2001-11-DWQ). In order to regulate all of the discharges at the Facility under one order, the Regional Water Board incorporated the pertinent specifications, limitations, and monitoring requirements of Order No. 2001-11-DWQ into Order No. R9-2003-0008. The State Water Board has since re-issued the General Order again, the most recent version being Order No. 2006-0008-DWQ.

**6. Pier Cleaning**

The ammunition pier known as Bravo Pier, at the western shore of NASNI, is located southeast of the bait barges which supply bait for the commercial fishing operations of San Diego Bay fishermen. Consequently, the area has a significant marine bird population. The marine birds roost at Bravo Pier and create a significant amount of guano. To minimize health and safety issues resulting from the accumulated guano, the pier is washed with fire system potable water once a week.

Bravo Pier is swept with a street sweeper prior to being washed. A pump located on the pier is used to supply potable water for washing. The pump is rated at 240 GPM and the pier cleaning takes approximately 120 minutes to complete. The discharge volume for the pier is approximately 28,800 gallons for each washing and 1.5 million gallons annually. The wash water discharges to San Diego Bay over the edge of the pier and from several rectangular drains located on the pier. Pollutants that may be found in the discharge include pollutants already present in the wash water and pollutants removed from the pier surface during the wash down (e.g., coliform bacteria from bird guano). A map of the pier cleaning discharge location at NASNI is shown in Attachment B (Figure B-12). A line drawing for the pier cleaning discharges is shown in Attachment C (Figure C-8).

### 7. Reverse Osmosis Water Purification Unit (ROWPU)

ROWPUs are used to remove suspended solids, dissolved solids, and chemicals found in freshwater and seawater sources to a level fit for human consumption. This is done through filtration, reverse osmosis, and treating the water with select chemicals. The purification process works as follows: the raw intake water passes through a first-stage multi-media filter to remove large particles of suspended solids. Polymer is added to the raw water to coagulate the suspected solids so that they can be removed by the filter and sodium hexametaphosphate is injected into the raw water to reduce scaling and corrosion of pipes, pumps, and filters caused by hard water deposits. The filter contains six types of media including gravel, coarse garnet, tine garnet, silica sand, anthracite, and plastic. A second stage cartridge filter removes the finer suspended solids, and then a reverse osmosis unit removes dissolved solids and any suspended solids that may have passed through the multi-media and cartridge filters. Citric acid is injected downstream of the multi-media filter to remove scale deposits that build up on the reverse osmosis element and to maintain proper pH balance. Chlorine is added to the product water to reduce bacteria and make the water safe for consumption.

Each ROWPU processes a maximum of 600 gallons per hour (GPH) from freshwater or 400 GPH from seawater, and produces 10 gallons of product for every 30 gallons of raw water processed. Typically during a training event, one ROWPU is used and approximately 400 gallons of product water and approximately 800 gallons of brine are produced which are stored separately in 3,000-gallon collapsible water tanks.

After using a ROWPU, the multi-media filters are backwashed into a tank. Potable water is used as the source water for the backwashing process. The filters are backwashed for approximately 15 minutes. The maximum backwash flow rate is 120 GPM and approximately 1,800 gallons of backwash water is produced per backwash event.

The tanks are emptied at the conclusion of ROWPU exercises. Currently, the tanks are emptied into the sanitary sewer system. There are three types of discharges from the ROWPUs: product water, brine water, and backwash water. Due to the time-consuming and cumbersome nature of this activity, the Discharger has requested the ability to empty the tanks along the shoreline back into the supply source, either San Diego Bay or the Pacific Ocean. As discussed further in section IV.A and IV.D of this Fact Sheet, discharges of reverse osmosis brine and backwash water are not permitted by this Order. However, due to the low volume and high quality of discharges of ROWPU product water, these discharges will be permitted by this Order.

Pollutants that may be found in the discharges of ROWPU product water include pollutants in the San Diego Bay or Pacific Ocean water supplied to the ROWPU, pollutants that the water contacts as it circulates through the system, and pollutants that the water contacts in the temporary storage tanks prior to discharge. A map of the ROWPU product water discharge locations at NAB is shown in Attachment B

(Figure B-13). A line drawing for the ROWPU product water discharge is shown in Attachment C (Figure C-9).

## 8. Boat Rinsing

Small boats are rinsed off with low-pressure potable water from local hose bibbs at boat ramps located on both the northwest and southeast sides of the NAB peninsula or other paved areas throughout NAB. The maximum discharge rate is approximately 8 GPM. When necessary, high-pressure heated potable water (maximum of 170°F) is used to remove marine growth and any marine mammal fecal matter from the boats. The approximate discharge rate for high-pressure heated potable water boat rinsing is 3.2 GPM for approximately 2 hours per day, with a total discharge up to 960 GPD.

Boat engines are flushed with potable water to remove seawater from their cooling systems. The maximum discharge rate for boat engine flushing is 8 GPM. At approximately 20 minutes per day, the flushing discharges 160 GPD.

Small boat rinse water is discharged into San Diego Bay. Pollutants that may be found in the discharge include pollutants in the source water, fecal coliform from the marine mammal feces, pollutants that could be picked up as the water passes through the high-pressure heated water system and over the surface of the boats, and oils that could be picked up in the cooling water during engine flushing. A map of the boat rinsing discharge locations at NAB is shown in Attachment B (Figure B-14). A line drawing for the boat rinsing discharges is shown in Attachment C (Figure C-10).

## 9. Swimmer Rinsing

Individuals that have been swimming in the San Diego Bay by the mammal pens typically rinse off using potable water at the two bayside, outdoor showers at Building 215 at NAB. The water flows from the shower platforms across the pavement and into San Diego Bay. Individuals that have been swimming in the pool, or in some cases, swimming in the San Diego Bay, rinse off using the outdoor multi-head shower unit (containing 15 shower heads) at Building 164. The shower discharges fall onto the ground surface, flow down the street, and into the storm drain system that drains into San Diego Bay.

The two showers at Building 215 discharge at a combined rate of 8 GPM and are used approximately 20 minutes per day, 2 days per week. The multi-head shower at Building 164 discharges at a rate of 60 GPM and is used approximately 10 minutes per day, 3 days per week. The total volume of swimmer rinse water is approximately 2,120 gallons per week (GPW).

Pollutants that may be found in the discharge include pollutants in the source water and pollutants that may be picked up as the water flows down the street. A map of the swimmer rinsing discharge locations at NAB is shown in Attachment B (Figure B-

15). A line drawing for the swimmer rinsing discharges is shown in Attachment C (Figure C-11).

**10. Marine Mammal Enclosure Cleaning**

Marine mammal enclosure cleaning water is discharged to San Diego Bay. Pollutants that may be found in the marine mammal enclosure cleaning discharges include pollutants in the source water, fecal coliform from the sea mammal feces, and pollutants that could be picked up as the water passes through the high-pressure heated water system. A map of the marine mammal enclosure cleaning discharge locations at NAB is shown in Attachment B (Figure B-16). A line drawing for the marine mammal enclosure cleaning discharges is shown in Attachment C (Figure C-12).

**11. Miscellaneous Discharges Associated With Facility Maintenance**

**a.** Fire Hydrant Flushing. Fire hydrants are periodically flushed to remove stagnant water in the line to ensure that the proper chlorine residual is maintained in the distribution system. Hydrants are also flushed when maintenance on valves is conducted, when tests to determine hydraulic pressure and flow rates are performed, and when any rust or sediment in the line requires removal. These discharges are regulated by Order No. R9-2002-0020, NPDES No. CAG679001.

**b.** Fire Suppression Sprinkler System Flushing. Recurring maintenance of building fire suppression sprinkler systems includes draining and flushing the sprinkler piping to remove stagnant water and inspection and maintenance of the valves, sprinkler heads and manual actuators, and alarm infrastructure.

**c.** Potable Water System Operation, Maintenance, and Testing. As part of the Discharger's backflow prevention and water system maintenance programs, backflow prevention assemblies and other potable water equipment must be tested and maintained on a regular basis. Discharges of potable water may occur during testing and maintenance. These discharges are regulated by Order No. R9-2002-0020, NPDES No. CAG679001.

**d.** Emergency Eye Wash/Shower Maintenance. Proper maintenance of the emergency eye wash/shower stations is essential for maintaining a safe work environment. Eye wash/shower stations are flushed when maintenance is conducted. Water released from the station during maintenance is discharged to the ground and has the potential to enter the storm drain system depending on the proximity to the nearest storm drain inlet.

**e.** Air Conditioner Condensate. Air conditioners are located throughout the Facility and are used for environment and equipment cooling. Condensate is regularly discharged from air conditioners. However, most condensate discharges are at an extremely low flow rate and may not reach the storm drain system, depending on the proximity of the nearest storm inlet.

f. Landscape Watering. Landscape watering constitutes a significant portion of the potable water usage at the Facility. Runoff from landscape watering can flow into the storm drain system or directly into San Diego Bay.

**12. Ship Repair and Maintenance Activities**

The diverse discharges from ship repair and maintenance activities could occur at several locations, including aboard ship when docked, on the piers, or on shore locations. Ship repair and maintenance activities include abrasive blasting, hydroblasting, metal grinding, painting, tank cleaning, removal of bilge and ballast water, removal of anti-fouling paint, sheet metal work, electrical work, mechanical repair, engine repair, hull repair, and sewage disposal. Discharges associated with these activities include water contaminated with abrasive blast materials, paint, oils, fuels, lubricants, solvents, or petroleum; hydroblast water; tank cleaning water from tank cleaning to remove sludge and/or dirt; clarified water from oil/water separator; steam cleaning water; demineralizer and reverse osmosis brine; oily bilge water; vessel washdown water; pipe and tank hydrostatic test water; miscellaneous low-volume water; saltbox water; paint chips; paint over spray; paint spills; hydraulic oil leaks and spills; fuel leaks and spills; abrasive blast materials; trash; miscellaneous refuse and rubbish; fiberglass dust; swept materials; and ship repair and maintenance activity debris. This Order prohibits discharges from ship repair and maintenance activities.

## B. Discharge Points and Receiving Waters

1. The Facility is shown in Attachment B (Figure B-1), a part of this Order.

2. NASNI is located on the northern end of the Coronado Peninsula west of the city of San Diego's downtown district and adjacent to the city of Coronado. San Diego Bay borders NASNI on the north and east, and the Pacific Ocean borders it on the west. The base consists of 2,803 acres (2,397 on land and 406 acres in water). NASNI is located within the *Coronado Hydrologic Area* (910.10) in the *Otay Hydrologic Unit* (910.00).

3. NAB is located on a sand-spit strip known as the Silver Strand in the north-central section of the Coronado Peninsula, just west of the city of San Diego. NAB is within the city of Coronado. The Glorietta Bay area of San Diego Bay borders NAB on the north, San Diego Bay borders NAB on the east, and the Pacific Ocean borders it on the west. The base consists of 1,006 acres, including 257 beachfront acres leased from the State along the Pacific Ocean. NAB is located within the *Coronado Hydrologic Area* (910.10) in the *Otay Hydrologic Unit* (910.00).

4. NRRF occupies approximately 548 acres on the southern tip of the Silver Strand. The city of Imperial Beach adjoins the installation on the southern end, while Silver Strand State Beach is adjacent on the north. State Highway 75 parallels the eastern end of the installation. NRRF is located within the *Coronado Hydrologic Area* (910.10) in the *Otay Hydrologic Unit* (910.00).

5. NOLF is located 10 miles south of NASNI and 1.5 miles north of the U.S. border with Mexico. NOLF is located within the *San Ysidro Hydrologic Subarea* (911.11) of the *Tijuana Valley Hydrologic Area* (911.10) of the *Tijuana Hydrologic Unit* (911.00). NOLF contains approximately 1,295 acres in the Tijuana River Valley, south of Silver Strand peninsula. Approximately 283 acres of NOLF is part of the *Tijuana River National Estuarine Sanctuary Management Authority*. This area and certain adjoining lands of the Tijuana River Valley have been designated a *National Natural Landmark*.

6. Wastewater is discharged into the Pacific Ocean, San Diego Bay, and Tijuana River as summarized below:

**Table F-2. Discharge Locations**

| Application Name | Discharge Point | Effluent Description | Discharge Point Latitude | Discharge Point Longitude | Receiving Water |
|---|---|---|---|---|---|
| NIQWWST2A | SC-001 | Steam Condensate | 32° 42' 23" | 117° 11' 23" | San Diego Bay |
| NIQWWST3B | SC-002 | Steam Condensate | 32° 42' 23" | 117° 11' 23" | San Diego Bay |
| NIQWWST4 | SC-003 | Steam Condensate | 32° 42' 22" | 117° 11' 20" | San Diego Bay |
| NIQWWST5 | SC-004 | Steam Condensate | 32° 42' 19" | 117° 11' 10" | San Diego Bay |
| NIQWWST6 | SC-005 | Steam Condensate | 32° 42' 18" | 117° 12' 7" | San Diego Bay |
| NIQWWST7 | SC-006 | Steam Condensate | 32° 42' 17" | 117° 11' 3" | San Diego Bay |
| NIQWWST8 | SC-007 | Steam Condensate | 32° 42' 16" | 117° 11' 0" | San Diego Bay |
| I23233 | SC-008 | Steam Condensate | 32° 42' 30" | 117° 11' 24" | San Diego Bay |
| I32390 | SC-009 | Steam Condensate | 32° 42' 28" | 117° 11' 28" | San Diego Bay |
| I34329 | SC-010 | Steam Condensate | 32° 42' 28" | 117° 11' 30" | San Diego Bay |
| I41369 | SC-011 | Steam Condensate | 32° 42' 29" | 117° 11' 32" | San Diego Bay |
| I43319 | SC-012 | Steam Condensate | 32° 42' 29" | 117° 11' 33" | San Diego Bay |
| I41168 | SC-013 | Steam Condensate | 32° 42' 31" | 117° 11' 32" | San Diego Bay |
| F41313 | SC-014 | Steam Condensate | 32° 42' 38" | 117° 11' 31" | San Diego Bay |
| F41327 | SC-015 | Steam Condensate | 32° 42' 38" | 117° 11' 31" | San Diego Bay |
| F34716 | SC-016 | Steam Condensate | 32° 42' 40" | 117° 11' 30" | San Diego Bay |
| E44181 | SC-017 | Steam Condensate | 32° 42' 43" | 117° 11' 35" | San Diego Bay |
| E53113 | SC-018 | Steam Condensate | 32° 42' 43" | 117° 11' 37" | San Diego Bay |
| E63164 | SC-019 | Steam Condensate | 32° 42' 43" | 117° 11' 42" | San Diego Bay |
| E71175 | SC-020 | Steam Condensate | 32° 42' 43" | 117° 11' 45" | San Diego Bay |
| E73104 | SC-021 | Steam Condensate | 32° 42' 44" | 117° 11' 48" | San Diego Bay |
| E84306 | SC-022 | Steam Condensate | 32° 42' 42" | 117° 11' 54" | San Diego Bay |
| F84104 | SC-023 | Steam Condensate | 32° 42' 41" | 117° 11' 54" | San Diego Bay |
| E92386 | SC-024 | Steam Condensate | 32° 42' 42" | 117° 11' 56" | San Diego Bay |
| F92184 | SC-025 | Steam Condensate | 32° 42' 41" | 117° 11' 56" | San Diego Bay |
| F73339 | SC-026 | Steam Condensate | 32° 42' 38" | 117° 11' 47" | San Diego Bay |
| F73320 | SC-027 | Steam Condensate | 32° 42' 38" | 117° 11' 47" | San Diego Bay |
| F71320 | SC-028 | Steam Condensate | 32° 42' 38" | 117° 11' 45" | San Diego Bay |
| F64390 | SC-029 | Steam Condensate | 32° 42' 38" | 117° 11' 44" | San Diego Bay |
| F52312 | SC-030 | Steam Condensate | 32° 42' 38" | 117° 11' 37" | San Diego Bay |
| F62330 | SC-031 | Steam Condensate | 32° 42' 38" | 117° 11' 41" | San Diego Bay |
| G52201 | SC-032 | Steam Condensate | 32° 42' 37" | 117° 11' 37" | San Diego Bay |
| G52208 | SC-033 | Steam Condensate | 32° 42' 36" | 117° 11' 37" | San Diego Bay |
| G44153 | SC-034 | Steam Condensate | 32° 42' 37" | 117° 11' 35" | San Diego Bay |

| Application Name | Discharge Point | Effluent Description | Discharge Point Latitude | Discharge Point Longitude | Receiving Water |
|---|---|---|---|---|---|
| G103276 | SC-035 | Steam Condensate | 32° 42' 37" | 117° 12' 2" | San Diego Bay |
| F103571 | SC-036 | Steam Condensate | 32° 42' 39" | 117° 12' 1" | San Diego Bay |
| G112287 | SC-037 | Steam Condensate | 32° 42' 37" | 117° 12' 5" | San Diego Bay |
| G112380 | SC-038 | Steam Condensate | 32° 42' 36" | 117° 12' 21" | San Diego Bay |
| J103162 | SC-039 | Steam Condensate | 32° 42' 29" | 117° 12' 21" | San Diego Bay |
| J103265 | SC-040 | Steam Condensate | 32° 42' 26" | 117° 12' 21" | San Diego Bay |
| K103165 | SC-041 | Steam Condensate | 32° 42' 26" | 117° 12' 21" | San Diego Bay |
| K103378 | SC-042 | Steam Condensate | 32° 42' 24" | 117° 12' 21" | San Diego Bay |
| K93379 | SC-043 | Steam Condensate | 32° 42' 24" | 117° 12' 21" | San Diego Bay |
| K93399 | SC-044 | Steam Condensate | 32° 42' 23" | 117° 12' 21" | San Diego Bay |
| N103264 | SC-045 | Steam Condensate | 32° 42' 16" | 117° 12' 21" | San Diego Bay |
| M103163 | SC-046 | Steam Condensate | 32° 42' 20" | 117° 12' 21" | San Diego Bay |
| L143267 | SC-047 | Steam Condensate | 32° 42' 22" | 117° 12' 21" | San Diego Bay |
| M52158 | SC-048 | Steam Condensate | 32° 42' 19" | 117° 11' 38" | San Diego Bay |
| L52320 | SC-049 | Steam Condensate | 32° 42' 19" | 117° 11' 37" | San Diego Bay |
| L44385 | SC-050 | Steam Condensate | 32° 42' 20" | 117° 11' 36" | San Diego Bay |
| M43171 | SC-051 | Steam Condensate | 32° 42' 19" | 117° 11' 35" | San Diego Bay |
| L63257 | SC-052 | Steam Condensate | 32° 42' 21" | 117° 11' 43" | San Diego Bay |
| O151288 | SC-053 | Steam Condensate | 32° 42' 19" | 117° 11' 22" | San Diego Bay |
| O1512881 | SC-054 | Steam Condensate | 32° 42' 14" | 117° 12' 24" | San Diego Bay |
| P152136 | SC-055 | Steam Condensate | 32° 42' 12" | 117° 12' 24" | San Diego Bay |
| P144133 | SC-056 | Steam Condensate | 32° 42' 12" | 117° 12' 22" | San Diego Bay |
| P142153 | SC-057 | Steam Condensate | 32° 42' 12" | 117° 12' 20" | San Diego Bay |
| P132153 | SC-058 | Steam Condensate | 32° 42' 12" | 117° 12' 16" | San Diego Bay |
| P122163 | SC-059 | Steam Condensate | 32° 42' 12" | 117° 12' 11" | San Diego Bay |
| S141303 | SC-060 | Steam Condensate | 32° 42' 1" | 117° 12' 20" | San Diego Bay |
| X94212 | SC-061 | Steam Condensate | 32° 41' 47" | 117° 12' 0" | San Diego Bay |
| S22373 | SC-062 | Steam Condensate | 32° 41' 59" | 117° 11' 25" | San Diego Bay |
| T1E2390 | SC-063 | Steam Condensate | 32° 41' 55" | 117° 11' 16" | San Diego Bay |
| NIQWST1 | SC-064 | Steam Condensate | 32° 42' 24" | 117° 11' 24" | San Diego Bay |
| T11171 | SC-065 | Steam Condensate | 32° 41' 58" | 117° 11' 15" | San Diego Bay |
| U2E4224 | SC-066 | Steam Condensate | 32° 41' 54" | 117° 11' 13" | San Diego Bay |
| Building 812 | CW-001 | Diesel Engine Cooling Water | 32° 42' 42" | 117° 13' 36" | San Diego Bay |
| Building 1357 | CW-002 | Diesel Engine Cooling Water | 32° 42' 9" | 117° 12' 9" | Pacific Ocean |
| Building 1362 | CW-003 | Diesel Engine Cooling Water | 32° 41' 29" | 117° 13' 15" | Pacific Ocean |
| Building 1440 | CW-004 | Diesel Engine Cooling Water | 32° 41' 48" | 117° 13' 15" | San Diego Bay |
| Piers | BW-001[1] | Pier Boom Cleaning | 32° 42' 21" | 117° 11' 18" | San Diego Bay |
| Switch Station a | UV-001 | Utility Vault and Manhole Dewatering | 32° 42' 7" | 117° 10' 57" | San Diego Bay |
| Switch Station b | UV-002 | Utility Vault and Manhole Dewatering | 32° 42' 36" | 117° 11' 24" | San Diego Bay |
| Switch Station c | UV-003 | Utility Vault and Manhole Dewatering | 32° 42' 17" | 117° 11' 11" | San Diego Bay |
| Switch Station d | UV-004 | Utility Vault and Manhole Dewatering | 32° 42' 38" | 117°11' 24" | San Diego Bay |

| Application Name | Discharge Point | Effluent Description | Discharge Point Latitude | Discharge Point Longitude | Receiving Water |
|---|---|---|---|---|---|
| Switch Station f | UV-005 | Utility Vault and Manhole Dewatering | 32° 41' 42" | 117° 12' 13" | San Diego Bay |
| Switch Station g | UV-006 | Utility Vault and Manhole Dewatering | 32° 41' 26" | 117° 11' 39" | San Diego Bay |
| Switch Station h | UV-007 | Utility Vault and Manhole Dewatering | 32° 41' 20" | 117° 11' 27" | San Diego Bay |
| Switch Station j | UV-008 | Utility Vault and Manhole Dewatering | 32° 41' 2" | 117° 11' 25" | San Diego Bay |
| Switch Station l | UV-009 | Utility Vault and Manhole Dewatering | 32° 41' 16" | 117° 11' 56" | San Diego Bay |
| Quay Wall m1 | UV-010 | Utility Vault and Manhole Dewaterivng | 32° 42' 23" | 117° 11' 25" | San Diego Bay |
| Quay Wall m2 | UV-011 | Utility Vault and Manhole Dewatering | 32° 42' 23" | 117° 11' 23" | San Diego Bay |
| Quay Wall m3 | UV-012 | Utility Vault and Manhole Dewaterivng | 32° 42' 22" | 117° 11' 21" | San Diego Bay |
| Quay Wall m4 | UV-013 | Utility'Vault and Manhole Dewatering | 32° 42' 22" | 117° 11' 20" | San Diego Bay |
| Quay Wall m5 | UV-014 | Utility Vault and Manhole Dewatering | 32° 42' 21" | 117° 11' 18" | San Diego Bay |
| Quay Wall m6 | UV-015 | Utility Vault and Manhole Dewatering | 32° 42' 21" | 117° 11' 17" | San Diego Bay |
| Quay Wall m7 | UV-016 | Utility Vault and Manhole Dewatering | 32° 42' 20" | 117° 11' 15" | San Diego Bay |
| Quay Wall m8 | UV-017 | Utility Vault and Manhole Dewatering | 32° 42' 20" | 117° 11' 13" | San Diego Bay |
| Quay Wall m9 | UV-018 | Utility Vault and Manhole Dewatering | 32° 42' 19" | 117° 11' 12" | San Diego Bay |
| Quay Wall m10 | UV-019 | Utility Vault and Manhole Dewatering | 32° 42' 19" | 117° 11' 10" | San Diego Bay |
| Quay Wall m11 | UV-020 | Utility Vault and Manhole Dewatering | 32° 42' 18" | 117° 11' 9" | San Diego Bay |
| Quay Wall m12 | UV-021 | Utility Vault and Manhole Dewatering | 32° 42' 17" | 117° 11' 6" | San Diego Bay |
| Quay Wall m13 | UV-022 | Utility Vault and Manhole Dewatering | 32° 42' 17" | 117° 11' 5" | San Diego Bay |
| Quay Wall m14 | UV-023 | Utility Vault and Manhole Dewatering | 32° 42' 16" | 117° 11' 4" | San Diego Bay |
| Quay Wall m15 | UV-024 | Utility Vault and Manhole Dewatering | 32° 42' 16" | 117° 11' 2" | San Diego Bay |
| Quay Wall m16 | UV-025 | Utility Vault and Manhole Dewatering | 32° 42' 16" | 117° 11' 0" | San Diego Bay |
| Quay Wall m17 | UV-026 | Utility Vault and Manhole Dewatering | 32° 42' 15" | 117° 10' 58" | San Diego Bay |
| Quay Wall m18 | UV-027 | Utility Vault and Manhole Dewatering | 32° 42' 15" | 117° 10' 57" | San Diego Bay |
| Quay Wall m19 | UV-028 | Utility Vault and Manhole Dewatering | 32° 42' 14" | 117° 10' 55" | San Diego Bay |
| Quay Wall m20 | UV-029 | Utility Vault and Manhole Dewatering | 32° 42' 14" | 117° 10' 53" | San Diego Bay |
| B1354 | UV-030 | Utility Vault and Manhole Dewatering | 32° 42' 9" | 117° 12' 9" | San Diego Bay |

| Application Name | Discharge Point | Effluent Description | Discharge Point Latitude | Discharge Point Longitude | Receiving Water |
|---|---|---|---|---|---|
| Sub Station 308 (NAB) | UV-031 | Utility Vault and Manhole Dewatering | 32° 40' 31" | 117° 9' 38" | San Diego Bay |
| Sub Station 509 (NAB) | UV-032 | Utility Vault and Manhole Dewatering | 32° 40' 23" | 117° 10' 1" | San Diego Bay |
| NRRF Sub Station | UV-033 | Utility Vault and Manhole Dewatering | 32° 35' 56" | 117° 7' 25" | San Diego Bay |
| Building 33 Steam Vault | UV-034 | Utility Vault and Manhole Dewatering | 32° 42' 37" | 117° 11' 37" | San Diego Bay |
| Building 689 Steam Vault | UV-035 | Utility Vault and Manhole Dewatering | 32° 42' 16" | 117° 11' 28" | San Diego Bay |
| Building 698 Steam Vault | UV-036 | Utility Vault and Manhole Dewatering | 32° 42' 9" | 117° 11' 27" | San Diego Bay |
| Bravo Pier | PW-001 | Pier Cleaning | 32° 41' 43" | 117° 13' 36" | San Diego Bay |
| NAB Shoreline | RO-001[2] | ROWPU Product Water | 32° 40' 24" | 117° 9' 32" | San Diego Bay or Pacific Ocean |
| Ramp | BR-001[3] | Boat Rinsing | 32° 40' 47" | 117° 9' 31" | San Diego Bay |
| Ramp | BR-002[3] | Boat Rinsing | 32° 40' 32" | 117° 9' 22" | San Diego Bay |
| Building 164 | SR-001[4] | Swimmer Rinsing | 32° 40' 40" | 117° 9' 31" | San Diego Bay |
| Building 215 | SR-002[4] | Swimmer Rinsing | 32° 40' 48" | 117° 9' 29" | San Diego Bay |
| Marine Mammal Enclosures | ME-001[5] | Marine Mammal Enclosure Cleaning | 32° 40' 50" | 117° 9' 30" | San Diego Bay |
| 3 (NASNI) | NAS-001 | Industrial Storm Water | 32° 41' 15" | 117° 11' 53" | Pacific Ocean |
| 5 (NASNI) | NAS-002 | Industrial Storm Water | 32° 41' 16" | 117° 12'47" | Pacific Ocean |
| 6 (NASNI) | NAS-003 | Industrial Storm Water | 32° 41' 11" | 117° 13' 1" | Pacific Ocean |
| 7 (NASNI) | NAS-004 | Industrial Storm Water | 32° 41' 7" | 117° 13' 12" | Pacific Ocean |
| 8 (NASNI) | NAS-005 | Industrial Storm Water | 32° 41' 46" | 117° 13' 37" | San Diego Bay |
| 9 (NASNI) | NAS-006 | Industrial Storm Water | 32° 42' 9" | 117° 13' 27" | San Diego Bay |
| 10 (NASNI) | NAS-007 | Industrial Storm Water | 32° 42' 18" | 117° 13' 22" | San Diego Bay |
| 11 (NASNI) | NAS-008 | Industrial Storm Water | 32° 42' 24" | 117° 13' 16" | San Diego Bay |
| 12 (NASNI) | NAS-009 | Industrial Storm Water | 32° 42' 30" | 117° 13' 10" | San Diego Bay |
| 14 (NASNI) | NAS-010 | Industrial Storm Water | 32° 42' 46" | 117° 12' 38" | San Diego Bay |
| 15 (NASNI) | NAS-011 | Industrial Storm Water | 32° 42' 48" | 117° 12' 35" | San Diego Bay |
| 16 (NASNI) | NAS-012 | Industrial Storm Water | 32° 42' 50" | 117° 12' 25" | San Diego Bay |
| 17 (NASNI) | NAS-013 | Industrial Storm Water | 32° 42' 53" | 117° 12' 6" | San Diego Bay |
| 21 (NASNI) | NAS-014 | Industrial Storm Water | 32° 42' 38" | 117° 11' 20" | San Diego Bay |
| 22A (NASNI) | NAS-015 | Industrial Storm Water | 32° 42' 35" | 117° 11' 22" | San Diego Bay |
| 22B (NASNI) | NAS-016 | Industrial Storm Water | 32° 42' 35" | 117° 11' 21" | San Diego Bay |
| 23A (NASNI) | NAS-017 | Industrial Storm Water | 32° 42' 32" | 117° 11' 23" | San Diego Bay |
| 23B (NASNI) | NAS-018 | Industrial Storm Water | 32° 42' 34" | 117° 11' 26" | San Diego Bay |
| 24 (NASNI) | NAS-019 | Industrial Storm Water | 32° 42' 30" | 117° 11' 23" | San Diego Bay |
| 25 (NASNI) | NAS-020 | Industrial Storm Water | 32° 42' 25" | 117° 11' 26" | San Diego Bay |
| 26 (NASNI) | NAS-021 | Industrial Storm Water | 32° 42' 24" | 117° 11' 26" | San Diego Bay |
| 27 (NASNI) | NAS-022 | Industrial Storm Water | 32° 42' 23" | 117° 11' 25" | San Diego Bay |
| 28 (NASNI) | NAS-023 | Industrial Storm Water | 32° 42' 23" | 117° 11' 24" | San Diego Bay |
| 29 (NASNI) | NAS-024 | Industrial Storm Water | 32° 42' 22" | 117° 11' 19" | San Diego Bay |
| 30 (NASNI) | NAS-025 | Industrial Storm Water | 32° 42' 21" | 117° 11' 17" | San Diego Bay |
| 31 (NASNI) | NAS-026 | Industrial Storm Water | 32° 42' 21" | 117° 11' 16" | San Diego Bay |
| 31A (NASNI) | NAS-027 | Industrial Storm Water | 32° 42' 20" | 117° 11' 15" | San Diego Bay |
| 32 (NASNI) | NAS-028 | Industrial Storm Water | 32° 42' 20" | 117° 11' 14" | San Diego Bay |