NAVFAC
Naval Facilities Engineering Command

# NAVAL BASE SAN DIEGO

# STORM WATER PROGRAM

## MUNICIPAL SEPARATE STORM SEWER SYSTEM

## STORM WATER MANAGEMENT PLAN

*Order: R9-2013-0064 as Amended by R9-2017-0009*
*NPDES: CA0109169*

*December 15, 2017*

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# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ACSCE | Annual Comprehensive Site Compliance Evaluation |
| AST | Aboveground Storage Tank |
| BMP | Best Management Practice |
| CM/CONSTR MGR | Construction Manager |
| CNIC | Commander Navy Installation Command |
| CNRSW | Commander Navy Region Southwest |
| CGP | Construction General Permit |
| DN | Deficiency Notice |
| DRMO | Defense Reutilization and Marketing Office (aka Defense Logistics Agency Disposition Services) |
| DOD | Department of Defense |
| ECATTS | Environmental Compliance Assessment, Training, and Tracking |
| EMS | Environmental Management System |
| ENV | Environmental |
| FMS | Facilities Maintenance Specialist |
| FY | Fiscal Year |
| HM/HAZMAT | Hazardous Material |
| HW/HAZWASTE | Hazardous Waste |
| ID | Identify |
| ICID | Illicit Connection and Illicit Discharge |
| IEPD | Installation Environmental Program Director |
| IT | Information Technology |
| KO | Contracting Officer |
| LID | Low Impact Development |
| LOC | Location |
| MEP | Maximum Extent Practicable |
| MGRF | Mission Gorge Recreational Facility |
| MCMs | Minimum Control Measures |
| MS4 | Municipal Separate Storm Sewer System |
| MFIF | Municipal Facility Inspection Form |
| MFMS | Municipal Facility Master Spreadsheet |
| MWR | Moral Welfare & Recreation |
| NAL | Numeric Action Level |
| NASSCO | National Steel and Shipbuilding Company |

## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| NAVFAC SW | Naval Facilities Engineering Command Southwest |
| NBSD | Naval Base San Diego, including Mainside Complex, NMCSD, MGRF and Broadway Complex |
| NEPA | National Environmental Policy Act |
| NESDI | Navy Environmental Sustainability Development to Integration Program |
| NEX | Navy Exchange |
| NMCSD | Naval Medical Center, San Diego |
| NOAA | National Oceanic and Atmospheric Administration |
| NTU | Nephelometric Turbidity Unit |
| NPDES | National Pollutant Discharge Elimination System |
| PAO | Public Affairs Officer |
| PM | Project Manager |
| POC | Point of Contact |
| POL | Petroleum Oils and Lubricants |
| PW(O) | Public Works (Officer) |
| QIFVI | Quarterly Industrial Facility Visual Inspections |
| QSE | Qualifying Storm Event |
| RCRA | Resource Conservation and Recovery Act |
| RLD | Risk Level Determination |
| SDRWQCB | San Diego Regional Water Quality Control Board |
| SMARTS | Storm Water Multiple Application and Report Tracking System |
| SME | Subject Matter Expert |
| SOP | Standard Operating Procedure |
| SOW | Statement of Work |
| SPAWAR | Space and Naval Warfare Systems Command |
| SWMP | Storm Water Management Plan |
| SWPPP | Storm Water Pollution Prevention Plan |
| µg/L | Micrograms per Liter |
| UST | Underground Storage Tank |

## 1.0 BACKGROUND

This Storm Water Management Plan (SWMP) was developed in accordance with the requirements in the Naval Base San Diego (NBSD) National Pollutant Discharge Elimination System (NPDES) Permit, Order No. R9-2013-0064 as amended by R9-2017-0009, NPDES No. CA0109169hereby referred to as the Permit. NBSD submitted an initial SWMP to San Diego Regional Water Quality Control Board (SDRWQCB) in April 2015, within the Permit deadline submission date of May 1, 2015. The SWMP will be reviewed annually and revised as necessary (NPDES Permit, Attachment L, Section III). A summary of changes made to the SWMP will be performed for each annual review. The identified inadequacies, and any planned efforts to address the identified inadequacies shall be maintained in the Annual Review Summary (Attachment 8) of this SWMP and maintained for a minimum of five years (NPDES Permit, Attachment L, Section III).

This SWMP is designed to reduce pollutants in storm water discharges from NBSD municipal areas, to the technology-based standard of Maximum Extent Practicable (MEP) to protect receiving water quality. Since no precise definition of MEP exists, it allows maximum flexibility for NBSD to manage their municipal storm water program to meet local storm water problems. Furthermore, the SWMP serves as the central document that identifies, describes, assigns, and implements NBSD's Best Management Practices (BMPs) to control municipal discharges throughout NBSD. This is accomplished by integrating existing programs that have storm water quality benefits into the SWMP as well as developing new programs to complete coverage. These programs are identified as BMPs in Section 2 of this SWMP and focus on addressing the Minimum Control Measures (MCMs) outlined in Attachment L of the Permit, including: 1. Public Education and Outreach; 2. Public Participation and Involvement; 3. Illicit Discharge Detection and Elimination; 4. Construction Site Storm Water Runoff Control; 5. Post Construction Storm Water Runoff Control; and 6. Pollution Prevention and Good Housekeeping. Some BMPs address more than one MCM; however, the parameters to assess performance (measurable goals for each of the BMPs, including, as appropriate, the months and years for scheduled actions, including interim milestones and the frequency of the action) for these BMPs are specific to an MCM. BMP specifics are defined in the BMP Tables (Section 2) with support documents provided in Attachments 1-8 and Figures 1-4.

As part of the SWMP, the Permit also prescribes requirements for NBSD to submit a written plan for monitoring pollutants in non-

industrial storm water discharges from municipal areas on NBSD. The goal for the monitoring plan is to evaluate the effectiveness of the SWMP and its implementation throughout NBSD (NPDES Permit, Attachment E, Section IX(B)(1)(b)). The specific monitoring procedures, to include listed pollutants, representative locations, and schedules for monitoring, are incorporated into Section 3 of the SWMP. The monitoring results that are prescribed within the Monitoring section will be submitted annually with the Storm Water Annual Report (NPDES Permit, Attachment E, Section IX(B)(3)).

## 1.1 STORM WATER MANAGEMENT PLAN ORGANIZATION

The SWMP is organized into four sections with appropriate tables, figures, and attachments that describe the NBSD property and operations, regulatory background of the storm water compliance program, and the current plan for storm water discharge compliance. The SWMP addresses the six MCMs outlined in the Permit. The individual sections are described below.

**Section 1.0: Background** – Describes the organization of this SWMP, description of NBSD, permit regulations, and NBSDs storm water program.

**Section 2.0: BMPs for the Six MCMs** – Describes the requirements of each MCM and the plan for addressing those requirements.

**Section 3.0: Observations, Monitoring, and Recordkeeping** – Provides details on performing facility and outfall inspections, wet and dry weather observations and sampling, and recordkeeping and reporting requirements for compliance with the Permit.

**Section 4.0: References** – A list of references used in the preparation of the SWMP.

**Attachments**

A-1 MUNICIPAL SITE INSPECTION FORM (MFIF)
A-2 STORM WATER DISCHARGE VISUAL OBSERVATIONS FORM
A-3 NON-STORM WATER DISCHARGE VISUAL OBSERVATIONS FORM
A-4 PRE-RAIN VISUAL INSPECTION CHECKLIST
A-5 MUNICIPAL FACILITY MASTER SPREADSHEET (MFMS)
A-6 MS4 BEST MANAGEMENT PRACTICES (BMPs)
A-7 MS4 STORMWATER SOLUTIONS
A-8 ACTION MATRIX
A-9 SWMP REVISIONS/SUMMARY OF CHANGES

## 1.2 NBSD INSTALLATION DESCRIPTION

As described in the Permit, NBSD is comprised of the following four complexes: Mainside (NBSD), Naval Medical Center, San Diego (NMCSD), Broadway, and Mission Gorge Recreational Facility (MGRF).

### 1.2.1 MAINSIDE COMPLEX

NBSD proper is located at 32nd Street and Harbor Drive approximately three miles southeast of downtown San Diego on the eastern edge of San Diego Bay. It is bordered by the City of San Diego to the north and east and National City to the south and east and San Diego Bay to the west. NBSD includes a base population of over 35,000 military and civilian personnel with over 45 tenant activities, including the following major commands: Fleet Training Center, Naval Facilities Engineering Command Southwest (NAVFAC SW), Southwest Regional Maintenance Center, and Naval Supply Center. Personnel support activities at NBSD include Regional Commissary Store, Naval Dental and Medical Clinics, Naval Legal Service Office Trial Judiciary, Environmental Preventative Medicine Unit Five, Personnel Support Detachment, and Navy Resale and Service Support Office. NBSD is homeport to approximately 55 Pacific Fleet ships and provides in-port berthing services for 56 surface force ships and 51 service craft. NBSD occupies 1,049 acres of land and 326 water acres at a site lying east and west of Harbor Drive. The wet side consists of the Bay front area west of Harbor Drive, while the dry side consists of the community facilities east of Harbor Drive. There are no facilities designated as industrial on the dry side. This portion of the base mostly consists of support facilities such as the Commissary, Navy Exchange (NEX), and living quarters. The wet side is extensively developed and supports waterfront operations, ship berthing and maintenance, station maintenance, training, administration, and logistics functions. Operational facilities include piers, quay walls, small craft berthing facilities, fueling facilities, armories, and waterfront operations buildings. The straight-line map measurement of the shoreline at NBSD is 1.6 miles. NBSD contains twelve berthing piers, a mole pier, two channels, and various quay walls that have a total shoreline measurement of approximately five miles.

### 1.2.2 BROADWAY COMPLEX

The Broadway Complex is located in downtown San Diego at 937 North Harbor Drive on the corner of North Harbor Drive and Broadway. It consists of nearly 14 acres with no direct access to San Diego Bay. With only six buildings on site, the Broadway Complex is over 95 percent asphalt parking, with no industrial operations. The Broadway Complex is within the Lindbergh Hydrologic Subarea (908.21) of the San Diego Mesa Hydrologic Area (908.20) of the Pueblo San Diego Hydrologic Unit (908.00). The commands located at this compound include the offices of Commander Navy Region Southwest (CNRSW), Personnel Support Activity, Navy Computer and Telecommunications Station, Reserve Readiness Command, and Fleet and Industrial Supply Center. Historically this compound served as a supply depot, but it has operated only minimally in that capacity since the middle 1990s. The site on which the Broadway Complex is located is slated for redevelopment. It is anticipated the Broadway Complex will be demolished and redeveloped within the permit period. The Navy will obtain a permit under and comply with, the California General Construction Storm Water Permit for this project. Broadway Complex has municipal storm water discharges only, with no industrial processes occurring onsite.

### 1.2.3 MISSION GORGE RECREATIONAL FACILITY (MGRF)

MGRF also referred to locally as Admiral Baker Field, is located in the city of San Diego along the San Diego River and is within the Mission San Diego Hydrologic Subarea (907.11) of the Lower San Diego Hydrologic Area (907.10) of the San Diego Hydrologic Unit (907.00). The 440-acre complex is located east of Interstate 15, north of Friars Road, and west of Mission Gorge Road. The complex primarily consists of cultivated or landscaped habitat with various ornamental trees and shrubs planted on the golf course and surrounding areas. Natural habitat onsite includes riparian woodland along the San Diego River and coastal sage scrub adjacent to the golf course on the north and northwestern edges of the property. Most of the natural habitat onsite either occurs within the San Diego River or along very steep slopes (25-50 percent or greater). The majority of the land use at MGRF consists of two 18-hole golf courses and a driving range. Support facilities include a dance pavilion, snack bar, and coffee shop. Other recreational facilities include tennis courts, volleyball courts, a swimming pool, baseball fields, and a recreation vehicle (RV) camping area located on the southwestern edge of MGRF. The primary mission of MGRF is to provide for maximum participation in

programs that are designed to enhance physical, mental, and social health of all active duty personnel and their dependents. Both planned and spontaneous sports programs receive priority compensation within this department. MGRF has municipal storm water discharges only (no industrial storm water discharges).

### 1.2.4 NAVAL MEDICAL CENTER SAN DIEGO (NMCSD)

NMCSD is located within Balboa Park and occupies 79 acres in Florida Canyon. NMCSD is within the Lindbergh Hydrologic Subarea (908.21) of the San Diego Mesa Hydrologic Area (908.20) of the Pueblo San Diego Hydrologic Unit (908.00). The hospital complex is approximately 500,000 square feet and provides service to approximately 3,800 patients on an average day. NMCSD provides medical care to active duty personnel, family members, and retirees. The hospital is one of only two teaching hospitals in the Navy. It provides training for enlisted hospital corpsmen and junior medical officers and nurses. The Medical Center Commander is also responsible for all Navy and Marine Corps medical facilities in California, Nevada, and Arizona. Surface drainage flows to the south and east through catch basins and curb inlets down concrete swales or end of pipe outfalls towards Switzer Creek on Florida Drive and west towards Interstate 5. NMCSD is designated a municipal facility and has municipal storm water discharges only (no industrial storm water discharges).

## 1.3 NBSD RISK LEVEL DESIGNATIONS AND STORM WATER PROGRAMS

NBSD's geographic regions are further broken down by Risk Level Designations (RLDs). Municipal areas subject to the SWMP are areas where no industrial activities occur. These areas are indicated on storm water maps (Figures 1-4) with a pink color coding for the four complexes within NBSD. Non-municipal areas are covered by NBSD Industrial Storm Water Pollution Prevention Plan (SWPPP).

## 1.4 NON-STORM WATER DISCHARGES

The permit lists categories of authorized non-storm water discharges written in the following section below. The list may be modified if NBSD or the SDRWQCB identifies any of the discharge categories to contain quantities of pollutants that may cause or contribute to an exceedance of a water quality standard(s). If this is the case then it will be identified as a significant source of pollutants, and the category must be addressed as an illicit discharge and prohibited through

ordinance, order, or similar means unless the discharge is from a non-anthropogenic source. For a non-anthropogenic source (e.g. rising ground waters) determined to be a significant source of pollutants, NBSD will either prohibit the discharge category or develop and implement appropriate control measures to prevent the discharge of pollutants to the MS4. For any discharge that is not easily categorized according to the list provided, or if in doubt, please contact the NBSD Environmental Office during normal business hours at (619)556-0995/1537, or the NBSD Command Duty Officer at (619)247-8897 for times outside normal business hours.

**1.4.1 AUTHORIZED DISCHARGES**

a. Diverted stream flows;

b. Rising ground waters;

c. Uncontaminated ground water infiltration;

d. Uncontaminated pumped ground water, foundation drains, crawl space pumps and, footing drain discharges;

e. Springs;

f. Drinking fountain water and emergency eye wash water;

g. Atmospheric condensate including refrigeration, air conditioning and compressor condensate;

h. Flows from riparian habitats and wetlands;

i. Discharges from potable water sources - not subject to NPDES Permit No. CAG679001 (Hydrostatic Test Water and Potable Water)

j. Individual residential car washing;

k. De-chlorinated swimming pool discharges excluding saline swimming pool discharges;

l. Seawater infiltration where the seawater is discharged back into the Seawater source;

m. Building fire suppression system maintenance discharges (e.g. sprinkler line flushing) not otherwise regulated by the NPDES Permit No. CAG679001.

### 1.4.2 CONDITIONS OF AUTHORIZATION

Conditions for Authorized Non-Storm Water Discharges identified above are authorized only if all of the following conditions are satisfied:

a. The non-storm water discharges are not in violation of any SDRWQCB requirement.

b. The non-storm water discharges are not in violation of any municipal or federal agency ordinance or requirement.

c. BMPs are implemented for municipal areas to prevent or reduce the contact of non-storm water discharges with significant materials or equipment (NPDES Permit A-8) that would cause discharges to exceed benchmarks or contribute to water quality degradation; and minimize, to the MEP, the flow or volume of non-storm water discharges.

d. The non-storm water discharges do not contain quantities of pollutants that may cause or contribute to an exceedance of a water quality standard(s).

### 1.4.3 OTHER NON-STORM WATER DISCHARGES

a. Fire Fighting Discharges. Emergency fire-fighting flows (i.e., flows necessary for the protection of life or property) do not require BMPs. The NBSD Federal Fire Department does not conduct controlled burns on NBSD. Maintenance activities such as fire hydrant maintenance, hydrostatic testing of fire hoses or other fire equipment related discharges, and possible training discharges, such as those performed at the Training Support Center will follow BMP, MS4 001 (Attachment 6) for Fire Fighting Hydrostatic Testing discharges.

b. Fire Hydrant Flushing. Periodic flushing of fire hydrants is covered under the General Waste Discharge Requirements for Discharges of Hydrostatic Test Water and Potable Water to Surface Waters and Storm Drains or Other Conveyance Systems within the San Diego Region Order No. R9-2010-0003, NPDES No. CAG679001. Maintenance fire hydrant flushing is conducted by NAVFAC SW Utilities.

c. Utility Vault and Manhole Dewatering Discharges. Utility vaults and manholes located throughout NBSD can accumulate water from storm water, Bay water intrusion, and groundwater. Discharges from the underground structures to surface waters

shall comply with all the specifications, limitations, provisions, and monitoring requirements within the Permit and the current NBSD Utility Vault Plan.

d. Incidental Runoff from Landscaped Areas. Incidental runoff is defined as unintended amounts (volume) of water that escapes the area of intended use. Incidental runoff, not controlled by the following requirements, is prohibited:

- Detect leaks (e.g. broken sprinkler heads) and correct the leaks within 72 hours of learning of the leak;
- Properly design and aim sprinkler heads; and
- Eliminate irrigation during precipitation events.

## 1.5 NBSD ENVIRONMENTAL COMPLIANCE DEPARTMENT

The NBSD Environmental Compliance Department manages and ensures NBSD maintains compliance with Installation environmental permits. The department is comprised of the following environmental media groups: Air, Hazardous Waste (HW)/Resource Conservation and Recovery Act (RCRA), Tanks, National Environmental Policy Act (NEPA), Environmental Management System (EMS) and Water Program personnel. The Installation Environmental Program Director (IEPD) is the lead representative and manages department personnel. The Water Program consists of an overall Water Program Lead, a Municipal Facility Lead, and an Industrial Facility Lead. The Municipal Facility Lead is responsible for developing and updating the SWMP, implementing the timetables for the six MCMs, and ensuring the observations and sampling requirements prescribed in the Monitoring Plan are met. To maximize monitoring resources, municipal observations and sampling are scheduled and performed concurrently with industrial storm water monitoring. Consistency within the Water Program is maintained by incorporating established activities from the industrial program that will benefit the municipal program into the SWMP. Additionally, programs from other environmental media groups have been integrated into the SWMP to ensure maximum coverage and utilization of resources.

## 2.0 BEST MANAGEMENT PRACTICES (BMPs) FOR THE SIX MINIMUM CONTROL MEASURES (MCMs)

The BMPs included in this SWMP are for MS4 areas and are designed to reduce pollutants in storm water runoff to the technology-based standard of MEP, to protect water quality prevent or reduce the contact of non-storm water discharges with significant materials or equipment and to minimize, to the MEP, the flow or volume of non-storm water discharges. In accordance with 40 CFR 122.44(k), the inclusion of BMPs in lieu of numeric effluent limitations is appropriate in storm water permits.

The Permit requires a description of BMPs, and associated measureable goals, that fulfill the requirements of six MCMs:

1. Public Education and Outreach;
2. Public Participation and Involvement;
3. Illicit Discharge Detection and Elimination;
4. Construction Site Storm Water Runoff Control;
5. Post Construction Storm Water Runoff Control; and
6. Pollution Prevention and Good Housekeeping.

In this section of the SWMP, each MCM category is addressed, starting with permit requirements followed by narratives that provide background on the BMPs chosen to achieve each MCM requirement. The tables at the end of each MCM category provide specific BMPs along with their associated tasks, measurable goals, timelines for implementation and staff responsible for the task(s).

### 2.1 MCM 1 PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS

a. Requirements. The Public Education and Outreach MCM addresses how NBSD distributes educational materials and conducts outreach activities concerning the effects of NBSD

storm water discharges on local water bodies. These materials and activities inform the employees (military, civilians, contractors, and retailers), patrons (military family members and others with base access), and occupants (those who live on base) on actions and practices they can take to reduce pollutants in storm water runoff. It aims to provide awareness and knowledge to these target audiences about activities that may have potential adverse effect(s) to water quality so that they can prevent these activities and thereby improve overall water quality.

b. Background. MCM 1 utilizes six BMPs (identified MCM 1.1 – 1.6) to address the Permit requirements. The BMPs include existing and new programs to inform the target audiences to the MEP. The public education and outreach program consist of the following BMPs:

- MCM 1.1 Municipal Facility Inspections
- MCM 1.2 Environmental and SWMP Training
- MCM 1.3 Education and Outreach Booths
- MCM 1.4 Develop Partnerships
- MCM 1.5 Pollution Prevention Messaging
- MCM 1.6 Physical and Electronic Media Outreach

### 2.1.1 MCM 1.1 MUNICIPAL FACILITY INSPECTIONS

Facility visits at municipal facilities are an effective BMP to perform Public Education and Outreach on storm water impacts because they provide one-on-one interaction between environmental staff and the "tenant". The term, tenant, used throughout this SWMP, is defined as the municipal facility point of contact (POC) also known as the building monitor. The tenant at each municipal facility can assist the Water Program and directly distribute helpful materials to employees, staff, and customers to improve awareness and knowledge on storm water quality.

Facility visits will be conducted annually for all municipal designated tenants located on NBSD. The intent of the facility visits is to maintain updated building and POC information, record the facilities storm water structures and runoff flows on maps, and determine facility environmental needs (environmental training and storm water requirements). This will be catalogued via the standardized Municipal Facility Inspection Form (MFIF - Attachment 1). As part of the facility visit and inspection form, the municipal facility POC is interviewed by Water Program personnel to see whether they attend and/or receive environmental training, and if they have questions regarding storm water requirements. The interview will provide tenants with an opportunity to ask environmental staff questions, for example, if the tenant needs information on how to dispose waste, the NBSD Environmental Department has prepared and will distribute (upon request) waste disposal information sheets on 46 different types of waste. If the tenant instead requests information on how to conduct turn-in of government items (e.g. printers, metal shelving, etc.), then Standard Operating Procedures (SOPs) and training conducted by NBSD's environmental staff will be provided. These assessments and the associated feedback are designed to enhance the primary objective of improving water quality.

The Municipal Facilities Master Spreadsheet (MFMS – Attachment 5) tracks municipal site visits, interactions with building monitors, and facility inspections performed.

For construction sites, the Water Program personnel will conduct routine inspections to provide oversight, as some construction projects take less than one year, or even six months, to complete. The MFIF form will also be used for these sites. This will incorporate the construction sites into the SWMP program. These routine visits serve the same role as the facility visits to the municipal facilities.

### 2.1.2 MCM 1.2 ENVIRONMENTAL AND SWMP TRAINING

NBSD's Environmental Department has an established training program with an average audience of over 300 trainees a year. The training emphasis is on HW however, the main topics (proper

management of hazardous materials, proper disposal of HW, and spill clean-up and emergency response procedures) are equally applicable to the storm water program. The training also includes information on EMS and Storm Water. A series of informal tri-folds called "Storm Water Solutions" located in Attachment 7 of the SWMP is designed for the core municipal areas and processes and are provided during training. The training is three hours in length, performed monthly, and is required for municipal facility POCs who manage HW permits. As part of the SWMP, the Water Program staff will use the MFIF to determine which tenants attend the monthly environmental training. Facility personnel that do not attend but manage HW, universal waste, or have an interest in the training will be encouraged to attend. The Water Program staff will communicate the dates and locations of training and will ensure that storm water fliers will be distributed at the trainings. In addition, the training will include information on finding out answers to storm water related questions. The intent is to increase overall environmental awareness that can translate to improved water quality.

Another training initiative that the SWMP will use to improve environmental awareness and knowledge is the Environmental Compliance Assessment, Training, and Tracking System (ECATTS). This system is designed to provide an understanding and awareness of the environmental requirements established by the United States Environmental Protection Agency (EPA), the United States Department of Defense (DOD), and State regulations. ECATTS will be promoted to tenants and contractors working on the base. ECATTS has ten storm water modules pertinent to military base employees, related personnel, NAVFAC SW construction and other construction contractors. Information on ECATTS will be provided to tenants and contractors alike during facility inspections/visits. POCs will be interviewed on whether they have taken ECATTS courses and encouraged to take ECATTS storm water courses as needed for their facility.

### 2.1.3 MCM 1.3 EDUCATION AND OUTREACH BOOTHS

NBSD Environmental personnel regularly participate in Environmental Outreach events by displaying and staffing the department's "Go Green" booth at events such as the Gillespie

Field Air Show, the Miramar Airshow, Operation Clean Sweep, and the NBSD Safety Fair. The EMS program within the Environmental department is the lead coordinator for these events. They organize involvement with the event facilitators and ensure all fliers and booth materials are stocked and ready for each event. As part of this effort and to quantify the impact of the "Go Green" booth, the Water Program personnel plan to track message exposure by the approximate number of visitors to the booth and/or the number of items given away.

### 2.1.4 MCM 1.4 DEVELOP PARTNERSHIPS

The NBSD SWMP aims to develop partnerships in order to leverage existing resources as well as share those resources to address common water quality issues. Contacts with neighbors and partners such as National Steel and Shipbuilding company (NASSCO) will be increased in order to find common areas where NBSD and their partners can work together to address water quality issues.

### 2.1.5 MCM 1.5 POLLUTION PREVENTION MESSAGING

One of the key existing outreach programs used to improve water quality at NBSD is the marking and labeling of storm drains. Storm drains marking and labeling are a highly visible source control measure that contains a brief message that the storm drain goes to the bay and prohibits the dumping of improper materials. Storm drains are marked in yellow paint and have placards to inform NBSD tenants, employees, service members, and patrons that the storm drain goes to the bay and not to dump. Over time these markings and placards wear away and become illegible. In an effort to maintain this crucial public awareness BMP, NBSD Environmental staff will conduct surveys of all of NBSD storm drains, and assess the need for service. Pertinent findings will be provided to NBSD Public Works. The storm drains will be inspected annually as part of the annual facility inspection, and with available funding and/or manpower, the storm drains will be stenciled with the appropriate pollution prevention message.

### 2.1.6 MCM 1.6 PHYSICAL AND ELECTRONIC MEDIA OUTREACH

Information dissemination within NBSD's Environmental Department is transparent and timely. Facilities with environmental permits are visited on a monthly to annual basis, depending on the permit (more frequently in some cases). For facilities that do not have environmental permits, the SWMP provides coverage to ensure environmental oversight by inspecting (MCM 1.1) municipal facilities at least once per year.

In addition to this face-to-face outreach the NBSD's Commander Naval Installation Command (CNIC) webpage and the NBSD Facebook page will be utilized for information dissemination to key audiences. These websites are accessible to the public making them also accessible to tenants that may have trouble accessing websites that are restricted by the Navy for security reasons. Numerous helpful documents such as the SWMP, fliers, SOPs and other information will be posted on these websites. The Water Program personnel plan to work with the PAO and Information Technology (IT) personnel to track the number of times the webpage(s) have been viewed.

## 2.1.7 BMP TABLES FOR MCM 1.1 – 1.6

| Minimum Control Measure #1: Public Education and Outreach | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **MCM 1.1** Perform annual municipal facility inspections. Complete Municipal Facility Inspection Form (MFIF - Attachment 1) to include verification of storm water map (feedback corrections as needed). Record site visit into Municipal Facility Master Spreadsheet (MFMS - Attachment 5). | Perform annual municipal facility inspection. | (1) Accomplish annual municipal facility inspections.<br>(2) Complete MFIF for each facility visit.<br>(3) Record facility visit into MFMS.<br>(4) Annotate storm water map changes tracked in MFIF.<br>(5) Update municipal facility POCs for each facility. | | | x | x | x | (1) NBSD Env, & Facility POC<br>(2 - 5) NBSD Env |
| | Update storm water maps annually. | (1) Provide map discrepancies for annual map update.<br>(2) Verify that maps are corrected. | | | x | x | x | (1 - 2) NBSD Env |

| Minimum Control Measure #1: Public Education and Outreach | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **MCM 1.2** Provide training to facility POCs to increase environmental and storm water knowledge and awareness. Use training events and POC contact opportunities to distribute storm water awareness materials. | Perform monthly Environmental training focusing on proper handling, disposal of waste with coverage of storm water process BMPs. Provide storm water awareness fliers to training attendees requesting additional storm water information. | (1) Provide training to facility POCs during inspections.<br>(2) Distribute storm water awareness fliers at training events. | x | x | x | x | x | (1 - 2) NBSD Env |
| | Encourage facility POCs to perform ECATTS storm water training modules. | (1) Determine total number of ECATTS storm water courses taken each FY. | | | x | x | x | (1) NBSD Env |
| | Provide training to facility POCs during facility inspections. | (1) Determine tenant's storm water awareness and track training effectiveness with follow-on inspections. | | | | x | x | (1) NBSD Env & Facility POCs |

| Minimum Control Measure #1: Public Education and Outreach | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **MCM 1.3** Participate in public outreach events. Provide outreach messaging (posters, fliers, etc) that educate on storm water awareness and knowledge. Distribute storm water awareness materials. | Coordinate outreach event participation, ensure participants and materials are ready. | (1) Appoint staff member to coordinate events, ensure participation, and provide materials for each event. | x | x | x | x | x | (1) NBSD Env |
| | Track outreach participation and maintain internal booth attendance tally. | (1) Maintain participation in outreach events.<br>(2) Maintain attendance tally for each event. | | | x | x | x | (1 - 2) NBSD Env |
| **MCM 1.4** Communicate with partners/neighbors (i.e. other Metro bases and NASSCO) to improve storm water education and outreach efforts. | Meet with partners and neighbors to determine areas to align public education and outreach goals/efforts. | (1) Track meetings with partners and neighbors.<br>(2) Maintain partner/neighbor interaction.<br>(3) Promote partner developed programs. | | | | x | x | (1 - 3) NBSD Env, and partners/ neighbors |

| Minimum Control Measure #1: Public Education and Outreach | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **MCM 1.5** Apply appropriate pollution prevention message and install storm drain markers at high visibility storm drains. | Develop appropriate pollution prevention message. Survey and verify storm water maps storm drain locations and requirements for message and marker. | (1) Develop appropriate message to display on storm drains.<br>(2) Conduct survey of storm drains.<br>(3) Identify storm drains that need message and marker.<br>(4) Maintain maintenance requirements for storm drains. | | | x | x | x | (1) NBSD Env & PAO<br>(2 - 3) NBSD Env<br>(4) NBSD Env & PW |
| | Request funding (via US Navy Environmental Portal) for pollution prevention message and markers for storm drains. | (1) Request funding for storm drain message and markers.<br>(2) With available funding, increase properly maintained and marked storm drains from FY 17 to 18. | | | | x | x | (1 - 2) NBSD Env & PW |

| Minimum Control Measure #1: Public Education and Outreach | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **MCM 1.6** Develop existing NBSD CNIC and Facebook website to include storm water information. Allow access to Environmental Support link from NBSD Homeport/Facebook page. The Environmental Support link takes viewers to storm water info related to NBSD including spill prevent/report, community involvement, outreach events, and process BMPs. | Incorporate storm water info on CNIC/Facebook webpage. Program webpage to allow viewers to navigate through storm water materials. Monitor number of times the website has been viewed. | (1) Develop content for websites and coordinate it with PAO/ IT.<br>(2) Establish visitor counter for website(s).<br>(3) Review websites annually. | | | x | x | x | (1 - 3) NBSD Env, PAO, & IT |

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## 2.2 MCM 2 PUBLIC INVOLVEMENT AND PARTICIPATION

a. Requirements. The Public Involvement and Participation MCM addresses how NBSD regularly encourages public participation in the development and implementation of the SWMP, establishes a platform for the public and targets audiences to provide input into the development and implementation of the SWMP, solicits public reporting of suspected illicit discharges via telephone and writing, and implements procedures for the receipt and consideration of oral and/or written public inquires, concerns, and any other information submitted by the public.

b. Background. MCM 2 utilizes four BMPs (identified as MCM 2.1 – 2.4) to address the Permit requirements. These BMPs incorporate both existing and new programs to achieve maximum water quality benefits. The public involvement and participation MCM is organized into the following BMPs:

- MCM 2.1 Pre-Rain Actions Involvement
- MCM 2.2 Promote Participation in Outreach Events
- MCM 2.3 Encourage Public Review of NBSD SWMP

### 2.2.1 MCM 2.1 PRE-RAIN ACTIONS INVOLVEMENT

The Water Program staff plan to develop a list of facilities that would benefit from, and can take action on Pre-Rain notifications. This supports MCM 2 by increasing facility POC involvement and participation to take action to reduce exposure of materials during forecasted rain events. A facilities' participation will be determined by interviewing the facility POC during the annual inspection. Facilities that have regular exposure to storm water requirements and can implement storm water BMPs prior to a storm, may be brought into the Pre-rain Notification and Inspection process. Tenants would receive emails when there is a forecast of at least a 50% chance of precipitation forecasted by the National Oceanic and Atmospheric Association (NOAA). When the pre-rain email is received, the tenant will take pre-rain actions and fill out the associated pre-rain inspection form (Attachment 4).

### 2.2.2 MCM 2.2 PROMOTE PARTICIPATION IN OUTREACH EVENTS

The Water Program staff will utilize communications venues like NBSD sponsored websites, and facility inspections to promote

outreach events that will encourage public involvement and participation. Use of the internet to advertise public involvement and participation events such as clean-ups and SWMP development will be coordinated through the PAO and the IT Department.

### 2.2.3 MCM 2.3 ENCOURAGE PUBLIC REVIEW OF NBSD SWMP

The Water Program personnel will work with PAO and IT to post the SWMP to the CNIC webpage. The site will enable the public to review its contents and provide feedback. Utilizing outreach BMPs such as facility visits, training and electronic media, NBSD will provide the SWMP and information on the storm water program to promote Public Involvement and Participation.

## 2.2.4 BMP TABLES FOR MCM 2.1 – 2.3

| Minimum Control Measure #2: Public Involvement/Participation | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **MCM 2.1** Adopt the Industrial storm water program's Pre-Rain Inspection notifications. This includes sending an email to remind facility POCs to conduct "regular housekeeping" and other BMPs when NOAA forecasts a 50% chance or greater for precipitation. A similar notice will be sent to a limited group within the municipal areas. | Identify municipal facilities that can benefit from pre-rain inspections and can take proactive measures that may improve storm water quality. Train facility POCs on action to take for Pre-Rain procedures. Email tenants when NOAA forecasts a chance of precipitation 50% or greater. | (1) Identify municipal POCs to participate in Pre-Rain program.<br>(2) Train facility POC on required Pre-rain actions.<br>(3) Maintain Pre-rain email notifications that were sent to all identified municipal POCs for all NOAA forecasts chance of rain 50% or greater. | | | x | x | x | (1 - 2) NBSD Env & Facility POCs<br>(3) NBSD Env |

| Minimum Control Measure #2: Public Involvement/Participation | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **MCM 2.2** Utilizing established websites (i.e. MCM 1.6), participate, develop, and advertise on-base and neighborhood community clean-up events. | Work with PAO to identify existing cleanup events and develop way to increase participants (e.g. advertise on websites). | (1) Identify cleanup events (day/time/loc).<br>(2) Promote events. | | | | x | x | (1 - 2) NBSD Env & PAO |
| **MCM 2.3** Utilizing established websites (see MCM 1.6) and post SWMP online. Within SWMP, provide a point of contact to enable feedback mechanism from public. Inform tenants during site inspections about SWMP and where they can find it. | Notify Tenants/Patrons via email or face-to-face interaction about SWMP updates and changes. | (1) Coordinate with PAO/IT to allow public comment on SWMP on internet. | | | x | x | x | (1) NBSD Env, PAO, & IT |
| | We will encourage public involvement to clean-up areas by attending/participating in public events such as NBSD "Go Green" Booth. | (1) Identify storm water issues that a group effort can address.<br>(2) Develop partners to come together.<br>(3) Provide information during outreach events. | | | | | x | (1 - 3) NBSD Env |

## 2.3 MCM 3 ILLICIT DISCHARGE DETECTION AND ELIMINATION

a. Requirements. The Illicit Discharge Detection and Elimination MCM:

- Addresses how NBSD eliminates illicit discharges into storm water drainage systems;
- Provides a storm sewer system map showing locations of storm water systems outfalls and the names/ locations of all waters of the U.S. that receive discharges from those outfalls;
- Addresses discharge prohibitions;
- Describes the plan to detect and address non-storm water discharges (including illegal dumping) to the MS4 system that are not authorized by a separate NPDES permit;
- Informs target audiences of hazards generally associated with illegal discharges and improper disposal of waste; and
- Addresses the categories of non-storm water discharges or flows as specified in Non-Storm Water Specification IV.G of the NBSD NPDES Order (i.e., authorized non-storm water discharges) only where they are identified as significant contributors of pollutants to the storm water collection system.

b. Background. MCM 3 provides four BMPs (identified MCM 3.1 – 3.4) to address the NPDES requirements. The BMPs build upon existing programs and requirements that are incorporated within other BMPs [i.e. MCM 1.1 (facility visits) and MCM 1.2 (training)]. The four BMPs are organized into the following areas:

- MCM 3.1 Illicit Discharge Detection Hotline
- MCM 3.2 On-base Oil Recycling Program
- MCM 3.3 Storm Water System Maps
- MCM 3.4 Outreach Events (MCM 1.3)

### 2.3.1 MCM 3.1 ILLICIT DISCHARGE DETECTION HOTLINE

NBSD Environmental Department currently has an illicit discharge and detection hotline in place. Environmental fliers provide an Environmental contact number (619)556-6798/1537 to report discharges during normal facility operating hours and the Command Duty Officer's (CDO's) contact number (619)247-8897 to report discharges during non-working hours. This program further develops the existing platform to address other requirements outlined in the NPDES permit, as well as expand notification to target audiences by working with outreach groups (MCM 2.3/2.4). Additionally, this SWMP program will include data on illicit discharge reporting as a measurable goal.

### 2.3.2 MCM 3.2 ONBASE OIL RECYCLING PROGRAM

The NEX Autoport provides on base oil recycling for all on base patrons and tenants. The SWMP program will verify the continued performance of this public oil recycling program and ensure vehicle maintenance shops are utilizing this service. Additionally, information on this service will be better provided and advertised through other MCM BMPs.

### 2.3.3 MCM 3.3 STORM WATER SYSTEM MAPS

Storm water system maps have been developed for all four sites within NBSD, and are provided in Figures 1-4. These maps will be updated annually. During the facility inspections (MCM 1.1) the storm water conveyance systems will be compared with current maps to verify accuracy of both their description and location. Corrections and feedback to the maps will be provided as part of annual and semi-annual inspections, allowing the maps to be refined through the inspection process.

### 2.3.4 MCM 3.4 OUTREACH EVENTS (MCM 1.3)

Through the use of Education and Outreach MCM BMPs 1.1-1.6, NBSD will address requirements for illicit discharge detection and elimination. Increased focus on delivering the right messages about stopping and reporting illicit discharge should increase and improve general awareness, help eliminate pollutants discharged to surface waters and improve storm water quality.

## 2.3.5 BMP TABLES FOR MCM 3.1 – 3.4

| Minimum Control Measure #3: Illicit Discharge Detection and Elimination | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **MCM 3.1** Develop, provide and promote an Illicit Discharge Hotline. | Provide a number for the public to call and ensure phone is reachable and responsive. | (1) Maintain NBSD Environmental Illicit Discharge program and phone number.<br>(2) Track total calls to phone number.<br>(3) Work with PAO to increase audience and awareness of program. | | | x | x | x | (1 - 2) NBSD Env & Utilities<br>(3) NBSD Env & PAO |
| **MCM 3.2** Public oil recycling and HW turn-in program. | Accept oil and HW from NBSD tenants and patrons. | (1) Verify and maintain Autoport oil recycling service through FY 18.<br>(2) Contact Autoport to determine quantities collected.<br>(3) Inform tenants of service during facility inspections. | x | x | x | x | x | (1 - 2) NBSD Env & NEX Autoport<br>(3) NBSD Env |

| Minimum Control Measure #3: Illicit Discharge Detection and Elimination | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **MCM 3.3** Create a better understanding of the storm water conveyance system at NBSD by verifying, and updating outfalls and storm sewer maps. Actively inspect and update outfall and storm sewer condition. Request maintenance funds for storm sewers that are inoperable or need maintenance. | Inventory and create a Storm Sewer System Map of NBSD. Show location of all known storm sewers and outfalls and the names and locations of all waters of the US that receive discharge from those outfalls. | (1) Maintain and review past records showing Illicit Connections/Illicit Discharges and records mapping out storm water conveyance systems.<br>(2) Schedule and track map changes and incorporate semi-annual inspections into this overall effort.<br>(3) NBSD Environmental will conduct semi-annual surveys of 80 outfalls. | x | x | x | x | x | (1 - 3) NBSD Env & PW |

| Minimum Control Measure #3: Illicit Discharge Detection and Elimination | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **MCM 3.4** During NBSD Outreach Events (MCM 1.3), provide materials to target audiences on pertinent information regarding the hazards that are generally associated with illegal discharges and improper disposal of waste. | During Outreach Events, distribute NBSD handouts on information regarding the hazards that are generally associated with illegal discharges and improper disposal of waste. | (1) Appoint staff to maintain storm water material (i.e. brochures, fliers) and provide materials to personnel manning booth.<br>(2) Present information at hosted booth during outreach events.<br>(3) Track the number of people visiting booth from FY 16 to FY 18.<br>(4) Provide Pollution Prevention/Storm Water Awareness message during pre-movie commercials for on-base movies.<br>(5) Track the number of movies played during year and approximate number of personnel in attendance. | | | x | x | x | (1 - 5) NBSD Env & MWR |

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## 2.4 MCM 4 CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

a. Requirements. The Construction Site Storm Water Runoff Control MCM addresses how NBSD reduces pollutants in storm water runoff from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activities disturbing less than one acre are included in the program only if it is part of a larger common plan of development that would disturb one acre or more. This program includes the development and implementation of mechanisms to require:

- The development and implementation of mechanisms to require erosion and sediment controls, as well as enforcement mechanisms to ensure compliance;
- Requires construction site operators to implement appropriate erosion and sediment control BMPs;
- Requires construction site operators to control wastes such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
- Requires procedures for site plan reviews which incorporate consideration of potential water quality impacts;
- Requires procedures for receipt and consideration of information submitted by the public;
- Requires procedures for site inspection and enforcement of control measures; and
- Requires procedures for verifying that the site has existing coverage under the California statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities (the Construction General Permit (CGP)).

b. Background. MCM 4 utilizes two BMPs (identified MCM 4.1 – 4.2) to address the Permit requirements. The BMPs reflect NBSD's (and NAVFAC SW's) intensive oversight of construction projects, and including NEPA an expanded version of a Site

Inspection BMP (MCM 1.1). The two BMPs are organized into the following areas:

- MCM 4.1 NEPA and Construction Project Review
- MCM 4.2 Construction Site Inspections

### 2.4.1 MCM 4.1 NEPA AND CONSTRUCTION PROJECT REVIEW

Every construction project performed within NBSD requires extensive oversight to meet all Federal, California and local regulation for multiple requirements (structural, safety, environmental, etc.). This oversight is required for all projects regardless if they are greater or less than one acre. Special requirements for projects greater than one acre are addressed during the NEPA process by the NBSD Environmental Compliance office. All requirements contained within the CGP are reviewed by the NBSD NEPA Planner. For projects smaller than one acre, NBSD incorporates BMPs to reduce erosion and sediment runoff. All final plans to execute a project include the Statement of Work (SOW) where the NEPA process is able to implement requirements for the contractor to execute. The Project Manager and Construction Manager (CM) oversee all requirements that are prescribed within the SOW. These are NAVFAC SW employees whose responsibility is to ensure the Government receives full execution of elements prescribed in the SOW.

### 2.4.2 MCM 4.2 CONSTRUCTION SITE INSPECTIONS

As part of the requirements to manage construction projects, the CM is required to ensure environmental requirements are executed. The NAVFAC SW CM provides this oversight weekly. For sites greater than one acre, compliance with the site specific SWPPP is required. For sites less than one acre, compliance with the NBSD BMPs is required. On a semi-annual basis or as required NBSD's Water Program personnel will conduct site inspections (MCM 1.1) to provide further verification and oversight of construction projects.

## 2.4.3 BMP TABLES FOR MCM 4.1 – 4.2

| Minimum Control Measure #4: Construction Site Runoff Control | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **MCM 4.1** Perform National Environmental Policy Act (NEPA) review of all construction projects. | All NEPA documents are signed by appropriate SMEs and leadership. Prior to construction, determine size and impact of construction project. Implement construction requirements for larger (>1 acre) and smaller (<1 acre) projects. These are provided to the contractor to implement prior to construction. | **Projects >1 Acre**<br>(1) Verify Construction General Permit requirements and Site Specific SWPPPs are assigned.<br>**Projects < 1 Acre**<br>(2) Verify NBSD BMPs for Construction Activities Less Than One Acre of Land are assigned. | x | x | x | x | x | (1 - 2) NBSD PWO, FMS, & Env |
| **MCM 4.2** Monitor all construction sites to verify requirements are being implemented. | Perform routine monitoring for all construction activities. | (1) NAVFAC Construction Manager (CM) conducts site visits at least once per week to ensure SWPPP or NBSD Policy is being implemented. | x | x | x | x | x | (1) Const Mgr (CM) |
| | | (2) Conduct routine site visit to ensure SWPPP or NBSD Policy is being implemented. | | | x | x | x | (2) NBSD Env |
| | | (3) Run semi-annual SMARTS queries for larger sites. | | | x | x | x | (3) NBSD Env |

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## 2.5 MCM 5 POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

a. Requirements. The Post-Construction Storm Water Management in New Development and Redevelopment MCM addresses storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre that discharge into the storm water drainage system. Compliance with the permit is accomplished by ensuring that controls are in place that would prevent or minimize water quality impacts, and that are designed to maintain pre-project runoff conditions. Furthermore, this MCM:

- Develops and implements water quality strategies, which include a combination of structural and/or non-structural BMPs appropriate for the facility;
- Develops or uses a mechanism to address post-construction runoff from new development and redevelopment projects;
- Ensures adequate long-term operation and maintenance of water quality BMPs; and
- Maintains and regularly updates an inventory of BMPs installed pursuant to the SWMP.

The BMP inventory shall include:

- The exact location of BMP(s);
- Contact information for the individual or entity responsible for long term BMP operation and maintenance;
- A description of the BMP and the year it was installed;
- Maintenance required for the BMP;
- Actual inspections and maintenance activities that occurred during the reporting year;
- An assessment by the discharger determining if proper operation and maintenance occurred during the year; and
- Actions the discharger has taken, or will take, to address deficiencies, if applicable.

b. Background. MCM 5 incorporates three BMPs (identified MCM 5.1 – 5.3) to address Permit requirements. The BMPs align with the various stages of the construction process. Site inspections retain a critical role in determining the inventory. The three BMPs are organized as follows:

- MCM 5.1 Design and Planning
- MCM 5.2 Construction
- MCM 5.3 Post-Construction

### 2.5.1 MCM 5.1 DESIGN AND PLANNING

Under the Energy Independence and Securities Act (EISA) of 2007, the DOD mandated that all projects exceeding 5,000 square feet (~0.1 acres) are required to incorporate Low Impact Development (LID) into their design and execution. This requirement is identified as well in the NEPA process for each project that is conducted on NBSD. The DOD requirement mandates that applicable projects return the site to pre-construction conditions for runoff for everything up to the 95$^{th}$ percentile storm event.

### 2.5.2 MCM 5.2 CONSTRUCTION

As part of the semi-annual construction site inspections (MCM 1.1), the Water Program personnel will ensure designed LID features are being incorporated into the site as prescribed. The Master Spreadsheet (Attachment 5) will be updated accordingly to include newly constructed facilities in municipal areas.

### 2.5.3 MCM 5.3 POST-CONSTRUCTION

As part of the annual site inspection program (MCM 1.1), the NBSD Water Program Inspector will capture LID features for each site. For sites already built, maintenance requirements will be determined by researching through the NBSD Facilities Engineering and Acquisition Division as well the Facilities Maintenance Specialist (FMS). For sites being built, the LID will be captured during the semi-annual inspection.

## 2.5.4 BMP TABLES FOR MCM 5.1 – 5.3

| Minimum Control Measure #5: Post Construction Runoff Control | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **Method A: California General Construction Permit** | | | | | | | | |
| **MCM 5.1 Design & Planning:** It is mandated by DOD Policy (UFC 3-210-10) that construction or expansion of buildings or impervious area exceeding 5,000 Square Feet incorporate LID to reduce runoff to pre-construction (natural) hydrologic conditions for up to the 24-hour 95th percentile storm event. This is part of the NEPA process for all CONST projects on NBSD. | Incorporate LID during the design and planning phase to meet DOD requirements. If applicable, determine the requirements and plan for any recurring maintenance. | (1) Determine size of construction activity.<br>(2) For > 5,000 SF, require LID to meet DOD policy.<br>(3) Verify LID features in design.<br>(4) RFI for maintenance cost. If applicable, request recurring maintenance or service contract to fund future maintenance. | x | x | x | x | x | (1 - 4) NBSD Env, Facilities Engineering & Acquisitions Division (FEAD), Planners, appropriate PM & KO |
| **MCM 5.2 Construction:** During routine site inspections, verify LID is being built to design specs. | Monitor construction sites. | (1) Perform routine site visits.<br>(2) Verify LIDs are built per design. | | | x | x | x | (1 - 2) NBSD Env, FEAD, & CM |
| **MCM 5.3 Post-Construction:** Evaluate LID features for effectiveness and maintenance requirements during routine inspections. Evaluate sites for potential future LID implementation. | Monitor sites annually and provide feedback for maintenance or incorporation of new LID. | (1) Record site visit to LID feature in MFMS.<br>(2) Maintenance requirements or LID needs are noted.<br>(3) Coordinate with FMS to generate work request to fund maintenance. | | | x | x | x | (1 - 3) NBSD Env, & FMS |

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## 2.6 MCM 6 POLLUTION PREVENTION/GOOD HOUSEKEEPING

a. Requirements. The Pollution Prevention/ Good Housekeeping MCM provides facility POCs and applicable target audiences with BMPs that are sufficient to minimize pollutant runoff from on-site operations to the maximum extent possible. This MCM incorporates, by reference, other plans implemented at the Facility (such as the Industrial SWPPP and various process/discharge-specific BMP Plans). This MCM develops and implements operation and maintenance programs that include a training component with the ultimate goal of preventing or reducing pollutant-containing runoff from facility operations. Specific training materials that are available from USEPA, the State, or other organizations, include target audience training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet building maintenance, new construction and land disturbances, and storm water system maintenance.

b. Background. MCM 6 utilizes seven BMPs (identified MCM 6.1 – 6.7) to address the NPDES permit requirements. The BMPs build on existing programs and incorporate other MCM BMPs to meet the requirements. The seven BMPs are organized into the following areas:

- MCM 6.1 Pollution Prevention and Good Housekeeping Facility Inspections
- MCM 6.2 Storm Drain Operability
- MCM 6.3 Assess for Exposed Materials and Properly Dispose
- MCM 6.4 Petroleum Oils and Lubricants (POL) Storage & Management (AST/UST)
- MCM 6.5 Existing Programs (SWPPP)
- MCM 6.6 Dry Weather Monitoring
- MCM 6.7 Enforcement

### 2.6.1 MCM 6.1 POLLUTION PREVENTION AND GOOD HOUSEKEEPING FACILITY INSPECTIONS

As part of the annual facility inspection program (MCM 1.1), each facility will be assessed to determine which BMPs are most

applicable. The BMPs listed in Section 2, Attachment 6 and others not yet identified will be captured in the MFIF for each facility.

### 2.6.2 MCM 6.2 STORM DRAIN OPERABILITY

The NBSD Water Program staff will use the maintenance process via the NAVFAC SW FMS in order to address storm drain operability. Annual facility inspections (MCM 1.1) will help inform the need for this requirement as the storm drains are inspected as part of the facility inspection.

### 2.6.3 MCM 6.3 ASSESS FOR EXPOSED MATERIALS AND PROPERLY DISPOSE

During annual facility inspections (MCM 1.1), the NBSD Water Program Inspector will identify exposed pollutant source materials at each facility. On-site training (MCM 1.2) and distribution of education materials will be provided and followed up on to ensure exposed materials are properly disposed.

### 2.6.4 MCM 6.4 POL STORAGE & MANAGEMENT (AST/UST)

NBSD Environmental Compliance Department provides oversight for all Aboveground Storage Tank (AST) and Underground Storage Tank (UST) systems. These systems fall under the HW program and are inspected on a monthly basis. As part of the SWMP facility inspections, these systems will be verified annually to ensure the containment BMPs are in place with closed drainage valves. All facilities that store POLs in a 55-gallon container, or larger, are covered under the NBSD Spill Prevention Control and Countermeasures (SPCC) Plan.

### 2.6.5 MCM 6.5 EXISTING PROGRAMS (SWPPP, HMBP, MWMP, SPCC, RECYCLING, DLA)

The NPDES Permit requires an annual review of NBSDs risk level designation (RLD) for each facility. Due to process changes within some facilities RLDs change from industrial to municipal. Municipal facilities that were previously industrial have older SWPPPs that often consist of extensive detail that can be utilized in the development and maintenance of municipal BMPs. For facilities that fall into this category, the SWPPP will be incorporated into the SWMP. Municipal facilities that generate HW, typically pose an increased storm water risk than those that do not. These facilities are covered under site-specific Hazardous Materials Business Plans, and inspected on a monthly

basis by Environmental. The inspections verify that the facility POCs are properly containing, labeling, and disposing of hazardous materials and wastes, and keeping them out of the trash and storm drain system. Material usage is compared to disposal records to ensure accountability.

Municipal tenants that generate medical waste have site-specific Medical Waste Management Plans, and are inspected on a monthly basis by Environmental. These plans describe how medical waste is managed to avoid contact with regular refuse and the storm drain system.

### 2.6.6 MCM 6.6 DRY WEATHER MONITORING

The SWMP monitoring program prescribes that 80% of outfalls be inspected semi-annually. If flows are identified the NBSD Water Program personnel performing the inspection are to trace the source. For sources traced to tenants, feedback will be given, and the deficiency will be corrected, so that non-storm water flows can be reduced or eliminated.

### 2.6.7 MCM 6.7 ENFORCEMENT

NBSD uses Deficiency Notices (DNs) for internal tracking only. These DNs are issued to tenants that fail to take corrective action in a timely manner. It provides an internal tracking mechanism that enables environmental media programs to focus on repeat offenders as well as providing a track record of maintenance and corrective action. The SWMP will utilize DNs as necessary to ensure tenants maintain BMPs prescribed.

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## 2.6.8 BMP TABLES FOR MCM 6.1 – 6.7

| Minimum Control Measure #6: Pollution Prevention/Good Housekeeping | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **MCM 6.1** During facility inspections, develop and establish facility specific BMPs for municipal facilities. | Facility specific BMPs are determined for each municipal facility during facility inspection. | (1) Identify facility BMPs and train facility POC on BMPs.<br>(2) Update BMPs during each facility inspection as needed. | | | x | x | x | (1 - 2) NBSD Env & Facility POCs |
| **MCM 6.2** Maintain storm drain operability. | Visually inspect storm drains during facility inspections to ensure they are operable (i.e. not full of sediment or other obstructions). | (1) Identify and track inoperable storm drains in MFMS.<br>(2) Make notifications and track progress to return storm drains to operability in MFMS.<br>(3) Encourage facilities to take ownership of storm drains on their site. | | | | | x | (1 - 3) NBSD Env, PW, & Facility POCs |

| Minimum Control Measure #6: Pollution Prevention/Good Housekeeping | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **MCM 6.3** Assess facility for exposed materials. Coordinate with facility POC, Recycling, DRMO, and HAZWASTE Facility to remove exposed materials. | Conduct annual inspection and work with Environmental media partners to maintain situational awareness for facilities. Coordinate with appropriate facilities to remove exposed materials. | (1) Identify and track status of exposed materials during inspections.<br>(2) Inform facility POC on who to coordinate with to remove exposed materials. | | | x | x | x | (1 - 2) NBSD Env, Facility POCs, DRMO, Recycling, & HAZWASTE Facility |
| **MCM 6.4** Liquid materials storage and management. | Inspect above ground storage tanks monthly to ensure employment of proper storage procedures (e.g. ensure berm valves are closed for containment areas). | (1) Verify that inspections are occurring on a monthly basis. | x | x | x | x | x | (1) NBSD Env |
| | Municipal facilities that have HW permits are inspected monthly by HW program. HW inspection support proper storm water protection procedures are employed. | (1) Verify that inspections are occurring on a monthly basis. | x | x | x | x | x | (1) NBSD Env |

| Minimum Control Measure #6: Pollution Prevention/Good Housekeeping | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **BMP Implement Timeline (FY: Oct-Sep)** | | | | | **Staff Responsible** |
| | | | **14** | **15** | **16** | **17** | **18** | |
| **MCM 6.5** Incorporate pre-existing SWPPP BMPs for facilities that were previously industrial but now designated as municipal. | Determine all facilities previously assigned as industrial, in the 2013 Storm Water Pollution Prevention Plan, and are currently re-designated as municipal. | (1) Use 2013 SWPPP to identify municipal facilities.<br>(2) Update SWPPPs for municipal facilities and incorporate BMPs to SWMP.<br>(3) Develop BMPs for facilities that do not have an existing SWPPP. | | | x | x | x | (1 - 3) NBSD Env |
| **MCM 6.6** Perform Semi-annual dry weather monitoring. | As part of the SWMP Monitoring Plan, NBSD Environmental monitors 80% of outfalls and traces dry weather flows. | (1) Conduct Semi-Annual outfall inspections.<br>(2) Trace dry weather flows to source and eliminate if possible.<br>(3) Sample unknown/unauthorized flows per the Monitoring Plan. | | | x | x | x | (1 - 3) NBSD Env |
| **MCM 6.7** Issue Deficiency Notices (DN) as required. This enforcement measure can be taken for non-compliance with any and all MS4 requirements. | Perform inspections and issue deficiency notices to be internally monitored as needed. | (1) Conduct Inspections.<br>(2) Issue DNs for facilities that are not taking corrective action.<br>(3) Monitor results internally. | x | x | x | x | x | (1 -3) NBSD Env |

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# 3.0 OBSERVATIONS, MONITORING, AND RECORD KEEPING

## 3.1 MUNICIPAL STORM WATER OBSERVATIONS, MONITORING AND RECORDKEEPING

Per the NPDES Permit No. CA0109169, the requirement to implement observations, monitoring and official record keeping for municipal facilities throughout NBSD will commence on November 1, 2015. NBSD is composed of four separate complexes. Mainside Complex is the primary and largest with piers and facilities to support Naval Ships. The Naval Medical Center San Diego is the DOD's San Diego metro area's primary medical facility. The Broadway Complex is located in downtown San Diego and is the headquarters for CNRSW. The MGRF serves as a recreational complex with two 18-hole golf courses and other recreational facilities.

### 3.1.1 MUNICIPAL FACILITY INSPECTIONS AND UPDATES

NBSD will inspect and update municipal facilities, which include both buildings, and outfalls. The MFIF (Attachment 1) will be used for buildings and the Non-Storm Water Visual Observation Form (Attachment 3) will be used for outfalls to update important information (e.g. outfall condition, time of sample/observation, flow observation, POCs, BMPs, etc.) and to verify sites are assessed and noted as necessary. Buildings will be inspected once annually. Building updates will be conducted throughout the course of the year. The Outfall and Monitoring Location Maps (Figures 1-4) will be used to aid the inspection and update process. Outfalls will be inspected twice per year. To the maximum extent possible, municipal outfall inspections will be conducted concurrently with the Annual Comprehensive Site Compliance Evaluation (ACSCE) which is conducted during the 2$^{nd}$ quarter of the calendar year and the Quarterly Industrial Facility Visual Inspections (QIFVI) performed during the 4$^{th}$ quarter of the calendar year. Coordinating these activities ensures resources will be readily available to conduct sampling as required.

### 3.1.2 ASSIGNMENT OF REPRESENTATIVE SAMPLING LOCATIONS

In accordance with Attachment D-III.A of NBSD's NPDES Standard Provisions, samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The prescribed storm water sampling locations prescribed in Table 3 meet these requirements and are representative of the monitored activity for these reasons:

- NBSD's Mainside Complex is the largest in terms of area amongst the four separate NBSD complex locations. (1,049 acres).

- The Mainside Complex's impervious profile (87% is comprised of streets, parking, and roofing [Space and Naval Warfare Systems Command (SPAWAR) Navy Environmental Sustainability Development to Integration Program (NESDI) LID Study)] is representative of NMCSD and the Broadway Complex however their areas, 79 and 15 acres, are significantly smaller.

- MGRF is largely non-representative amongst the NBSD facilities. At 440 acres, this site primarily consists of cultivated or landscaped habitat with various ornamental trees and shrubs planted on the golf course and surrounding areas.

- Mainside Complex shares some unique land characteristics to NMCSD and MGRF with comparable medical facilities to those located on NMCSD as well as a small, approximately 10-acre, golf course within the outfall 70 drainage area of the NBSD proper.

- Funding and logistics to perform sampling are minimized at the Mainside Complex because all storm water samples are collected there.

Wet weather sampling will be done at the outfall locations designated in Table 3 of the monitoring plan. The assigned locations are in accordance with Table E-1 of NBSD's NPDES Permit and performed in accordance with Section IX.B of Attachment E of the NBSD NPDES Permit. Dry weather sampling will be collected as far upstream as possible to get as close to the discharge location as possible. Dry weather locations are dependent on where dry weather discharges are occurring, in which case sampling may occur at any of the four NBSD Complex sites.

### 3.1.3 OUTFALL INSPECTIONS

Outfall inspections will be performed during dry weather conditions (i.e. at least 72 hours after any rain event) in order to identify outfalls that are flowing or ponding. Eighty outfalls (80% of 99 municipal outfalls located within all parts of NBSD) will be visually inspected two times per year [Regional

NPDES 2.a.(2)(a)(i)]. Table 1 is utilized as a guide for conducting visual observations. The Navy is not a co-permittee under San Diego Regional MS4 NPDES Order NO. R9-2013-0001 but, will utilize the guidance provided in order to promote consistency with other regional small MS4 co-permittees. The Non Storm Water Discharge Visual Observations (Attachment 3) will be utilized to track observations for each outfall visually observed.

**Table 1 - Field Screening Visual Observations for MS4 Outfall Discharge Monitoring Stations[1]**

| Field Observations |
|---|
| • Station identification and location<br>• Presence of flow, or pooled or ponded water<br>• If flow is present:<br>- Flow estimation (i.e. width of water surface, approximate depth of water, approximate flow velocity, flow rate)<br>- Flow characteristics (i.e. presence of floatables, surface scum, sheens, odor, color)<br>- Flow source(s) suspected or identified from non-storm water source investigation<br>- Flow source(s) eliminated during non-storm water source identification<br>• If pooled or ponded water is present:<br>- Characteristics of pooled or ponded water (i.e. presence of floatables, surface scum, sheens, odor, color)<br>- Known or suspected source(s) of pooled or ponded water<br>• Station description (i.e. deposits or stains, vegetation condition, structural condition, observable biology)<br>• Presence and assessment of trash in and around station<br>• Evidence or signs of illicit connections or illegal dumping |

[1]San Diego Regional MS4 NPDES Order NO. R9-2013-0001 Table D-5.

### 3.1.4 DRY WEATHER SAMPLING

In accordance with the NBSD NPDES E-33 permit, up to three monitoring locations will be sampled twice per year (see Table 5). Dry weather sampling will be conducted at the first three locations where non-authorized/unknown discharges are observed during the semi-annual dry weather outfall inspections. Dry weather sampling must be conducted at least 72 hours after any rain event. For identified sources, a determination will be made as to whether it is authorized or unauthorized.

Unauthorized sources will be stopped and addressed as necessary. The first set of dry weather sampling will coincide with the ACSCE during the January 1st to June 30th timeframe. The second set of dry weather sampling will be performed during the 4th quarter QIFVIs, conducted between July 1st and December 31st, in order to better coincide with NBSD's Industrial Storm Water Monitoring Program. This coordination is intended to maximize available resources. Dry weather samples will be taken at the furthest upstream source and in accordance with Field Sampling guidance provided in California's Phase II Small MS4 General Permit (2013-0001-DWQ). The sampling will be conditional, so that if no outfalls are flowing or ponding, then no samples will be collected. Table 2 summarizes the analytical parameters for dry weather flow sample constituent analysis. These constituents are consistent with those provided in the San Diego MS4 Regional NPDES Permit for Analytical Monitoring Constituents for Persistent Flow MS4 Outfall Discharge Monitoring Stations.

**Table 2 – Dry Weather Sampling Constituents[2]**

| PARAMETER | UNIT | SAMPLE TYPE | MINIMUM FREQUENCY | REQUIRED ANALYTICAL TEST METHOD |
|---|---|---|---|---|
| Total Dissolved Solids | mg/L | Grab | Twice Annually | 40CFR136 |
| Total Suspended Solids | mg/L | Grab | Twice Annually | 40CFR136 |
| Total Hardness | µS/cm | Grab | Twice Annually | 40CFR136 |
| Total Phosphorous | mg/L | Grab | Twice Annually | 40CFR136 |
| Nitrite | mg/L | Grab | Twice Annually | 40CFR136 |
| Nitrate | NTU | Grab | Twice Annually | 40CFR136 |
| Total Kjeldhal Nitrogen | mg/L | Grab | Twice Annually | 40CFR136 |
| Ammonia | mg/L | Grab | Twice Annually | 40CFR136 |
| Cadmium | mg/L | Grab | Twice Annually | 40CFR136 |
| Copper | mg/L | Grab | Twice Annually | 40CFR136 |
| Lead | mg/L | Grab | Twice Annually | 40CFR136 |

| PARAMETER | UNIT | SAMPLE TYPE | MINIMUM FREQUENCY | REQUIRED ANALYTICAL TEST METHOD |
|---|---|---|---|---|
| Zinc | mg/L | Grab | Twice Annually | 40CFR136 |
| Total Coliform | mg/L | Grab | Twice Annually | 40CFR136 |
| Fecal Coliform | mg/L | Grab | Twice Annually | 40CFR136 |
| Enterococcus | mg/L | Grab | Twice Annually | 40CFR136 |

[2]Dry Weather sampling is dependent on observed water and could be conducted at any of the four sites within NBSD.

### 3.1.5 WET WEATHER SAMPLING

Wet weather storm water sampling will be performed with samples collected in accordance with NBSD Industrial Storm Water Sampling and Analysis guidance (Attachment E-IX.A.3 of NPDES No. CA0109169). Specifically, storm water from three selected locations (see Table 3) will be sampled during each semi-annual period (January - June, and July - December) in the event of a Qualifying Storm Event (QSE). Wet weather flows will be tested for analytical monitoring constituents provided in the Regional MS4 NPDES Permit, summarized in Table 4, for all wet weather sampling locations. For each sample collected, the appropriate data will be filled out on the Storm Water Visual Observation form (Attachment 2). For each sampling location, following two consecutive sample events at a discrete sampling location where parameters are not detected or below the Annual Numeric Action Level (NAL) values, analysis for those parameters may be discontinued.

**Table 3 - Wet Weather Sampling Locations**

| LOCATION | DESCRIPTION | NAVY ID DISCHARGE POINT | RECEIVING WATER |
|---|---|---|---|
| NBSD Dryside | Discharge Point 72 | 72 | Chollas Creek |
| NBSD Dryside | Discharge Point 70 | 70 | Chollas Creek |
| NBSD Dryside | Medical Clinic (Bldg. 3300) Catch Basin | 54 | Paleta Creek |

**Table 4 – Wet Weather Sampling Constituents**

| PARAMETER | UNIT | SAMPLE TYPE | MINIMUM FREQUENCY | REQUIRED ANALYTICAL TEST METHOD |
|---|---|---|---|---|
| Total Dissolved Solids | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Total Suspended Solids | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Turbidity | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Total Hardness | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Total Organic Carbon | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Dissolved Organic Carbon | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Sulfate | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Methyl Blue Active Substances. | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Total Phosphorus | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Nitrite | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Nitrate | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Total Kjeldhal Nitrogen | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Ammonia | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Arsenic | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Copper, Total Recoverable | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Zinc, Total Recoverable | mg/L | Grab | One storm per semiannual period | 40CFR136 |

| PARAMETER | UNIT | SAMPLE TYPE | MINIMUM FREQUENCY | REQUIRED ANALYTICAL TEST METHOD |
|---|---|---|---|---|
| Lead Total Recoverable | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Cadmium | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Chromium | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Iron | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Nickel | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Selenium | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Thallium | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Total Coliform | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Fecal Coliform | mg/L | Grab | One storm per semiannual period | 40CFR136 |
| Enterococcus | mg/L | Grab | One storm per semiannual period | 40CFR136 |

### 3.1.6 SAMPLING FREQUENCY

Table 5 outlines the wet and dry weather sampling schedule for the duration of NBSD NPDES permit expiring October 31, 2018. Sampling may occur at any time during the allotted timeframe but each sampling event shall not occur any sooner than four weeks apart.

**Table 5 - Sampling Schedule**

| YEAR | WET AND DRY WEATHER SAMPLING SCHEDULE |
|---|---|
| 2015 | November 1 - December 31 |
| 2016 - 2018 | 1st Set: January 1 – June 30 |
| 2016 - 2018 | 2nd Set: July 1 – December 31 |

### 3.1.7 ANNUAL REPORTING

Wet and dry weather analytical results will be submitted to SDRWQCB as part of the Storm Water Annual Report due by September 1st of each year. The first Annual Report to include this information was included in the 2017 Annual Report submitted on August 29, 2017.

## 4.0 REFERENCES

California Regional Water Quality Control Board – San Diego Region, Order No. R9-2013-0064 as Amended by Order No. R9-2017-0009, NPDES Order No. CA0109169 – Waste Discharge Requirments for the United States Department of the Navy, Naval Base San Diego Complex, San Diego County, December 13, 2017

State Water Resources Control Board – Division of Water Quality, Order No. 2009-0009-DWQ as Amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES Order No. CAS000002 – National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Contruction and Land Disturbance Activities, July 17, 2012

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**FIGURE 1**

**NAVAL BASE SAN DIEGO (NBSD)**

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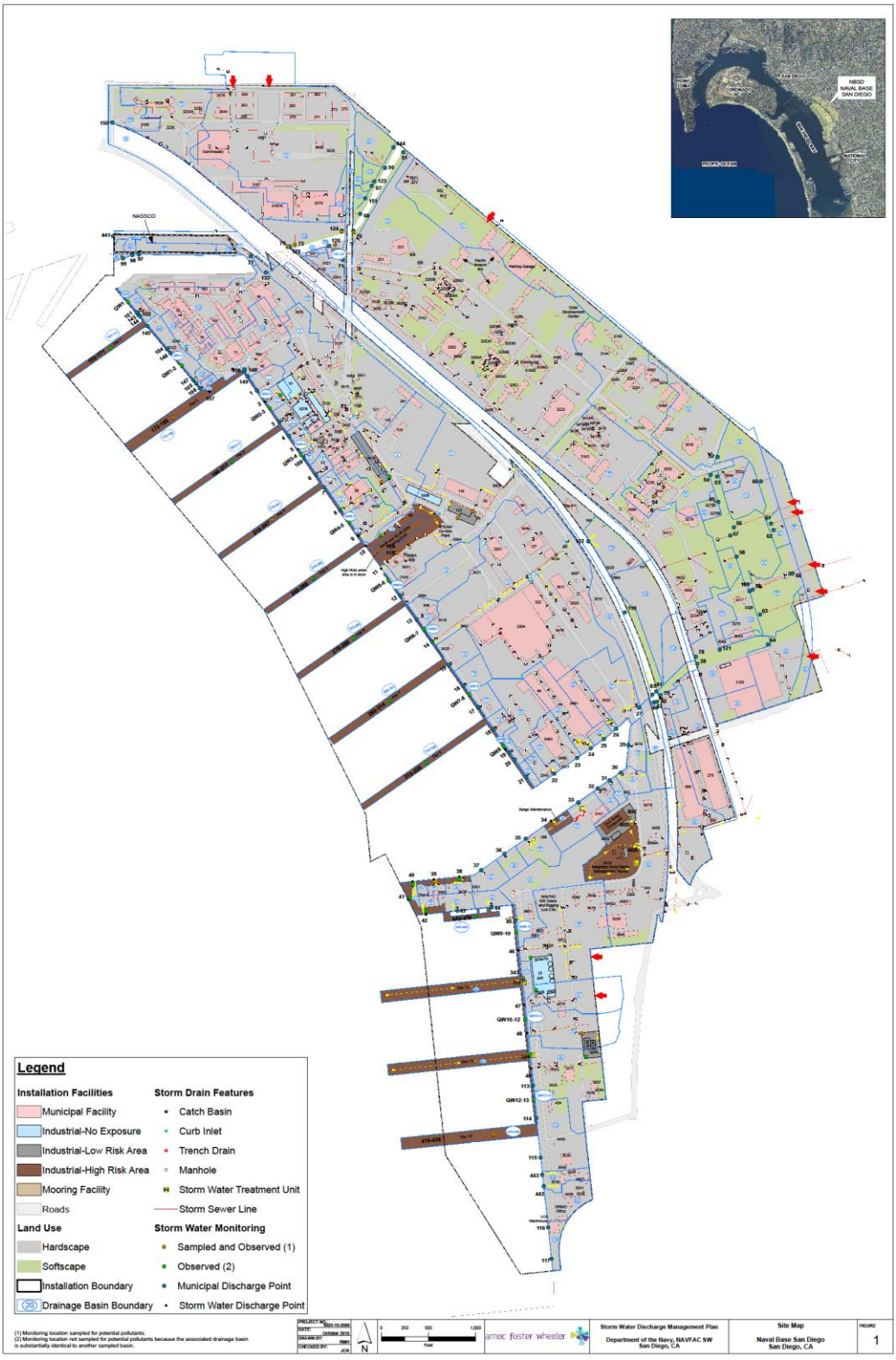
NBSD
NAVAL BASE
SAN DIEGO
NASSCO
Legend
Installation Facilities
Municipal Facility
Industrial-No Exposure
Industrial-Low Risk Area
Industrial-High Risk Area
Mooring Facility
Roads
Land Use
Hardscape
Softscape
Installation Boundary
Drainage Basin Boundary
Storm Drain Features
Catch Basin
Curb Inlet
Trench Drain
Manhole
Storm Water Treatment Unit
Storm Sewer Line
Storm Water Monitoring
Sampled and Observed (1)
Observed (2)
Municipal Discharge Point
Storm Water Discharge Point
(1) Monitoring location sampled for potential pollutants.
(2) Monitoring location not sampled for potential pollutants because the associated drainage basin is substantially identical to another sampled basin.
amec foster wheeler
Storm Water Discharge Management Plan
Department of the Navy, NAVFAC SW
San Diego, CA
Site Map
Naval Base San Diego
San Diego, CA
FIGURE
1

Figure 1

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**FIGURE 2**

**NAVAL MEDICAL CENTER SAN DIEGO (NMCSD)**

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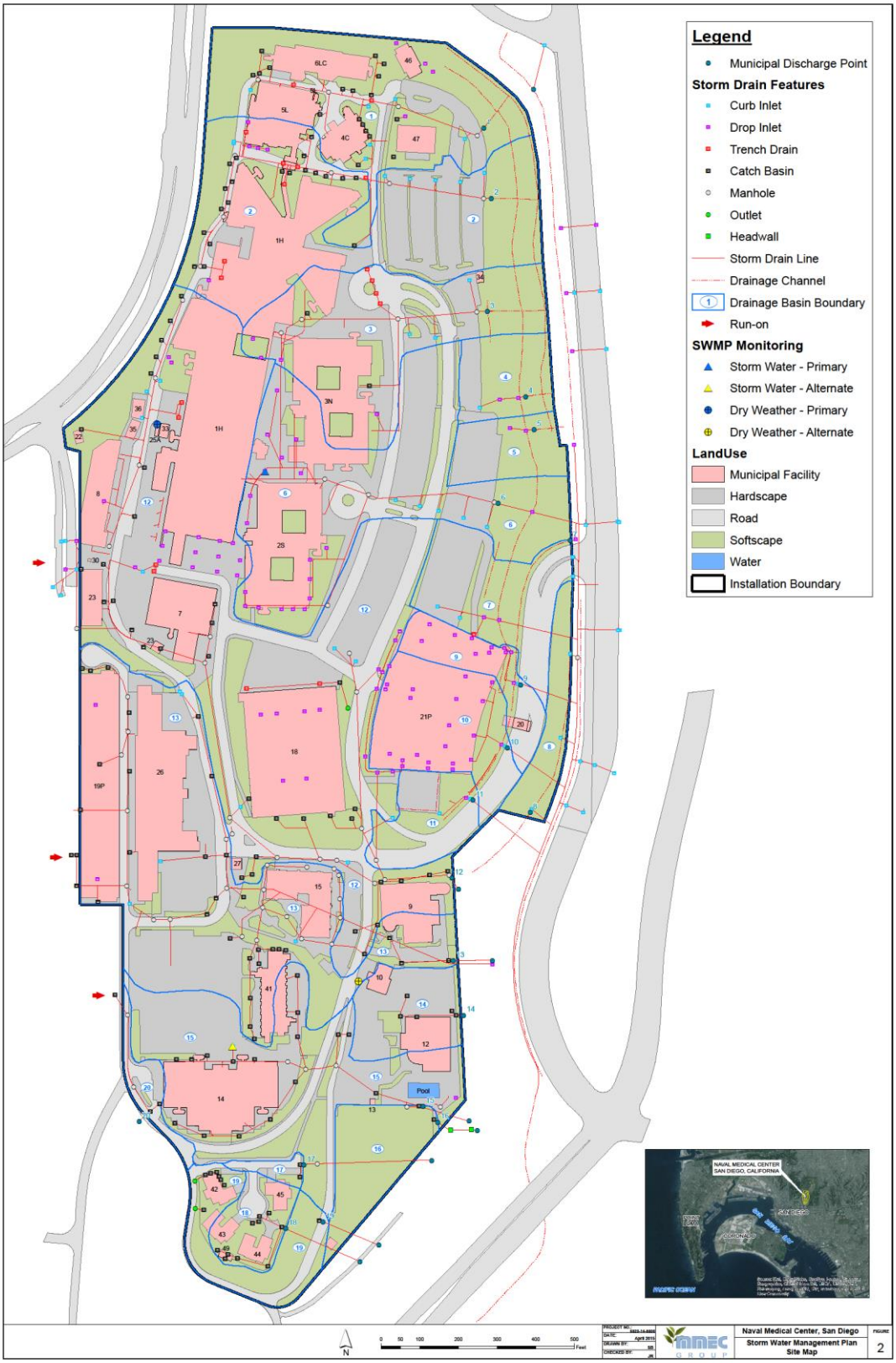
Legend
Municipal Discharge Point
Storm Drain Features
Curb Inlet
Drop Inlet
Trench Drain
Catch Basin
Manhole
Outlet
Headwall
Storm Drain Line
Drainage Channel
Drainage Basin Boundary
Run-on
SWMP Monitoring
Storm Water - Primary
Storm Water - Alternate
Dry Weather - Primary
Dry Weather - Alternate
LandUse
Municipal Facility
Hardscape
Road
Softscape
Water
Installation Boundary
Pool
NAVAL MEDICAL CENTER SAN DIEGO, CALIFORNIA
Naval Medical Center, San Diego
Storm Water Management Plan
Site Map
2

Figure 2

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**FIGURE 3**

**BROADWAY COMPLEX**

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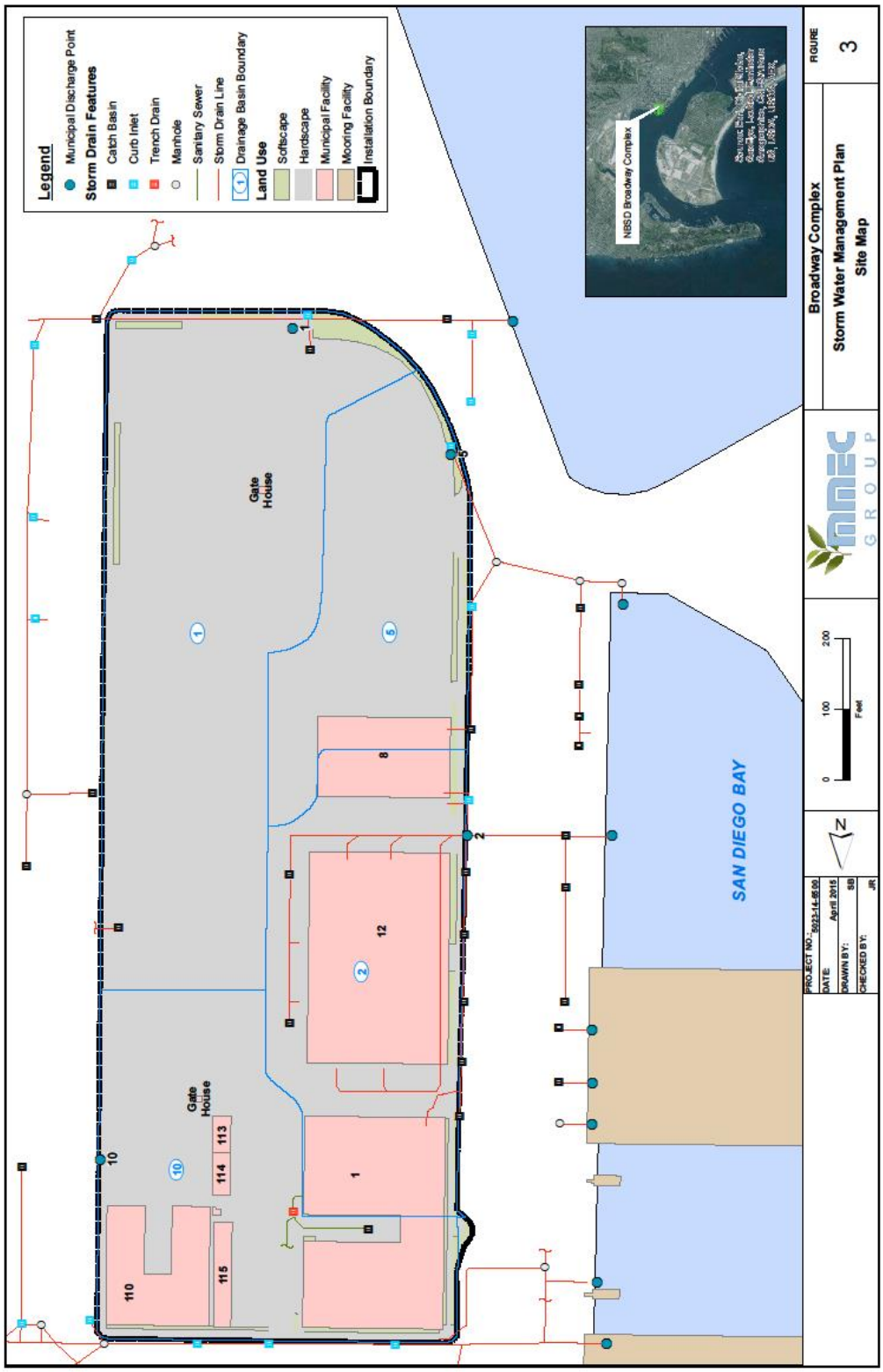
Legend
Municipal Discharge Point
Storm Drain Features
Catch Basin
Curb Inlet
Trench Drain
Manhole
Sanitary Sewer
Storm Drain Line
Drainage Basin Boundary
Land Use
Softscape
Hardscape
Municipal Facility
Mooring Facility
Installation Boundary
NBSD Broadway Complex
Broadway Complex
Storm Water Management Plan
Site Map
FIGURE
3
Gate House
Gate House
SAN DIEGO BAY
PROJECT NO: 2023-14-5500
DATE: April 2015
DRAWN BY: SB
CHECKED BY: JR
N
0
100
200
Feet

Figure 3

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**FIGURE 4**

**MISSION GORGE RECREATION FACILITY (MGRF)**

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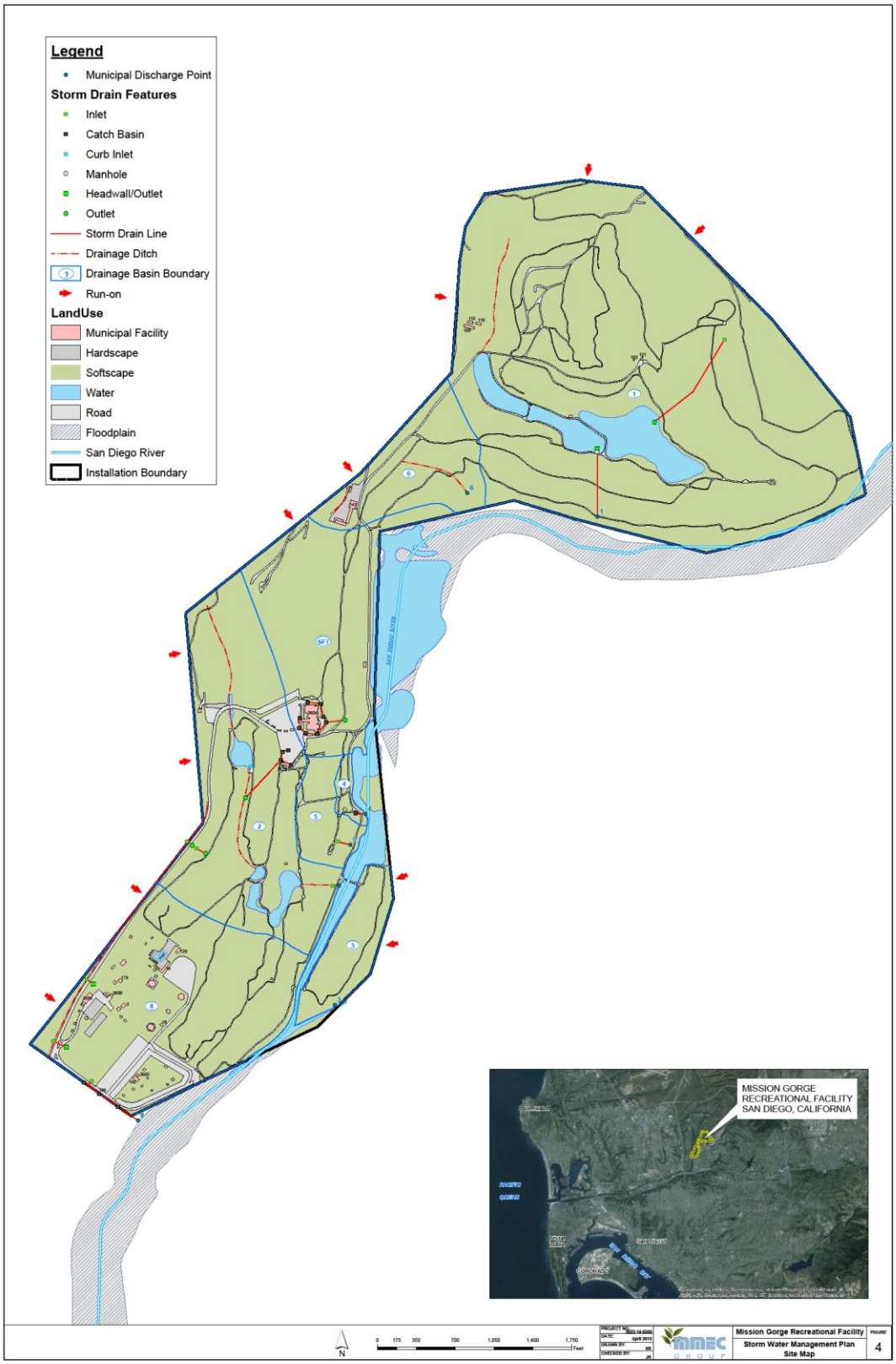
Legend
Municipal Discharge Point
Storm Drain Features
Inlet
Catch Basin
Curb Inlet
Manhole
Headwall/Outlet
Outlet
Storm Drain Line
Drainage Ditch
Drainage Basin Boundary
Run-on
LandUse
Municipal Facility
Hardscape
Softscape
Water
Road
Floodplain
San Diego River
Installation Boundary
MISSION GORGE
RECREATIONAL FACILITY
SAN DIEGO, CALIFORNIA
Mission Gorge Recreational Facility
Storm Water Management Plan
Site Map
4

Figure 4

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**ATTACHMENT 1**

**MUNICIPAL FACILITY INSPECTION FORM (MFIF)**

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**NBSD MUNICIPAL SITE INSPECTION FORM (ANNUAL SURVEY)**
**STORM WATER MANAGEMENT PLAN – MUNICIPAL STORM SEWER SYSTEM (MS4)**

Installation _____ Bldg _____ NPDES Permit # CA0109169

Primary Tenant _____ POC _____ Phone# _____

FMS _____ Facility Mission _____ Email _____ Outfall# ____

| **Site Physical Characteristics** | **Y/N/NA/Other (see comments)** |
|---|---|
| 1. Number of Storm Drains. | [ ] |
| 2. Low Impact Development Onsite. (LID)? | [ ] |
| 3. Are there maintenance activities performed outdoors? | [ ] |
| 4. Number Of Trashcans, recycling bins and dumpsters onsite. | [ ] |
| 5. Are fueling processes performed outdoors? | [ ] |
| 6. Authorized Water discharges on-site? | [ ] |
| 7. Does Site store hazardous materials/waste outside? | [ ] |
| 8. Does Site have USTs/ASTs/and/or containment areas? | [ ] |
| 9. Is there an Oily Water Separator onsite? | [ ] |
| **Site POC Information** | |
| 10. Site personnel attended Environmental Training? | [ ] |
| 11. Bldg. perimeter area cleaned and how often? (See comments) | [ ] |
| 12. Site has been given Environmental Programs POCs Tri-Fold #35? | [ ] |
| 13. Bldg. perimeter inspected prior to rain events? | [ ] |
| 14. Storm drains maintained clean? | [ ] |
| 15. Is Storm Water Pollution Prevention Plan Onsite (SWPPP)? | [ ] |
| 16. Site personnel understand Storm Water fundamentals? | [ ] |
| **Site Inspection** | |
| 17. Outside areas clean? | [ ] |
| 18. Any accumulated sediment? | [ ] |
| 19. Any vehicles or equipment leaking? | [ ] |
| 20. Are recycling and municipal solid waste bins closed? | [ ] |
| 21. Are potential storm water pollutants stored outside managed properly? | [ ] |
| 22. Are spills properly managed? | [ ] |
| 23. Were any unauthorized discharges observed? | [ ] |
| 24. Was Environmental Deficiency Notice (DN) Issued | [ ] |

**Comments**

**Corrective Action Follow-Up**

Inspector's Signature:_____ Date:_____

*FORM W-MS4-1 revised February 2016*

Attachment 1

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**ATTACHMENT 2**

**STORM WATER DISCHARGE**

**VISUAL OBSERVATIONS FORM**

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## STORM WATER DISCHARGE VISUAL OBSERVATIONS

**Base Name:**_____

**pH Meter No.:**_____ **pH Meter Calibration Date:**_____

| **Outfall No.** | | **Rainfall:** | **Flow?** | **Standing $H_2O$?** | **Floatables:** | **Clarity:** | **Color:** | **Odor:** | **Temperature (°C):** **pH:** |
|---|---|---|---|---|---|---|---|---|---|
| **Time:** | | Drizzle ❒ | Yes ❒ | Yes ❒ | None ❒ | Clear ❒ | None ❒ | None ❒ | **Analyst:** |
| **Inaccessible?** | Observed? ❒ | Light ❒ | No ❒ | No ❒ | Oily Sheen ❒ | Cloudy ❒ | Green ❒ | Petroleum ❒ | **Analyzed within 15 mins? Yes ❒ No ❒ Explain Below** |
| **If so, why?** | Sampled? ❒ | Heavy ❒ | | | Sewage ❒ | Susp. Solids ❒ | Brown ❒ | Musty ❒ | **Comments:** |
| Hazardous ❒ | ***If sampled, record*** | | | | Foam ❒ | | Yellow ❒ | Ammonia ❒ | |
| Secure ❒ | ***pH & temperature*** | | | | Leaves/Grass ❒ | | | Rotten eggs ❒ | |
| Tidal ❒ | ***(see far right)*** | | | | Trash ❒ | | | | |

| **Outfall No.** | | **Rainfall:** | **Flow?** | **Standing $H_2O$?** | **Floatables:** | **Clarity:** | **Color:** | **Odor:** | **Temperature (°C):** **pH:** |
|---|---|---|---|---|---|---|---|---|---|
| **Time:** | | Drizzle ❒ | Yes ❒ | Yes ❒ | None ❒ | Clear ❒ | None ❒ | None ❒ | **Analyst:** |
| **Inaccessible?** | Observed? ❒ | Light ❒ | No ❒ | No ❒ | Oily Sheen ❒ | Cloudy ❒ | Green ❒ | Petroleum ❒ | **Analyzed within 15 mins? Yes ❒ No ❒ Explain Below** |
| **If so, why?** | Sampled? ❒ | Heavy ❒ | | | Sewage ❒ | Susp. Solids ❒ | Brown ❒ | Musty ❒ | **Comments:** |
| Hazardous ❒ | ***If sampled, record*** | | | | Foam ❒ | | Yellow ❒ | Ammonia ❒ | |
| Secure ❒ | ***pH & temperature*** | | | | Leaves/Grass ❒ | | | Rotten eggs ❒ | |
| Tidal ❒ | ***(see far right)*** | | | | Trash ❒ | | | | |

| **Outfall No.** | | **Rainfall:** | **Flow?** | **Standing $H_2O$?** | **Floatables:** | **Clarity:** | **Color:** | **Odor:** | **Temperature (°C):** **pH:** |
|---|---|---|---|---|---|---|---|---|---|
| **Time:** | | Drizzle ❒ | Yes ❒ | Yes ❒ | None ❒ | Clear ❒ | None ❒ | None ❒ | **Analyst:** |
| **Inaccessible?** | Observed? ❒ | Light ❒ | No ❒ | No ❒ | Oily Sheen ❒ | Cloudy ❒ | Green ❒ | Petroleum ❒ | **Analyzed within 15 mins? Yes ❒ No ❒ Explain Below** |
| **If so, why?** | Sampled? ❒ | Heavy ❒ | | | Sewage ❒ | Susp. Solids ❒ | Brown ❒ | Musty ❒ | **Comments:** |
| Hazardous ❒ | ***If sampled, record*** | | | | Foam ❒ | | Yellow ❒ | Ammonia ❒ | |
| Secure ❒ | ***pH & temperature*** | | | | Leaves/Grass ❒ | | | Rotten eggs ❒ | |
| Tidal ❒ | ***(see far right)*** | | | | Trash ❒ | | | | |

| **Outfall No.** | | **Rainfall:** | **Flow?** | **Standing $H_2O$?** | **Floatables:** | **Clarity:** | **Color:** | **Odor:** | **Temperature (°C):** **pH:** |
|---|---|---|---|---|---|---|---|---|---|
| **Time:** | | Drizzle ❒ | Yes ❒ | Yes ❒ | None ❒ | Clear ❒ | None ❒ | None ❒ | **Analyst:** |
| **Inaccessible?** | Observed? ❒ | Light ❒ | No ❒ | No ❒ | Oily Sheen ❒ | Cloudy ❒ | Green ❒ | Petroleum ❒ | **Analyzed within 15 mins? Yes ❒ No ❒ Explain Below** |
| **If so, why?** | Sampled? ❒ | Heavy ❒ | | | Sewage ❒ | Susp. Solids ❒ | Brown ❒ | Musty ❒ | **Comments:** |
| Hazardous ❒ | ***If sampled, record*** | | | | Foam ❒ | | Yellow ❒ | Ammonia ❒ | |
| Secure ❒ | ***pH & temperature*** | | | | Leaves/Grass ❒ | | | Rotten eggs ❒ | |
| Tidal ❒ | ***(see far right)*** | | | | Trash ❒ | | | | |

Note: Observations of an item in one of the shaded boxes require a cursory investigation lasting no longer than 10 minutes be performed to determine the source. Note possible sources in the comments box.

**Inspector Signature and Title**_____ **Date** _____ **Form W-10** *Rev Oct 2013*

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**ATTACHMENT 3**

**NON-STORM WATER DISCHARGE**

**VISUAL OBSERVATIONS FORM**

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## NON-STORM WATER DISCHARGE VISUAL OBSERVATIONS (OUTFALLS)

**Activity:**_____

| **Outfall No.** | | **Staining:** | **Flow rate (gpm):** | **Sludge:** | **Floatables:** | **Clarity:** | **Color:** | **Odor:** | **Source of Unexpected Obs?** | **Comments:** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Time:** | | None ❒ | | | | | | | | |
| **Design:** | **Material:** | Oily❒ | 0 (standing) ❒ | None ❒ | None ❒ | Clear ❒ | None ❒ | None ❒ | | |
| Pipe ❒ | Conc., Asph. ❒ | Paint ❒ | 0.25 trickle ❒ | Sed./Mud ❒ | Oily Sheen ❒ | Cloudy ❒ | Green ❒ | Petroleum❒ | | |
| Channel ❒ | Smooth Metal ❒ | Concrete | 0.5 ❒ | Organic ❒ | Sewage ❒ | Opaque ❒ | Brown ❒ | Musty ❒ | | |
| Box Culvert ❒ | Corrugated Metal ❒ | Residue ❒ | 1 ❒ | Other ❒ | Foam ❒ | Susp. Solids ❒ | Yellow ❒ | Ammonia ❒ | | |
| Catch Basin ❒ | Plastic❒ | Algae ❒ | 2 ❒ | _____ | Leaves/Grass ❒ | | Red ❒ | Rotten eggs ❒ | | |
| Sheet Flow ❒ | Soil ❒ | **Water?** | 3 ❒ | | | | Other ❒ | Sour milk ❒ | | |
| Condition? | Vegetated ❒ | Yes ❒ | 4 ❒ | | | | _____ | Other ❒ | | |
| _____ | Rock ❒ | No ❒, Stop | > 5 ❒ | | | | | _____ | | |

| **Outfall No.** | | **Staining:** | **Flow rate (gpm):** | **Sludge:** | **Floatables:** | **Clarity:** | **Color:** | **Odor:** | **Source of Unexpected Obs?** | **Comments:** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Time:** | | None ❒ | | | | | | | | |
| **Design:** | **Material:** | Oily❒ | 0 (standing) ❒ | None ❒ | None ❒ | Clear ❒ | None ❒ | None ❒ | | |
| Pipe ❒ | Conc., Asph. ❒ | Paint ❒ | 0.25 trickle ❒ | Sed./Mud ❒ | Oily Sheen ❒ | Cloudy ❒ | Green ❒ | Petroleum❒ | | |
| Channel ❒ | Smooth Metal ❒ | Concrete | 0.5 ❒ | Organic ❒ | Sewage ❒ | Opaque ❒ | Brown ❒ | Musty ❒ | | |
| Box Culvert ❒ | Corrugated Metal ❒ | Residue ❒ | 1 ❒ | Other ❒ | Foam ❒ | Susp. Solids ❒ | Yellow ❒ | Ammonia ❒ | | |
| Catch Basin ❒ | Plastic❒ | Algae ❒ | 2 ❒ | _____ | Leaves/Grass ❒ | | Red ❒ | Rotten eggs ❒ | | |
| Sheet Flow ❒ | Soil ❒ | **Water?** | 3 ❒ | | | | Other ❒ | Sour milk ❒ | | |
| Condition? | Vegetated ❒ | Yes ❒ | 4 ❒ | | | | _____ | Other ❒ | | |
| _____ | Rock ❒ | No ❒, Stop | > 5 ❒ | | | | | _____ | | |

| **Outfall No.** | | **Staining:** | **Flow rate (gpm):** | **Sludge:** | **Floatables:** | **Clarity:** | **Color:** | **Odor:** | **Source of Unexpected Obs?** | **Comments:** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Time:** | | None ❒ | | | | | | | | |
| **Design:** | **Material:** | Oily❒ | 0 (standing) ❒ | None ❒ | None ❒ | Clear ❒ | None ❒ | None ❒ | | |
| Pipe ❒ | Conc., Asph. ❒ | Paint ❒ | 0.25 trickle ❒ | Sed./Mud ❒ | Oily Sheen ❒ | Cloudy ❒ | Green ❒ | Petroleum❒ | | |
| Channel ❒ | Smooth Metal ❒ | Concrete | 0.5 ❒ | Organic ❒ | Sewage ❒ | Opaque ❒ | Brown ❒ | Musty ❒ | | |
| Box Culvert ❒ | Corrugated Metal ❒ | Residue ❒ | 1 ❒ | Other ❒ | Foam ❒ | Susp. Solids ❒ | Yellow ❒ | Ammonia ❒ | | |
| Catch Basin ❒ | Plastic❒ | Algae ❒ | 2 ❒ | _____ | Leaves/Grass ❒ | | Red ❒ | Rotten eggs ❒ | | |
| Sheet Flow ❒ | Soil ❒ | **Water?** | 3 ❒ | | | | Other ❒ | Sour milk ❒ | | |
| Condition? | Vegetated ❒ | Yes ❒ | 4 ❒ | | | | _____ | Other ❒ | | |
| _____ | Rock ❒ | No ❒, Stop | > 5 ❒ | | | | | _____ | | |

**Inspector Signature and Title**_____ **Date** _____ **Form W-11** *Rev Sep 2008*

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**ATTACHMENT 4**

**PRE-RAIN VISUAL INSPECTION CHECKLIST**

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# NAVAL BASE SAN DIEGO PRE-RAIN VISUAL INSPECTION CHECKLIST FOR INDUSTRIAL HIGH RISK AREAS

**NBSD Water Program Checklist W-9**
**July 2014**

**DATE:**_____ **LOCATION:**_____ **BUILDING #:**_____

**OUTFALL:**_____ **DRAINAGE AREA:**_____ **TIME:** _____

**CHANCE (%) AND EXPECTED DATE OF RAIN EVENT:**_____

*Pre Rain inspections are required when the National Weather Service Forecast Office forecasts a 50% or greater chance of precipitation. Pre Rain inspections are not required more than once within any 14 day period.

## VISUAL OBSERVATIONS TO BE COMPLETED PRIOR TO RAINFALL

1. **Are BMPs in place to mitigate outdoor pollutant sources?** **Yes** ☐ **No** ☐
2. **Are outside areas clean and orderly, with trash and debris removed?** **Yes** ☐ **No** ☐
3. **Is sediment observed in the area?** **Yes** ☐ **No** ☐
4. **Are there any active leaks or spills onsite?** **Yes** ☐ **No** ☐
5. **Are secondary containments free of accumulated storm water & contaminates?** **Yes** ☐ **No** ☐
6. **Are appropriate BMPs fully implemented?** **Yes** ☐ **No** ☐

*Areas of non-applicability for a specific discharge will remain blank or separate comment provided.

**Comments:**

_____

_____

_____

_____

_____

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_____

_____

_____

_____

**Inspector Signature and Title:** _____

**FORM W-9 July 2014**
Attachment 4

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**ATTACHMENT 5**

**MUNICIPAL FACILITY MASTER SPREADSHEET (MFMS)**

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## MUNICIPAL FACILITY MASTER SPREADSHEET (MFMS)

| ACTIVITY | BUILDING # / OUTFALL # | INSPECTION FORM # | SCHEDULE / FREQUENCY | OPERATION / SHOP / DISCHARGE LOCATION | NOV 10-21-15 to 11-20-15 | DEC 11-21-15 to 12-20-15 | JAN 12-21-14 to 01-20-16 | FEB 01-21-15 to 02-20-16 | MAR 02-21-15 to 03-20-16 | APR 03-21-15 to 04-20-16 | MAY 04-21-15 to 05-20-16 | JU 05-21 -15 to 06-20-16 | JUL 06-21-15 to 07-20-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD Broadway Complex | 1 | W-MS4-1 | ANNUAL, **NBSD** | Broadway Complex | | | | | | **14** | | | |
| NBSD Broadway Complex | 8 | W-MS4-1 | ANNUAL, **NBSD** | Broadway Complex | | | | | | **14** | | | |
| NBSD Broadway Complex | 12 | W-MS4-1 | ANNUAL, **NBSD** | Broadway Complex | | | | | | **14** | | | |
| NBSD Broadway Complex | 110 | W-MS4-1 | ANNUAL, **NBSD** | Broadway Complex | | | | | | **14** | | | |
| NBSD Broadway Complex | 113 | W-MS4-1 | ANNUAL, **NBSD** | Broadway Complex | | | | | | **14** | | | |
| NBSD Broadway Complex | 114 | W-MS4-1 | ANNUAL, **NBSD** | Broadway Complex | | | | | | **14** | | | |
| NBSD Broadway Complex | 115 | W-MS4-1 | ANNUAL, **NBSD** | Broadway Complex | | | | | | **14** | | | |
| NBSD NMCSD | 14 | W-MS4-1 | ANNUAL, **NBSD** | NMCSD | | | | | **22** | | | | |
| NBSD | 17 | W-MS4-1 | ANNUAL, **NBSD** | SWRMC | | | | | **22** | | | | |
| NBSD | 20 | W-MS4-1 | ANNUAL, **NBSD** | SWRMC | | | | | **22** | | | | |
| NBSD | 36 | W-MS4-1 | ANNUAL, **NBSD** | SWRMC Admin. | | | | | **22** | | | | |
| NBSD | 37 | W-MS4-1 | ANNUAL, **NBSD** | SWRMC Diesel Repair | | | | | **22** | | | | |
| NBSD | 40 | W-MS4-1 | ANNUAL, **NBSD** | | | | | | **23** | | | | |
| NBSD | 45 | W-MS4-1 | ANNUAL, **NBSD** | MWR Water Front Café | | | | | | | **25** | | |
| NBSD | 56 | W-MS4-1 | ANNUAL, **NBSD** | NLSO, PSD, Legal, RLSO, | | | | | | | **22** | | |

| ACTIVITY | BUILDING # / OUTFALL # | INSPECTION FORM # | SCHEDULE / FREQUENCY | OPERATION / SHOP / DISCHARGE LOCATION | NOV 10-21-15 to 11-20-15 | DEC 11-21-15 to 12-20-15 | JAN 12-21-14 to 01-20-16 | FEB 01-21-15 to 02-20-16 | MAR 02-21-15 to 03-20-16 | APR 03-21-15 to 04-20-16 | MAY 04-21-15 to 05-20-16 | JU 05-21 -15 to 06-20-16 | JUL 06-21-15 to 07-20-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD | 57 | W-MS4-1 | ANNUAL, **NBSD** | CNRSW Force Protection, NCIS, NMCI, LCS, RITSC | | | | | | | **22** | | |
| NBSD | 58 | W-MS4-1 | ANNUAL, **NBSD** | ATGPAC | | | | | | | **22** | | |
| NBSD | 62 | W-MS4-1 | ANNUAL, **NBSD** | Coast Gaurd and ASIR NAVAIR | | | | | | | **28** | | |
| NBSD | 71 | W-MS4-1 | ANNUAL, **NBSD** | NBSD Theatre, MWR Deployed Forces, Deron 23 | | | | | | | **22** | | |
| NBSD | 72 | W-MS4-1 | ANNUAL, **NBSD** | Chief MA, CO/XO, NAVBASE ADMIN. | | | | | | | **22** | | |
| NBSD | 74 | W-MS4-1 | ANNUAL, **NBSD** | LCS CLASSRON | | | | | | | **22** | | |
| NBSD | 76 | W-MS4-1 | ANNUAL, **NBSD** | Ship Eng. Techs, Compressor Shop | | | | | | | **22** | | |
| NBSD | 77 | W-MS4-1 | ANNUAL, **NBSD** | SWRMC Ship Engineering | | | | | **23** | | | | |
| NBSD | 82 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Ship To Shore | | | | | **23** | | | | |
| NBSD | 86 | W-MS4-1 | ANNUAL, **NBSD** | SWRMC Transportation | | | **23** | | **23** | | | | |
| NBSD | 88 | W-MS4-1 | ANNUAL, **NBSD** | | | | | | **23** | | | | |
| NBSD | 91 | W-MS4-1 | ANNUAL, **NBSD** | SWRMC Safety and Finance | | | | | | | **25** | | |

| ACTIVITY | BUILDING # / OUTFALL # | INSPECTION FORM # | SCHEDULE / FREQUENCY | OPERATION / SHOP / DISCHARGE LOCATION | NOV 10-21-15 to 11-20-15 | DEC 11-21-15 to 12-20-15 | JAN 12-21-14 to 01-20-16 | FEB 01-21-15 to 02-20-16 | MAR 02-21-15 to 03-20-16 | APR 03-21-15 to 04-20-16 | MAY 04-21-15 to 05-20-16 | JU 05-21 -15 to 06-20-16 | JUL 06-21-15 to 07-20-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD | 116 | W-MS4-1 | ANNUAL, **NBSD** | FLC, Classron, PHIBGRU-3, FISC | | | | | **24** | | | | |
| NBSD | 118,119 | W-MS4-1 | ANNUAL, **NBSD** | PSD NAVFAC | | | | | **24** | | | | |
| NBSD | 121 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC FEAD, PWO | | | | | **24** | | | | |
| NBSD | 127 | W-MS4-1 | ANNUAL, **NBSD** | ATGPAC | | | | | **24** | | | | |
| NBSD | 148 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Compressor Bldg. and Switching Station | | | | | | | **25** | | |
| NBSD | 150 | W-MS4-1 | ANNUAL, **NBSD** | Port Ops EOC | | | | | **24** | | | | |
| NBSD | 151 | W-MS4-1 | ANNUAL, **NBSD** | Security | | | | | **25** | | | | |
| NBSD | 152 | W-MS4-1 | ANNUAL, **NBSD** | NAVY College | | | | | **25** | | | | |
| NBSD | 153 | W-MS4-1 | ANNUAL, **NBSD** | Training Support Center SD | | | | | **25** | | | | |
| NBSD | 221 | W-MS4-1 | ANNUAL, **NBSD** | Enlisted Club Rec. Yard | | | | | **25** | | | | |
| NBSD | 223 | W-MS4-1 | ANNUAL, **NBSD** | MWR Olde Gym | | | | | **25** | | | | |
| NBSD | 259 | W-MS4-1 | ANNUAL, **NBSD** | Family Service Center | | | | | **25** | | | | |
| NBSD | 261 | W-MS4-1 | ANNUAL, **NBSD** | Familiy Advocacy Center | | | | | **29** | | | | |
| NBSD | 262 | W-MS4-1 | ANNUAL, **NBSD** | SPAWAR | | | | | **29** | | | | |
| NBSD | 263 | W-MS4-1 | ANNUAL, **NBSD** | Family Service Center | | | | | **29** | | | | |

| ACTIVITY | BUILDING # / OUTFALL # | INSPECTION FORM # | SCHEDULE / FREQUENCY | OPERATION / SHOP / DISCHARGE LOCATION | NOV 10-21-15 to 11-20-15 | DEC 11-21-15 to 12-20-15 | JAN 12-21-14 to 01-20-16 | FEB 01-21-15 to 02-20-16 | MAR 02-21-15 to 03-20-16 | APR 03-21-15 to 04-20-16 | MAY 04-21-15 to 05-20-16 | JU 05-21 -15 to 06-20-16 | JUL 06-21-15 to 07-20-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD | 265 | W-MS4-1 | ANNUAL, **NBSD** | DTS Afloat Focus Group | | | | | **29** | | | | |
| NBSD | 268 | W-MS4-1 | ANNUAL, **NBSD** | SARP | | | | | **29** | | | | |
| NBSD | 270 | W-MS4-1 | ANNUAL, **NBSD** | NMC Relief | | | | | **29** | | | | |
| NBSD | 271 | W-MS4-1 | ANNUAL, **NBSD** | SPAWAR | | | | | **1** | | | | |
| NBSD | 272 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC SW Utilities | | | | | **1** | | | | |
| NBSD | 273 | W-MS4-1 | ANNUAL, **NBSD** | NEPMU-5 | | | | | **1** | | | | |
| NBSD | 277 | W-MS4-1 | ANNUAL, **NBSD** | CNRSW Chapel | | | | | | | **27** | | |
| NBSD | 279 | W-MS4-1 | ANNUAL, **NBSD** | DDDC MTIS | | | | | **1** | | | | |
| NBSD | 280 | W-MS4-1 | ANNUAL, **NBSD** | SWRMC | | | | | **1** | | | | |
| NBSD | 291 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC SW | | | | | **1** | | | | |
| NBSD | 292 | W-MS4-1 | ANNUAL, **NBSD** | | | | | | **2** | | | | |
| NBSD | 330 | W-MS4-1 | ANNUAL, **NBSD** | CNRSW Chaplins Office | | | | | | | **27** | | |
| NBSD | 333 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Shop Storage | | | | | **2** | | | | |
| NBSD | 357 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC SW | | | | | **2** | | | | |
| NBSD | 371 | W-MS4-1 | ANNUAL, **NBSD** | | | | | | **2** | | | | |
| NBSD | 372 | W-MS4-1 | ANNUAL, **NBSD** | | | | | | **3** | | | | |
| NBSD | 384 | W-MS4-1 | ANNUAL, **NBSD** | Telephone Offices NCTS | | | | | | | **22** | | |
| NBSD | 391 | W-MS4-1 | ANNUAL, **NBSD** | | | | | | **3** | | | | |
| NBSD | 392 | W-MS4-1 | ANNUAL, **NBSD** | | | | | | **3** | | | | |

| ACTIVITY | BUILDING # / OUTFALL # | INSPECTION FORM # | SCHEDULE / FREQUENCY | OPERATION / SHOP / DISCHARGE LOCATION | NOV 10-21-15 to 11-20-15 | DEC 11-21-15 to 12-20-15 | JAN 12-21-14 to 01-20-16 | FEB 01-21-15 to 02-20-16 | MAR 02-21-15 to 03-20-16 | APR 03-21-15 to 04-20-16 | MAY 04-21-15 to 05-20-16 | JU 05-21 -15 to 06-20-16 | JUL 06-21-15 to 07-20-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD | 399 | W-MS4-1 | ANNUAL, **NBSD** | DDDC | | | | | **4** | | | | |
| NBSD | 548 | W-MS4-1 | ANNUAL, **NBSD** | MWR | | | | | **4** | | | | |
| NBSD | 1134 | W-MS4-1 | ANNUAL, **NBSD** | CNRSW Religious Education | | | | | | | **27** | | |
| NBSD | 1220 | W-MS4-1 | ANNUAL, **NBSD** | SWDIV 1220 | | | | | | | **10** | **20** | |
| NBSD Admiral Baker Site | 2,3,4,5,6,7,8,9,10,11,15,16, 17,18,21,22,114,115,116,11 7,120,122,123,124,126,127, 128,139,142,146,147,148,1 49,151,152,153,173,174,17 5,176,177,178,179,3351, 3586, 3603,3604 | W-MS4-1 | ANNUAL, **NBSD** | Admiral Baker Golf Course | | | | | | | | **20** | |
| NBSD | 3116 | W-MS4-1 | ANNUAL, **NBSD** | SWRMC Water Front Ops, BUMED Dental Services | | | | | | | **28** | | |
| NBSD | 3142 | W-MS4-1 | ANNUAL, **NBSD** | TPU Brunton Hall BEQ | | | | | | | **28** | | |
| NBSD | 3149 | W-MS4-1 | ANNUAL, **NBSD** | CNSP Applied Instruction Simulation | | | | | | | **28** | | |
| NBSD | 3031 | W-MS4-1 | ANNUAL, **NBSD** | | | | | | **4** | | | | |
| NBSD | 3137 | W-MS4-1 | ANNUAL, **NBSD** | Indoor Range, ATG | | | | | | | **22** | | |
| NBSD | 3141 | W-MS4-1 | ANNUAL, **NBSD** | NSGA BOQ CBH | | | | | **4** | | | | |
| NBSD | 3143 | W-MS4-1 | ANNUAL, **NBSD** | Training Support Center SD | | | | | **7** | | | | |
| NBSD | 3144 | W-MS4-1 | ANNUAL, **NBSD** | BOQ CBH | | | | | **7** | | | | |
| NBSD | 3149 | W-MS4-1 | ANNUAL, **NBSD** | CNSP Applied Instruction | | | | | **7** | | | | |

| ACTIVITY | BUILDING # / OUTFALL # | INSPECTION FORM # | SCHEDULE / FREQUENCY | OPERATION / SHOP / DISCHARGE LOCATION | NOV 10-21-15 to 11-20-15 | DEC 11-21-15 to 12-20-15 | JAN 12-21-14 to 01-20-16 | FEB 01-21-15 to 02-20-16 | MAR 02-21-15 to 03-20-16 | APR 03-21-15 to 04-20-16 | MAY 04-21-15 to 05-20-16 | JU 05-21 -15 to 06-20-16 | JUL 06-21-15 to 07-20-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD | 3150 | W-MS4-1 | ANNUAL, **NBSD** | BOQ CBH | | | | | 7 | | | | |
| NBSD | 3155 | W-MS4-1 | ANNUAL, **NBSD** | NEX , HandClasp, FISC, DDDC | | | | | 8 | | | | |
| NBSD | 3160 | W-MS4-1 | ANNUAL, **NBSD** | NEX Gas Satation | | | | | 8 | | | | |
| NBSD | 3187 | W-MS4-1 | ANNUAL, **NBSD** | SATO Commercial Travel | | | | | 8 | | | | |
| NBSD | 3187a | W-MS4-1 | ANNUAL, **NBSD** | NEX | | | | | 8 | | | | |
| NBSD | 3202 | W-MS4-1 | ANNUAL, **NBSD** | Mercer Hall | | | | | 9 | | | | |
| NBSD | 3210 | W-MS4-1 | ANNUAL, **NBSD** | Anchors | | | | | 9 | | | | |
| NBSD | 3213 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC SW Shops | | | | | 9 | | | | |
| NBSD | 3223 | W-MS4-1 | ANNUAL, **NBSD** | Bowling Alley | | | | | 9 | | | | |
| NBSD | 3229 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Tool Rm. | | | | | 10 | | | | |
| NBSD | 3230 | W-MS4-1 | ANNUAL, **NBSD** | NBSD Dryside Dental | | | | | 10 | | | | |
| NBSD | 3231 | W-MS4-1 | ANNUAL, **NBSD** | NBSD Dryside Dental | | | | | 10 | | | | |
| NBSD | 3232 | W-MS4-1 | ANNUAL, **NBSD** | NBSD Dryside IH | | | | | 10 | | | | |
| NBSD | 3266 | W-MS4-1 | ANNUAL, **NBSD** | Seelf Help SEE Bee's | | | | | 11 | | | | |
| NBSD | 3270 | W-MS4-1 | ANNUAL, **NBSD** | MWR Restroom | | | | | 11 | | | | |
| NBSD | 3278 | W-MS4-1 | ANNUAL, **NBSD** | SWRMC Production Family | | | | | 11 | | | | |
| NBSD | 3279 | W-MS4-1 | ANNUAL, **NBSD** | MWR Field House | | | | | 11 | | | | |

| ACTIVITY | BUILDING # / OUTFALL # | INSPECTION FORM # | SCHEDULE / FREQUENCY | OPERATION / SHOP / DISCHARGE LOCATION | NOV 10-21-15 to 11-20-15 | DEC 11-21-15 to 12-20-15 | JAN 12-21-14 to 01-20-16 | FEB 01-21-15 to 02-20-16 | MAR 02-21-15 to 03-20-16 | APR 03-21-15 to 04-20-16 | MAY 04-21-15 to 05-20-16 | JU 05-21 -15 to 06-20-16 | JUL 06-21-15 to 07-20-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD | 3280 | W-MS4-1 | ANNUAL, **NBSD** | TSC Training Facilities | | | | | **14** | | | | |
| NBSD | 3281, 82, 83, 84, 85 | W-MS4-1 | ANNUAL, **NBSD** | TSC Training Facilities | | | | | **14** | | | | |
| NBSD | 3290, 91 | W-MS4-1 | ANNUAL, **NBSD** | TSC Training Facilities | | | | | **14** | | | | |
| NBSD | 3292 | W-MS4-1 | ANNUAL, **NBSD** | TSC Training Facilities | | | | | **14** | | | | |
| NBSD | 3294 | W-MS4-1 | ANNUAL, **NBSD** | TSC Training Facilities Fire Fighting | | | | | **15** | | | | |
| NBSD | 3300 | W-MS4-1 | ANNUAL, **NBSD** | NBSD Dryside Clinic | | | | | **15** | | | | |
| NBSD | 3301 | W-MS4-1 | ANNUAL, **NBSD** | NEX Fleet Exchange | | | | | **15** | | | | |
| NBSD | 3303 | W-MS4-1 | ANNUAL, **NBSD** | Morale Welfare Recreation - Admin | | | | | **15** | | | | |
| NBSD | 3304 | W-MS4-1 | ANNUAL, **NBSD** | NBSD Automated Storage | | | | | **16** | | | | |
| NBSD | 3317 | W-MS4-1 | ANNUAL, **NBSD** | MWR Raquetball Court | | | | | **16** | | | | |
| NBSD | 3321 | W-MS4-1 | ANNUAL, **NBSD** | Port Ops, Admin | | | **23** | | **16** | | | | |
| NBSD | 3322 | W-MS4-1 | ANNUAL, **NBSD** | FISC HAZMAT | | | | | **16** | | | | |
| NBSD | 3322, 3483, 3581 | W-MS4-1 | ANNUAL, **NBSD** | DLA Compound | | | **23** | | **17** | | | | |
| NBSD | 3335 | W-MS4-1 | ANNUAL, **NBSD** | Security Dog Kennel | | | | | **17** | | | | |
| NBSD | 3337 | W-MS4-1 | ANNUAL, **NBSD** | MWR Auto | | | | | **17** | | | | |
| NBSD | 3343, 3480 | W-MS4-1 | ANNUAL, **NBSD** | Port Ops, Admin | | | **23** | | **17** | | | | |

| ACTIVITY | BUILDING # / OUTFALL # | INSPECTION FORM # | SCHEDULE / FREQUENCY | OPERATION / SHOP / DISCHARGE LOCATION | NOV 10-21-15 to 11-20-15 | DEC 11-21-15 to 12-20-15 | JAN 12-21-14 to 01-20-16 | FEB 01-21-15 to 02-20-16 | MAR 02-21-15 to 03-20-16 | APR 03-21-15 to 04-20-16 | MAY 04-21-15 to 05-20-16 | JU 05-21 -15 to 06-20-16 | JUL 06-21-15 to 07-20-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD | 3350 | W-MS4-1 | ANNUAL, **NBSD** | NBSD Security Gate 13 | | | | | | | **28** | | |
| NBSD | 3355 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Utilities | | | | | | **21** | | | |
| NBSD | 3361 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Electrical Sub Stations | | | | | | **21** | | | |
| NBSD | 3362 | W-MS4-1 | ANNUAL, **NBSD** | Donnelly Hall | | | | | | **21** | | | |
| NBSD | 3363 | W-MS4-1 | ANNUAL, **NBSD** | | | | | | | **21** | | | |
| NBSD | 3379 | W-MS4-1 | ANNUAL, **NBSD** | NEX Home Store | | | | | | **21** | | | |
| NBSD | 3382, 83 | W-MS4-1 | ANNUAL, **NBSD** | TSC Training Facilities | | | | | | **22** | | | |
| NBSD | 3404 | W-MS4-1 | ANNUAL, **NBSD** | Anchors | | | | | | **22** | | | |
| NBSD | 3405 | W-MS4-1 | ANNUAL, **NBSD** | NEX Bruergers Bagels | | | | | | | **28** | | |
| NBSD | 3407, 08, 09 | W-MS4-1 | ANNUAL, **NBSD** | NCTS AT&T | | | | | | **22** | | | |
| NBSD | 3410 | W-MS4-1 | ANNUAL, **NBSD** | | | | | | | **22** | | | |
| NBSD | 3412, 13, 14, 15 | W-MS4-1 | ANNUAL, **NBSD** | TSC Training Facilities | | | | | | **22** | | | |
| NBSD | 3416 | W-MS4-1 | ANNUAL, **NBSD** | NBSD Career Counselor | | | | | | **23** | | | |
| NBSD | 3420 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Utilities | | | | | | **23** | | | |
| NBSD | 3421 | W-MS4-1 | ANNUAL, **NBSD** | NEX Rice King | | | | | | **23** | | | |
| NBSD | 3424 | W-MS4-1 | ANNUAL, **NBSD** | SWRMC Production Equipment | | | | | | **23** | | | |
| NBSD | 3432 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Covered Lumber | | | | | | **23** | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD | 3436 | W-MS4-1 | ANNUAL, **NBSD** | PAO/Info. Center | | | | | | | **22** | | |
| NBSD | 3461, 68, 69 | W-MS4-1 | ANNUAL, **NBSD** | CNRSW Sunday School Mtg. | | | | | | | **25** | | |
| NBSD | 3478 | W-MS4-1 | ANNUAL, **NBSD** | DLA DDDC | | | | | | **24** | | | |
| NBSD | 3485 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Electrical Switching Station | | | | | | | **6** | | |
| NBSD | 3486 | W-MS4-1 | ANNUAL, **NBSD** | NEX Mini Mart | | | | | | | **6** | | |
| NBSD | 3492 | W-MS4-1 | ANNUAL, **NBSD** | SCI Temp Office | | | | | | | **6** | | |
| NBSD | 3494 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC SW Pest Control Shop | | | | | | | **6** | | |
| NBSD | 3495 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC SW Utility Service | | | | | | | **6** | | |
| NBSD | 3509, 10, 11 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Transportation , Admin and - Car Wash | | | **23** | | | **24** | | | |
| NBSD | 3519 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Records | | | | | | **24** | | | |
| NBSD | 3522 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Covered Lumber | | | | | | **24** | | | |
| NBSD | 3523, 24 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Maintenance Bldgs. | | | | | | **25** | | | |
| NBSD | 3526 | W-MS4-1 | ANNUAL, **NBSD** | NAVY Lodge | | | | | | **25** | | | |
| NBSD | 3532 | W-MS4-1 | ANNUAL, **NBSD** | Morale Welfare Recreation - Print | | | | | | **25** | | | |

| ACTIVITY | BUILDING # / OUTFALL # | INSPECTION FORM # | SCHEDULE / FREQUENCY | OPERATION / SHOP / DISCHARGE LOCATION | NOV 10-21-15 to 11-20-15 | DEC 11-21-15 to 12-20-15 | JAN 12-21-14 to 01-20-16 | FEB 01-21-15 to 02-20-16 | MAR 02-21-15 to 03-20-16 | APR 03-21-15 to 04-20-16 | MAY 04-21-15 to 05-20-16 | JU 05-21 -15 to 06-20-16 | JUL 06-21-15 to 07-20-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD | 3533 | W-MS4-1 | ANNUAL, **NBSD** | Training Support Center SD | | | | | | **25** | | | |
| NBSD | 3534 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Code 500 | | | | **3** | | **25** | | | |
| NBSD | 3535 | W-MS4-1 | ANNUAL, **NBSD** | CBMU-303 | | | | | **2** | | | | |
| NBSD | 3536 | W-MS4-1 | ANNUAL, **NBSD** | CBMU-303 | | | | **21** | **3** | | | | |
| NBSD | 3538 | W-MS4-1 | ANNUAL, **NBSD** | CBMU-303 | | | | | **4** | | | | |
| NBSD | 3546 | W-MS4-1 | ANNUAL, **NBSD** | Fleet Logistics Center | | | | **21** | **7** | | | | |
| NBSD | 3552 | W-MS4-1 | ANNUAL, **NBSD** | MWR Storage | | | | | **8** | | | | |
| NBSD | 3554 | W-MS4-1 | ANNUAL, **NBSD** | SWRMC Storage Bldg | | | **23** | | **9** | | | | |
| NBSD | 3579 | W-MS4-1 | ANNUAL, **NBSD** | NAVFAC Utility | | | | | **10** | | | | |
| NBSD | 3585 | W-MS4-1 | ANNUAL, **NBSD** | MWR PEB Bldg | | | | | **11** | | | | |
| NBSD | 3593 | W-MS4-1 | ANNUAL, **NBSD** | Coast Guard | | | | | | | **28** | | |
| NBSD | 3601, 02 | W-MS4-1 | ANNUAL, **NBSD** | CDU Divers | | | | | **14** | | | | |
| NBSD | 3615 | W-MS4-1 | ANNUAL, **NBSD** | NBSD Security Gate #6 | | | | | | | **26** | | |
| NBSD | Solar City Project | W-MS4-1 | as required | | | | | | | | | **2** | |
| NBSD | Bayside natural gas lines dryside project. | W-MS4-1 | as required | | | | | | | | | **26** | |
| NBSD | Recycling center Yard treatment system construction | W-MS4-1 | as required | | | | | | | | | **16** | |

| ACTIVITY | BUILDING # / OUTFALL # | INSPECTION FORM # | SCHEDULE / FREQUENCY | OPERATION / SHOP / DISCHARGE LOCATION | NOV 10-21-15 to 11-20-15 | DEC 11-21-15 to 12-20-15 | JAN 12-21-14 to 01-20-16 | FEB 01-21-15 to 02-20-16 | MAR 02-21-15 to 03-20-16 | APR 03-21-15 to 04-20-16 | MAY 04-21-15 to 05-20-16 | JU 05-21 -15 to 06-20-16 | JUL 06-21-15 to 07-20-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD | P-800 Dryside Construction Project | W-MS4-1 | as required | | | | | | | | | **26** | |
| NBSD | 17 | W-MS4-1 | ANNUAL, **NBSD** | SWRMC | | | | | **17** | | | | |
| NBSD | 444 | W-11 | SEMI-ANNUAL | Chollas | | **24** | | | **23** | | | | |
| NBSD | 51 | W-11 | SEMI-ANNUAL | Chollas | | **23** | | | **23** | | | | |
| NBSD | 50 | W-11 | SEMI-ANNUAL | Chollas | | **24** | | | **23** | | | | |
| NBSD | 123 | W-11 | SEMI-ANNUAL | Chollas | | **24** | | | **23** | **15** | | | |
| NBSD | 67 | W-11 | SEMI-ANNUAL | Chollas | | **24** | | | **23** | | | | |
| NBSD | 151 | W-11 | SEMI-ANNUAL | Chollas | | **24** | | | **23** | | | | |
| NBSD | 68 | W-11 | SEMI-ANNUAL | Chollas | | **24** | | | **23** | | | | |
| NBSD | 70 | W-11 | SEMI-ANNUAL | Chollas | | **23** | | | **23** | | | | |
| NBSD | 71 | W-11 | SEMI-ANNUAL | Chollas | | **23** | | | **23** | | | | |
| NBSD | 124 | W-11 | SEMI-ANNUAL | Chollas | | **23** | | | **23** | | | | |
| NBSD | 126 | W-11 | SEMI-ANNUAL | Chollas | | **23** | | | **23** | | | | |
| NBSD | 128 | W-11 | SEMI-ANNUAL | Chollas | | **23** | | | **23** | | | | |
| NBSD | 72 | W-11 | SEMI-ANNUAL | Chollas | | **23** | | | **23** | | | | |
| NBSD | 73 | W-11 | SEMI-ANNUAL | Chollas | | **23** | | | **23** | | | | |
| NBSD | 129 | W-11 | SEMI-ANNUAL | Chollas | | **23** | | | **23** | | | | |
| NBSD | 130 | W-11 | SEMI-ANNUAL | Chollas | | **23** | | | **23** | | | | |
| NBSD | 131 | W-11 | SEMI-ANNUAL | Chollas | | **23** | | | **23** | | | | |

| ACTIVITY | BUILDING # / OUTFALL # | INSPECTION FORM # | SCHEDULE / FREQUENCY | OPERATION / SHOP / DISCHARGE LOCATION | NOV 10-21-15 to 11-20-15 | DEC 11-21-15 to 12-20-15 | JAN 12-21-14 to 01-20-16 | FEB 01-21-15 to 02-20-16 | MAR 02-21-15 to 03-20-16 | APR 03-21-15 to 04-20-16 | MAY 04-21-15 to 05-20-16 | JU 05-21 -15 to 06-20-16 | JUL 06-21-15 to 07-20-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD | 132 | W-11 | SEMI-ANNUAL | Chollas | | 23 | | | 23 | | | | |
| NBSD | 74 | W-11 | SEMI-ANNUAL | Chollas | | 23 | | | 23 | | | | |
| NBSD | 75 | W-11 | SEMI-ANNUAL | Chollas | | 23 | | | 23 | | | | |
| NBSD | 76 | W-11 | SEMI-ANNUAL | Chollas | | 23 | | | 23 | | | | |
| NBSD | 77 | W-11 | SEMI-ANNUAL | Chollas | | 23 | | | 23 | | | | |
| NBSD | 133 | W-11 | SEMI-ANNUAL | Chollas | | 23 | | | 24 | | | | |
| NBSD | 102 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 24 | | | | |
| NBSD | 97 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 24 | | | | |
| NBSD | 98 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 24 | | | | |
| NBSD | 99 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 24 | | | | |
| NBSD | 101 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 24 | | | | |
| NBSD | 143 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 24 | | | | |
| NBSD | 144 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 24 | | | | |
| NBSD | 145 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 24 | | | | |
| NBSD | 104 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 24 | | | | |
| NBSD | 146 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 24 | | | | |
| NBSD | 147 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 105 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 106 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 108 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |

| ACTIVITY | BUILDING # / OUTFALL # | INSPECTION FORM # | SCHEDULE / FREQUENCY | OPERATION / SHOP / DISCHARGE LOCATION | NOV 10-21-15 to 11-20-15 | DEC 11-21-15 to 12-20-15 | JAN 12-21-14 to 01-20-16 | FEB 01-21-15 to 02-20-16 | MAR 02-21-15 to 03-20-16 | APR 03-21-15 to 04-20-16 | MAY 04-21-15 to 05-20-16 | JU 05-21 -15 to 06-20-16 | JUL 06-21-15 to 07-20-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD | 148 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 149 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 1 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 3 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 4 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 109 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 6 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 7 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 8 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 12 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 13 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 14 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 15 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 16 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 17 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 18 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 19 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 20 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 21 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 22 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |

| ACTIVITY | BUILDING # / OUTFALL # | INSPECTION FORM # | SCHEDULE / FREQUENCY | OPERATION / SHOP / DISCHARGE LOCATION | NOV 10-21-15 to 11-20-15 | DEC 11-21-15 to 12-20-15 | JAN 12-21-14 to 01-20-16 | FEB 01-21-15 to 02-20-16 | MAR 02-21-15 to 03-20-16 | APR 03-21-15 to 04-20-16 | MAY 04-21-15 to 05-20-16 | JU 05-21 -15 to 06-20-16 | JUL 06-21-15 to 07-20-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD | 23 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 24 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 25 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 26 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 29 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 30 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 31 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 32 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 33 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 35 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 36 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 37 | W-11 | SEMI-ANNUAL | Waterfront | | 23 | | | 23 | | | | |
| NBSD | 43 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 23 | | | | |
| NBSD | 44 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 23 | | | | |
| NBSD | 45 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 23 | | | | |
| NBSD | 111 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 23 | | | | |
| NBSD | 113 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 23 | | | | |
| NBSD | 114 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 23 | | | | |
| NBSD | 115 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 23 | | | | |
| NBSD | 443 | W-11 | SEMI-ANNUAL | Waterfront | | 24 | | | 23 | | | | |

| ACTIVITY | BUILDING # / OUTFALL # | INSPECTION FORM # | SCHEDULE / FREQUENCY | OPERATION / SHOP / DISCHARGE LOCATION | NOV 10-21-15 to 11-20-15 | DEC 11-21-15 to 12-20-15 | JAN 12-21-14 to 01-20-16 | FEB 01-21-15 to 02-20-16 | MAR 02-21-15 to 03-20-16 | APR 03-21-15 to 04-20-16 | MAY 04-21-15 to 05-20-16 | JU 05-21 -15 to 06-20-16 | JUL 06-21-15 to 07-20-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NBSD | 442 | W-11 | SEMI-ANNUAL | Waterfront | | **24** | | | **23** | | | | |
| NBSD | 116 | W-11 | SEMI-ANNUAL | Waterfront | | **24** | | | **23** | | | | |
| NBSD | 117 | W-11 | SEMI-ANNUAL | Waterfront | | **24** | | | **23** | | | | |
| NBSD | 27 | W-11 | SEMI-ANNUAL | Paleta | | | | | **23** | | | | |
| NBSD | 81 | W-11 | SEMI-ANNUAL | Paleta | | | | | | | | | |
| NBSD | 79 | W-11 | SEMI-ANNUAL | Paleta | | | | | | | | | |
| NBSD | 82 | W-11 | SEMI-ANNUAL | Paleta | | | | | | | | | |
| NBSD | 84 | W-11 | SEMI-ANNUAL | Paleta | | | | | | | | | |
| NBSD | 78 | W-11 | SEMI-ANNUAL | Paleta | | | | | | | | | |
| NBSD | 28 | W-11 | SEMI-ANNUAL | Paleta | | | | | | | | | |

Attachment 5

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# ATTACHMENT 6

# MS4 BEST MANAGEMENT PRACTICES (BMPs)

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**MS4 BEST MANAGEMENT PRACTICES**

| | |
|---|---|
| BMP 003 | Perform Regular Cleaning |
| BMP 007 | Place Trash Receptacles at Appropriate Locations |
| BMP 009 | Train Employees to Properly Dispose of Wastes |
| BMP 015 | Recycle |
| BMP 023 | Place Portable Rubber Mats over Storm Drain Inlets |
| BMP 026 | Routinely Clean Catch Basins |
| BMP 027 | Stencil Signs on Storm Drain Inlets |
| BMP 031 | Conduct Refresher Courses in Operating and Safety Procedures |
| BMP 033 | Check Vehicles and Equipment for Leaks |
| BMP 047 | Conduct Maintenance within a Building or Covered Area |
| BMP 061 | Employ Proper Handling Procedures to Transport Materials and Waste |
| BMP 071 | Keep Tanks, Piping, and Valves in Good Condition |
| BMP 077 | Vacuum Particulate Wastes from Sanding or Painting Operations |
| BMP 092 | Properly Dispose of Sediment Generated by Cleaning Sanitary Sewer Lines |
| BMP 110 | Regularly Inspect and Maintain Storm Water Conveyance Systems |
| BMP 111 | Regularly Inspect and Test Equipment |
| BMP 113 | Conduct Personnel Training Regarding the SWPPP |
| BMP 115 | Store Containers Inside Secondary Containment |
| BMP 116 | Control Dust and Particulates |
| BMP 117 | Do Not Pour or Deposit Waste into Storm Drains |
| BMP 118 | Routinely Report Any Observed Non-Storm Water Discharges |
| MS4 001 | Fire Hose Hydrostatic Testing and Fire Hydrant Flushing |

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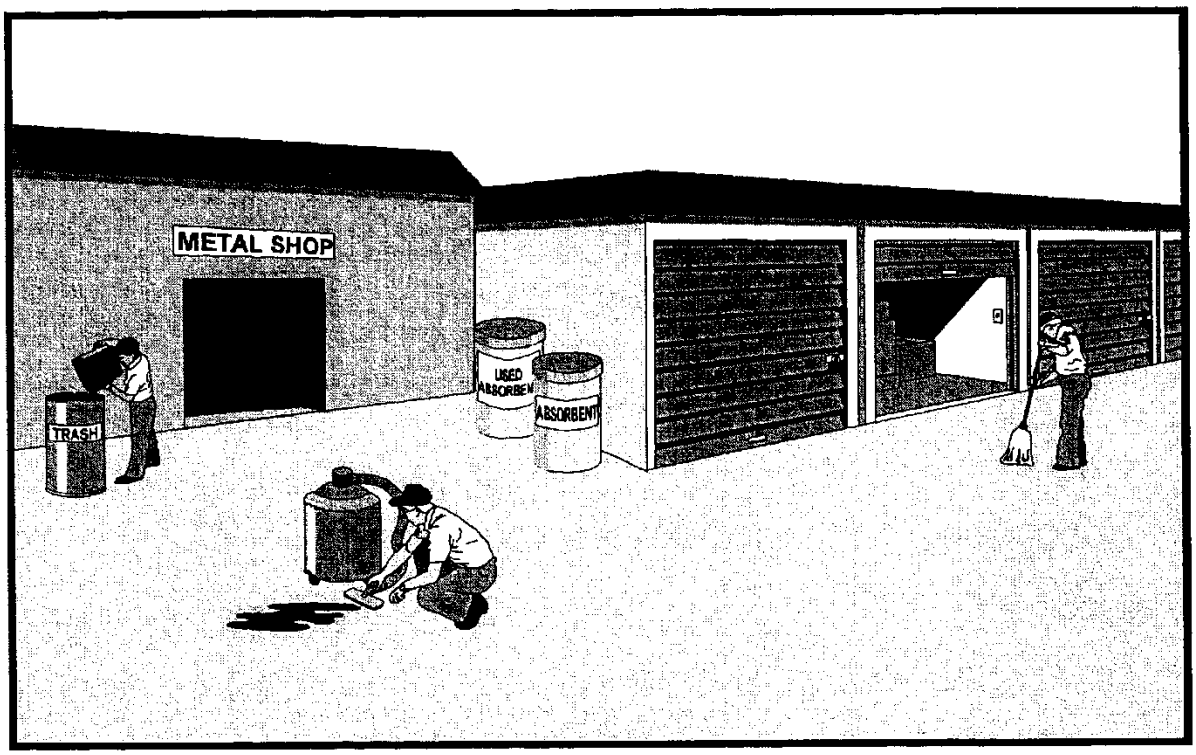
**BMP 003 - PERFORM REGULAR CLEANING**




**Potential Pollutants and Sources.** Dirt, surplus materials, and spilled or dropped materials are often allowed to accumulate in areas such as maintenance shops, manufacturing facilities, metal fabrication shops, loading docks, and storage areas. Pollutants from the accumulated material can be transported by storm water to the storm drain system. A clean and orderly work area reduces the possibility of accidental spills caused by mishandling of chemicals and equipment and should reduce safety hazards to personnel.

**Practices.** Maintaining a regular general sweeping and cleaning schedule reduces buildup of waste materials and minimizes the amount of significant materials exposed to storm water. General cleaning includes dusting and keeping work areas neat and organized. Floors and ground surfaces will be kept dry using brooms, shovels, vacuum cleaners, or cleaning machines. It is important to perform dry sweeping and dry cleaning (as opposed to hosing down areas as discussed in BMP 004). Garbage and waste materials will be collected and disposed regularly. Particular emphasis will be placed on sweeping and cleaning outdoor areas as close as possible to a forecasted rainfall. Any granular absorbent materials used for spill cleanup will be removed and properly disposed before a rainfall.

**Applications.** Cleanup and sweeping will be performed daily and more often as necessary to remove all loose trash, paint cans, discarded

construction materials, sediment, oil, solvents, plastics and other significant materials. Additional clean up and sweeping will be performed before anticipated storm events. Additionally, a regular sweeping schedule will be maintained.

The frequency for implementing of this BMP has been provided as general guidance. However, a facility operator may wish to establish a more suitable frequency. This will require SWPPP implementers to make judgments based on facility operations and conditions. To assign frequencies other than what has been suggested (i.e., more or less frequent), the following criteria will be considered and rated High, Medium, or Low. If many of the criteria are assigned a High rating, the frequency may be increased. Similarly, if many criteria are assigned a Low rating, the frequency may be decreased. However, the goal of implementing this BMP will be to minimize exposure of pollutants to storm water.

Table 003 – Implementation Frequency Criteria

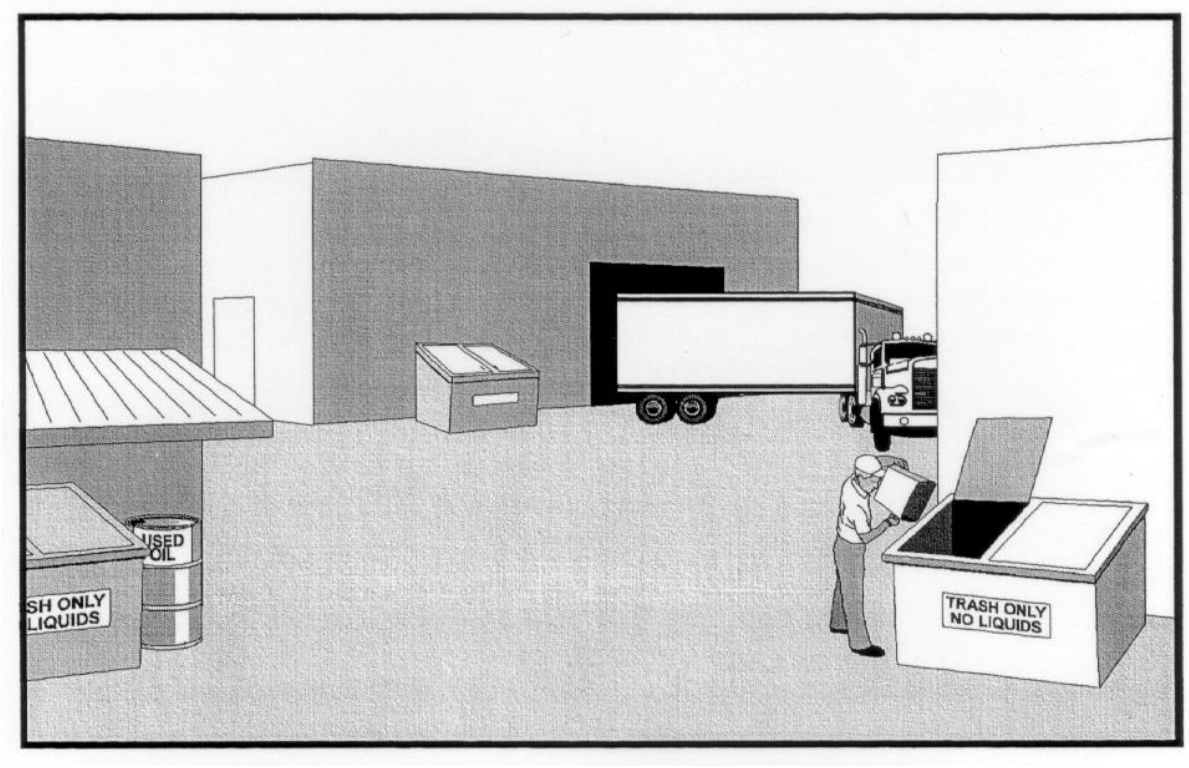
| **CRITERIA** | **RATING** H=High M=Medium L=Low |
|---|---|
| Probability of exposure of significant materials to storm water | |
| Quantity of significant materials potentially exposed | |
| Toxicity of significant materials potentially exposed | |
| Frequency of use of significant materials potentially exposed | |
| Evidence of exposure (e.g., stains on pavement, etching of concrete) | |
| Proximity of source area to outfall or receiving water | |
| Sensitivity of receiving water to potentially exposed significant materials (e.g., waters with beneficial uses such as human contact, recreation, significant species habitat, etc.) | |

**Training.** Personnel will be trained to ensure that all waste be managed within guidelines of applicable federal, state, and local regulations. Signs will be posed as reminders.

**Effectiveness and Cost.** Regular general cleaning is a highly effective, low-cost BMP.

**Limitations.** None

**BMP 007 - PLACE TRASH RECEPTACLES AT APPROPRIATE LOCATIONS**




**Potential Pollutants and Sources.** Improperly located or insufficient numbers of trash receptacles will promote poor housekeeping practices. This will increase the opportunity for pollutants from all source areas to reach storm water.

**Practices.** Proper and frequent placement of trash receptacles will promote the proper disposal of waste materials. This reduces the opportunity for pollutants to reach storm water. Trash receptacles will be easily accessible for personnel.

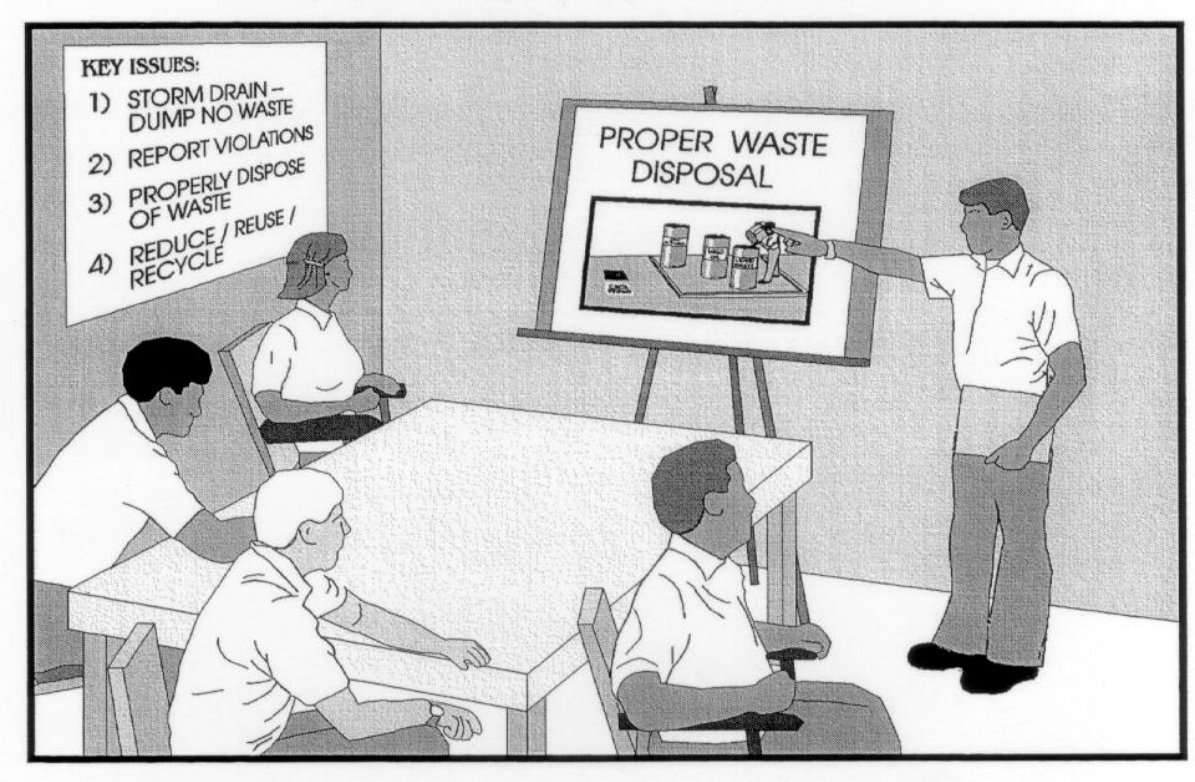
**Applications.** Placement of trash receptacles at appropriate locations will always be practiced.

**Training.** Personnel will be trained as to the location of trash receptacles.

**Effectiveness and Cost.** Appropriately located trash receptacles are an effective, low-cost BMP.

**Limitations.** None

**BMP 009 - TRAIN EMPLOYEES TO PROPERLY DISPOSE OF WASTES**




**Potential Pollutants and Sources.** Waste poured or deposited into storm drains contains pollutants which will enter the storm drain system and receiving waters without treatment.

**Practices.** Employees will be trained on proper waste disposal and recycling procedures. Refer also to BMP 118, "Routinely Report Any Observed Non-Storm Water Discharges," and BMP 027, "Stencil Signs on Storm Drain Inlets."

**Applications.** Training will be performed for all new personnel and semi-annually for all personnel. The frequency for implementing of this BMP has been provided as general guidance. However, a facility operator may wish to establish a more suitable frequency. This will require SWPPP implementers to make judgments based on facility operations and conditions. To assign frequencies other than what has been suggested (i.e., more or less frequent), the following criteria will be considered and rated High, Medium, or Low. If many of the criteria are assigned a High rating, the frequency may be increased. Similarly, if many criteria are assigned a Low rating, the frequency may be decreased. However, the goal of implementing this BMP will be to minimize exposure of pollutants to storm water.

Table 009 – Implementation Frequency Criteria

| **CRITERIA** | **RATING** H=High M=Medium L=Low |
|---|---|
| Probability of exposure of significant materials to storm water | |
| Quantity of significant materials used | |
| Toxicity of significant materials used | |
| Frequency of use of significant materials | |
| Frequency of use of equipment | |
| Evidence of exposure (e.g., stains on pavement, etching of concrete, evidence of significant materials in drainage system) | |
| Proximity of source area to outfall or receiving water | |
| Sensitivity of receiving water to potentially exposed significant Materials (e.g., waters with beneficial uses such as human Contact, recreation, significant species habitat, etc.) | |
| Frequency of personnel turnover | |

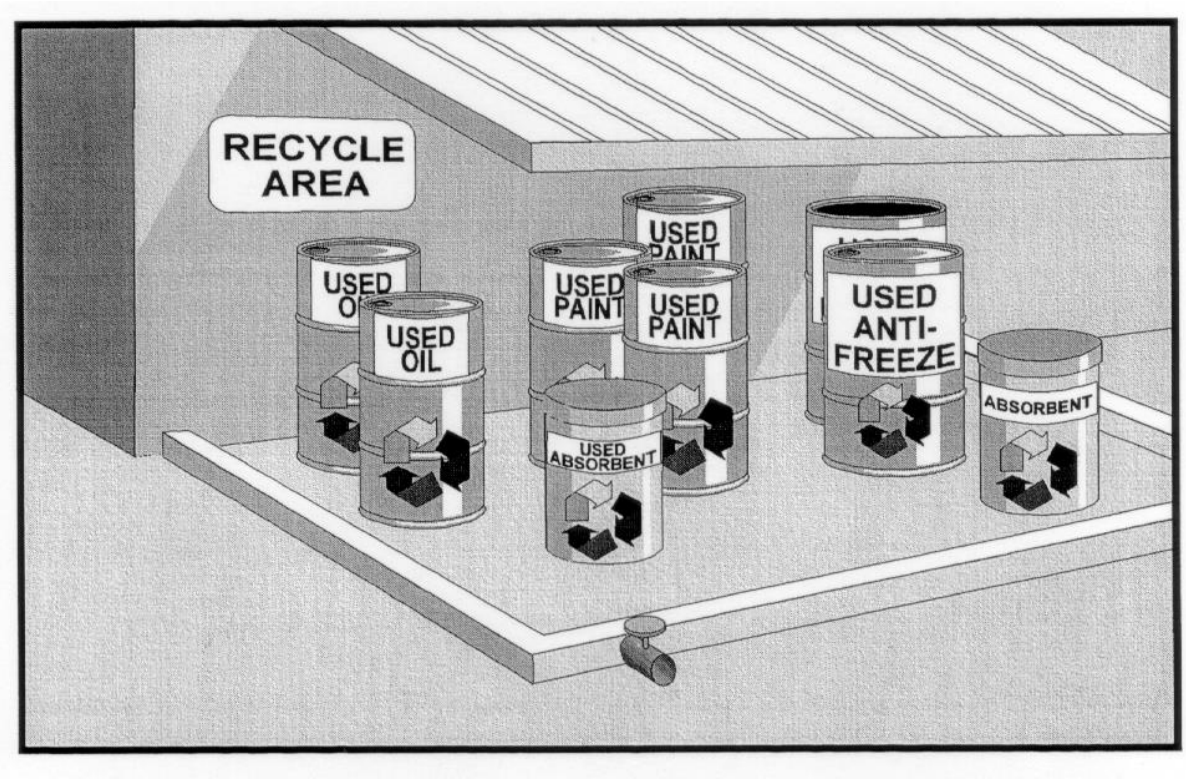
**Training.** Training will include the following:

- Train personnel at all levels not to pour or deposit wastes into storm drains or storm drain connections.
- Train personnel to properly dispose or recycle materials.
- Train personnel at all levels to report any observable non-storm water discharges.

**Effectiveness and Cost.** This is a highly effective, low-cost BMP.

**Limitations.** None

**BMP 015 – RECYCLE**




**Potential Pollutants and Sources.** Many materials, both hazardous and nonhazardous, can be sources of pollutants. Recycling will be employed to reduce the amount of waste material exposed to storm water on the Activity.

**Practices.** Recycling will be used to the fullest extent possible in all situations.

**Applications.** Recycling collections will be conducted at least weekly for recyclable items such as solvents, oil, scrap metals, wash water and absorbent materials. Separating the recyclable items facilitates recycling.

The frequency for implementing of this BMP has been provided as general guidance. However, a facility operator may wish to establish a more suitable frequency. This will require SWPPP implementers to make judgments based on facility operations and conditions. To assign frequencies other than what has been suggested (i.e., more or less frequent), the following criteria will be considered and rated High, Medium, or Low. If many of the criteria are assigned a High rating, the frequency may be increased. Similarly, if many criteria are assigned a Low rating, the frequency may be decreased. However, the goal of implementing this BMP will be to minimize exposure of pollutants to storm water.

Table 015 – Implementation Frequency Criteria

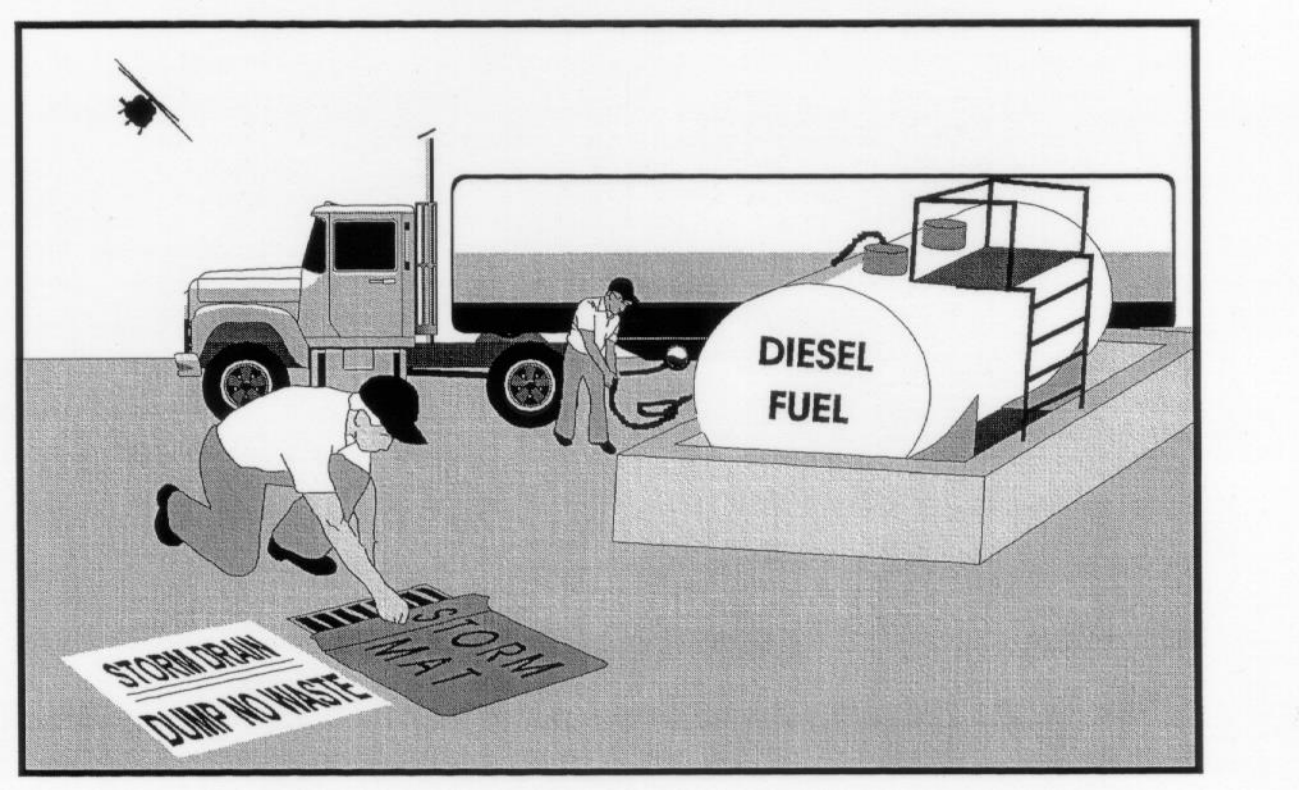
| **CRITERIA** | **RATING** H=High M=Medium L=Low |
|---|---|
| Probability of exposure of recyclable significant materials to stormwater | |
| Quantity of recyclable significant materials potentially exposed | |
| Toxicity of recyclable significant materials potentially exposed | |
| Length of time that used, potentially recyclable significant Material is stored before removal | |
| Evidence of exposure (e.g., stains on pavement, etching of Concrete) | |
| Proximity of source area to outfall or receiving water | |
| Sensitivity of receiving water to potentially exposed significant Materials (e.g., waters with beneficial uses such as human contact, recreation, significant species habitat, etc.) | |

**Training.** Personnel will be trained on proper recycling techniques along with posting and maintenance of signs.

**Effectiveness and Cost.** Effectiveness and cost will be site specific.

**Limitations.** Local vendors may not be available to receive certain recyclable materials.

**BMP 023 - PLACE PORTABLE RUBBER MATS OVER STORM DRAIN INLETS**




**Potential Pollutants and Sources.** Spills are more likely to occur during certain operations, such as materials transfer. If these operations occur near a storm drain, the material may be discharged into the storm drain system.

**Practices.** If operations which are likely to spill significant materials occur near a storm drain, a rubber portable mat will be placed over the storm drain during the operation. If a spill occurs during the operation, the mat will prevent the pollutant from entering the storm drain system. The spilled material can be properly cleaned up and disposed of before removal of the rubber mat.

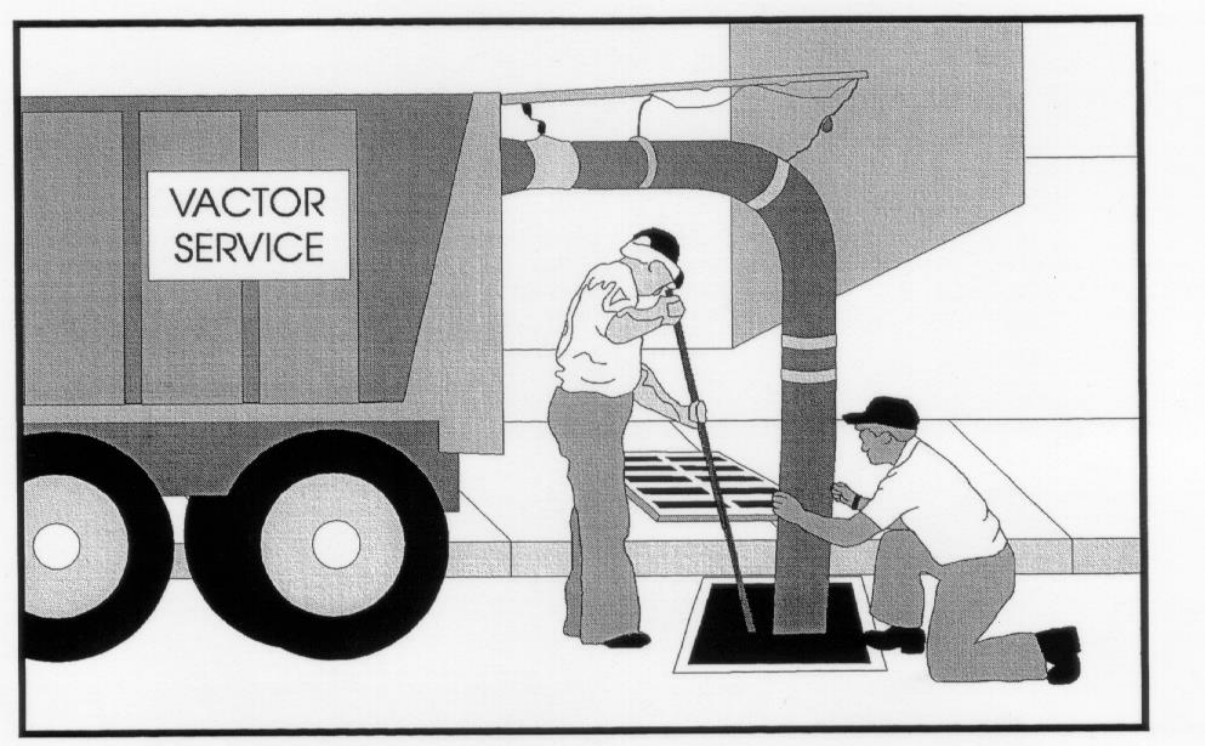
**Applications.** Portable rubber mats will be placed over the storm drain for the duration of any operation which is likely to discharge pollutants into the storm drain.

**Training.** Personnel will be trained regarding the use of the portable mat. In addition, personnel will be trained in proper cleanup and disposal of any spilled material.

**Effectiveness and Cost.** This is a highly effective, low-cost BMP.

**Limitations.** This BMP works best on flat storm drain inlets.

**BMP 026 - ROUTINELY CLEAN CATCH BASINS**




**Potential Pollutants and Sources.** Depending on their design, catch basins can accumulate sediment, trash, and debris. If the accumulated pollutants are not removed, they may be re-suspended by storm water.

**Practices.** Catch basins will be routinely cleaned to prevent clogging and to remove accumulated pollutants. The accumulated sediment will be tested to determine if it is a hazardous waste and then properly disposed. If the sediment is not a hazardous waste, it may be disposed in a landfill.

**Applications.** Catch basins will be cleaned at least quarterly. One of these cleanings will be just before the rainy season.

The frequency for implementing of this BMP has been provided as general guidance. However, a facility operator may wish to establish a more suitable frequency. This will require SWPPP implementers to make judgments based on facility operations and conditions. To assign frequencies other than what has been suggested (i.e., more or less frequent), the following criteria will be considered and rated High, Medium, or Low. If many of the criteria are assigned a High rating, the frequency may be increased. Similarly, if many criteria are assigned a Low rating, the frequency may be decreased. However, the goal of implementing this BMP will be to minimize exposure of pollutants to storm water.

Table 026 – Implementation Frequency Criteria

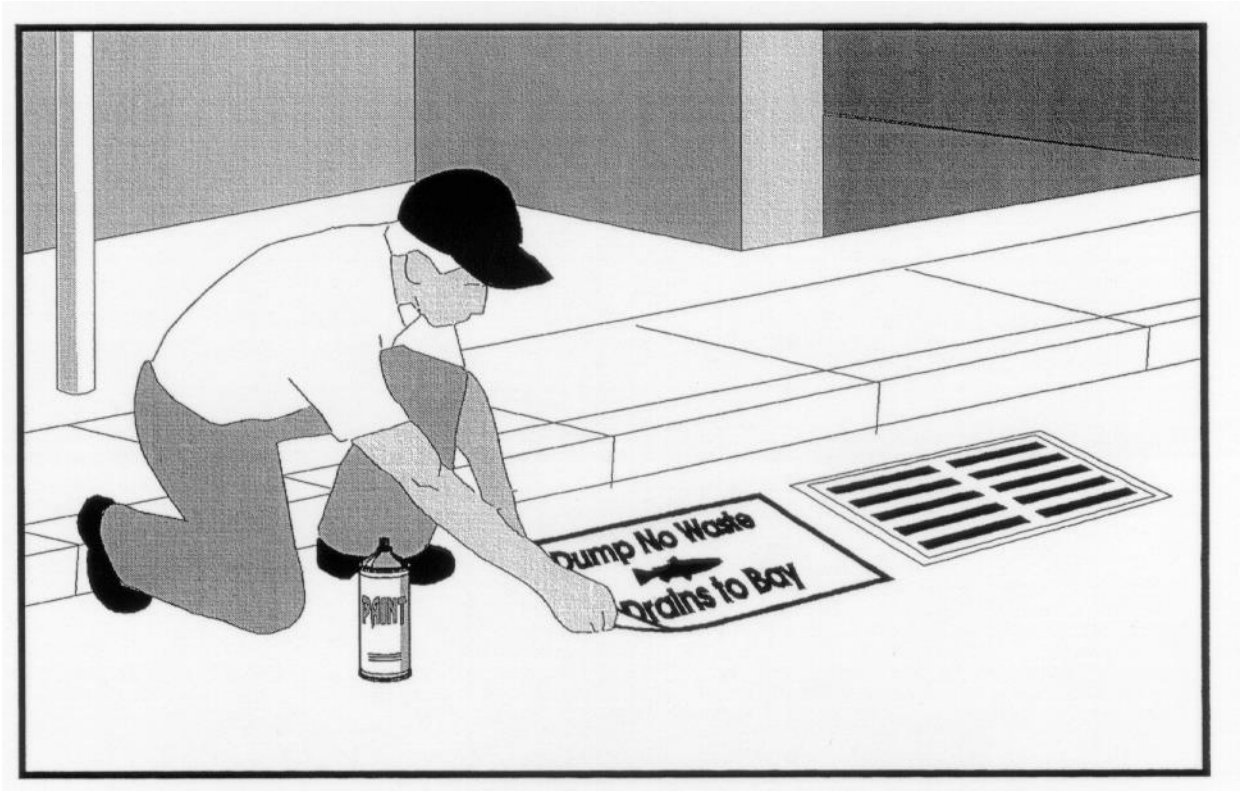
| **CRITERIA** | **RATING** H=High M=Medium L=Low |
|---|---|
| Probability of exposure of significant materials to storm water in area draining to catch basin | |
| Quantity of significant materials potentially exposed in area draining to catch basin | |
| Frequency of use of significant materials potentially exposed in area draining to catch basin | |
| Evidence of exposure (e.g., stains on pavement, evidence of significant material in drainage system) | |
| Proximity of source area to outfall or receiving water | |
| Sensitivity of receiving water to potentially exposed significant materials (e.g., waters with beneficial uses such as human contact, recreation, significant species habitat, etc.) | |

**Training.** Personnel will be trained in the proper testing, removal, and disposal of the sediment or a qualified contractor will be used to perform these services.

**Effectiveness and Cost.** This is a moderately effective, low-cost BMP.

**Limitations.** The accumulated sediments may be a hazardous waste.

**BMP 027 - STENCIL SIGNS ON STORM DRAIN INLETS**




**Potential Pollutants and Sources.** Storm drain inlets generally discharge to storm drains or directly into receiving waters (i.e., rivers, oceans, lakes). Some storm drain inlets lead to water quality facilities, such as oil/water separators. However, such facilities are typically only 40 to 80 percent effective in reducing pollutant concentrations and may not be effective in treating storm flows. Therefore, material, such as used oil, solvents, and solid waste, that enters the storm drains may be exposed to storm water.

**Practices.** Clearly mark storm drain inlets to warn against illegal dumping.

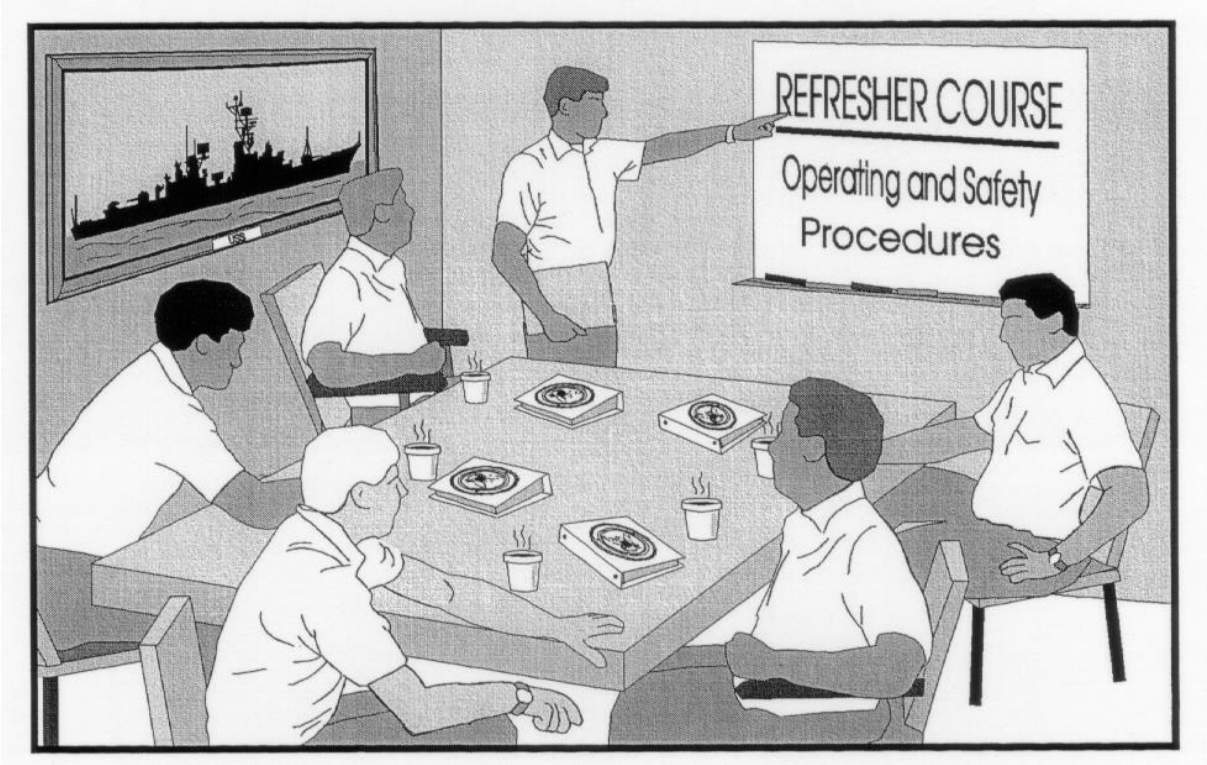
**Applications.** All storm drain inlets will be properly labeled.

**Training.** N/A

**Effectiveness and Cost.** Stenciling storm drains is a variably effective, inexpensive BMP.

**Limitations.** None

**BMP 031 - CONDUCT REFRESHER COURSES IN OPERATING AND SAFETY PROCEDURES**




**Potential Pollutants and Sources.** Through time, personnel may forget certain correct operating and safety procedures, which may result in storm water pollution. Also, personnel need to be informed of new procedures and policies regarding equipment operation.

**Practices.** Personnel will be required to have training and refresher courses in operating and safety procedures. This will help to reduce spills and accidents caused by negligence.

**Applications.** Training and refresher courses will be conducted semi-annually.

The frequency for implementing of this BMP has been provided as general guidance. However, a facility operator may wish to establish a more suitable frequency. This will require SWPPP implementers to make judgments based on facility operations and conditions. To assign frequencies other than what has been suggested (i.e., more or less frequent), the following criteria will be considered and rated High, Medium, or Low. If many of the criteria are assigned a High rating, the frequency may be increased. Similarly, if many criteria are assigned a Low rating, the frequency may be decreased. However, the goal of implementing this BMP will be to minimize exposure of pollutants to storm water.

Table 031 – Implementation Frequency Criteria

| **CRITERIA** | **RATING** H=High M=Medium L=Low |
|---|---|
| Probability of exposure of significant materials to storm water | |
| Quantity of significant materials potentially exposed | |
| Toxicity of significant materials potentially exposed | |
| Frequency of use of significant materials potentially exposed | |
| Frequency of use of equipment | |
| Intensity of use of equipment | |
| Old age or poor condition of equipment and systems | |
| Evidence of exposure (e.g., stains on pavement, etching of Concrete) | |
| Proximity of source area to outfall or receiving water | |
| Sensitivity of receiving water to potentially exposed significant materials (e.g., waters with beneficial uses such as human contact, recreation, significant species habitat, etc.) | |
| Frequency of personnel turnover | |

**Training.** Instructors will be trained. A course will be prepared that covers both equipment manufacturers' recommendations for safety and operations as well as facility procedures and policies regarding equipment operation.

**Effectiveness and Cost.** Training is a highly effective, moderate-cost BMP.

**Limitations.** Cost and logistics could be a problem in implementing this practice.

**BMP 033 - CHECK VEHICLES AND EQUIPMENT FOR LEAKS**


**Potential Pollutants and Sources.** Vehicles, aircraft, or equipment entering or stored at a maintenance facility may be leaking a variety of fluids (fuel, oil, antifreeze, Freon, etc.). These materials can be exposed to storm water.

**Practices.** All vehicles and equipment at the site, whether incoming, parked, stored, or salvaged, must be inspected for oil and fluid leaks. Drivers of fleet vehicles, such as delivery trucks, will also check under their vehicles each morning for fluid leaks. If leaks are present, drip pans will be placed under the vehicle or equipment. Once the vehicle is removed from the site, the former parking area will be inspected for stains, and these stains will be cleaned using rags or dry solvents.

**Applications.** Any vehicle or equipment coming in for repairs, painting, or storage will be inspected for leaks. Fleet vehicles will be inspected each morning. Vehicles that are parked, stored, or salvaged will be provided with drip pans, as will tanker rail cars waiting to be unloaded.

The frequency for implementing of this BMP has been provided as general guidance. However, a facility operator may wish to establish a more suitable frequency. This will require SWPPP implementers to make judgments based on facility operations and conditions. To assign frequencies other than what has been suggested (i.e., more or less frequent), the following criteria

will be considered and rated High, Medium, or Low. If many of the criteria are assigned a High rating, the frequency may be increased. Similarly, if many criteria are assigned a Low rating, the frequency may be decreased. However, the goal of implementing this BMP will be to minimize exposure of pollutants to storm water.

Table 033 – Implementation Frequency Criteria

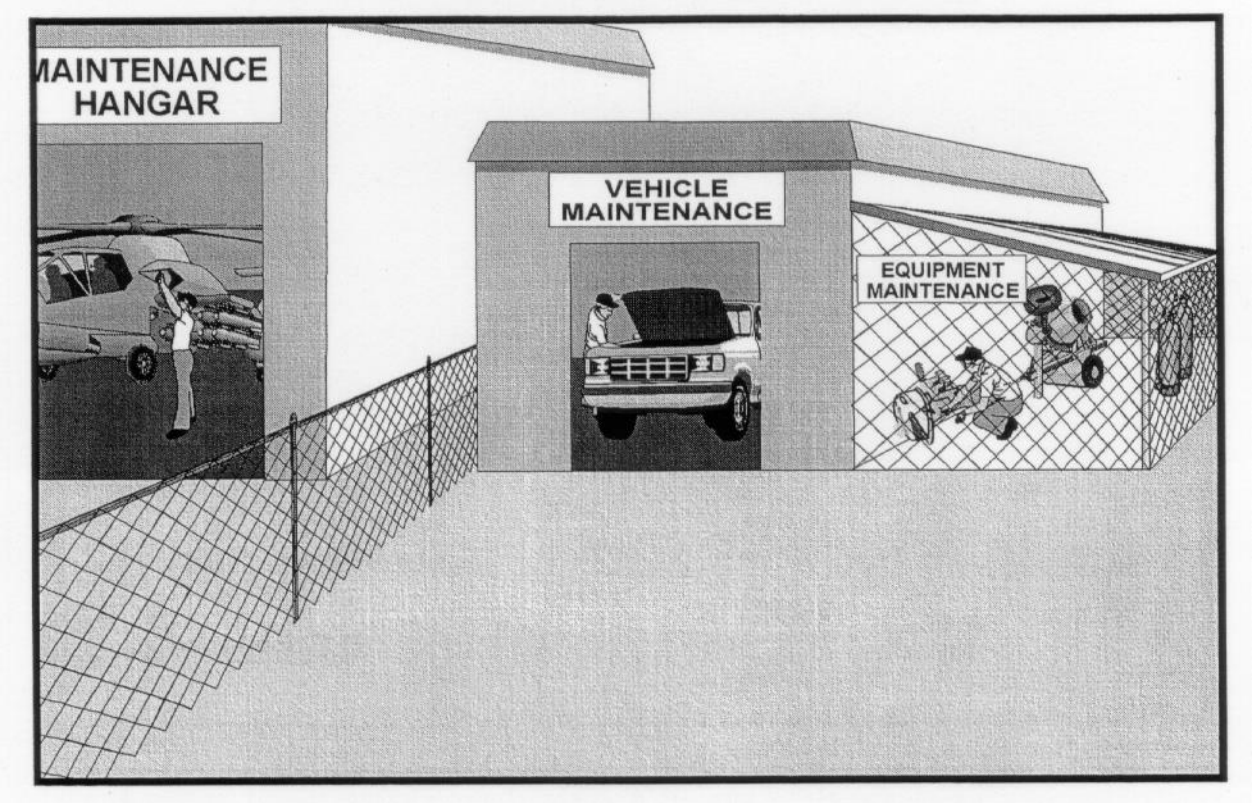
| **CRITERIA** | **RATING** H=High M=Medium L=Low |
|---|---|
| Probability of exposure of significant materials to storm water | |
| Old age or poor condition of equipment and vehicles | |
| Evidence of exposure (e.g., stains on pavement) | |
| Proximity of source area to outfall or receiving water | |
| Sensitivity of receiving water to potentially exposed significant materials (e.g., waters with beneficial uses such as human contact, recreation, significant species habitat, etc.) | |

**Training.** Signs will be posted to remind personnel of proper procedures.

**Effectiveness and Cost.** Checking for leaks is a moderately effective, low-cost BMP.

**Limitations.** None

**BMP 047 - CONDUCT MAINTENANCE WITHIN A BUILDING OR COVERED AREA**




**Potential Pollutants and Sources.** Many pollutants such as oil, grease, or solvents may be leaked or spilled during maintenance activities. If maintenance is performed outside, in an uncovered area, storm water may transport the leaked and spilled material into the storm drain system.

**Practices.** To the extent practical, maintenance will be conducted within a building or covered area. This includes performing aircraft/helicopter maintenance in hangars and vehicle maintenance in garages. If maintenance, including fluid top-offs, is performed outdoors, it will be conducted on an impervious surface, such as a concrete pad (see BMP 037). Rainfall runoff from the pad will be directed to a storm water treatment facility. Leaks and spills will be cleaned up as soon as possible using rags or dry absorbents (see BMP 006). Used rags and absorbent will be disposed properly. The garage floor will be cleaned regularly and all wash water from cleaning the floor will be disposed in the sanitary sewer (see BMP 042).

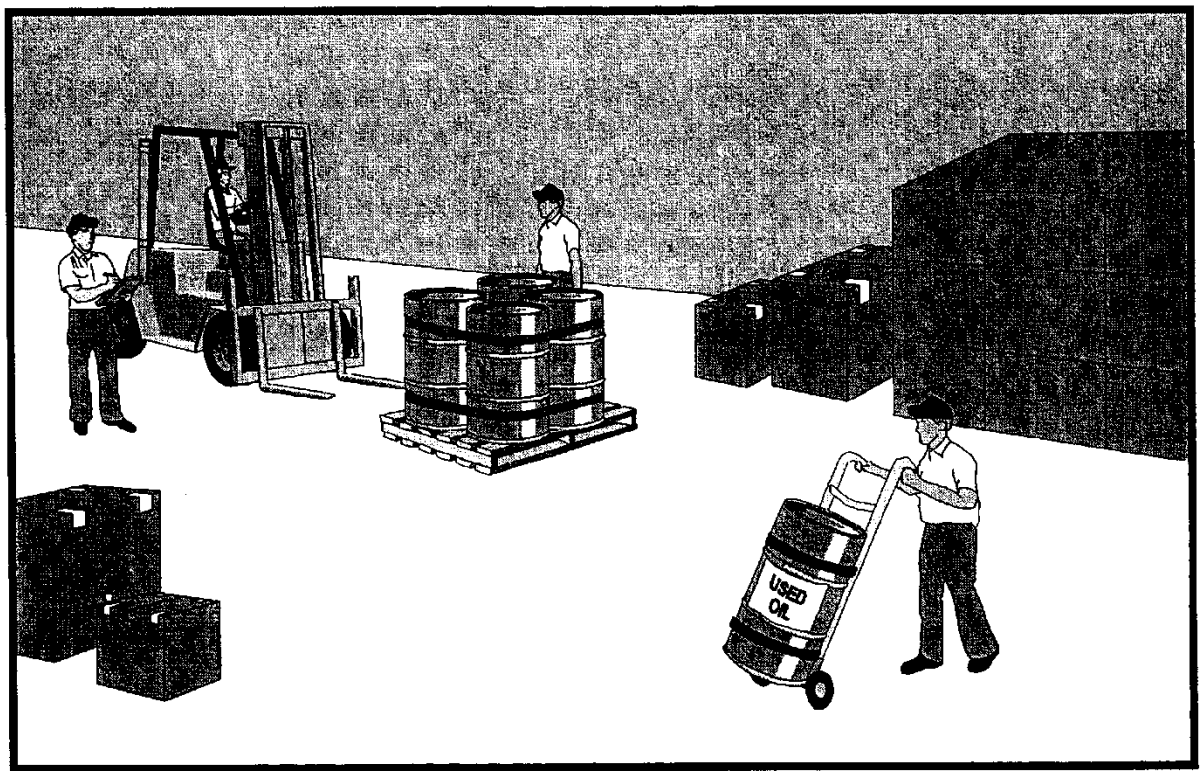
**Applications.** All maintenance will be conducted within a building or covered area, if possible. If not possible, the maintenance will be done on an impervious surface.

**Training.** Personnel will be trained to perform all maintenance, including fluid top-offs, only in the designated area. Personnel will be trained in keeping the maintenance area clean.

**Effectiveness and Cost.** This is a moderately effective BMP. The cost will vary depending upon the availability of a building in which to perform all maintenance.

**Limitations.** This BMP may not be possible for the maintenance of large equipment and vehicles.

**BMP 061 - EMPLOY PROPER HANDLING PROCEDURES TO TRANSPORT MATERIALS AND WASTE**




**Potential Pollutants and Sources.** Materials and waste are usually transported using forklifts, trailers, trucks, etc. If these loads are not properly secured or are handled incorrectly, drums can be ruptured and spills can occur. This can expose the materials to storm water, which can transport them to the storm drain system and/or receiving waters.

**Practices.** Drums will be moved by using a barrel cart or by placing the drum on a pallet and moving it with a forklift. As a minimum, two persons will assist the forklift operator when transferring a drum to or from a pallet. When multiple drums are stacked on a single pallet, the drums will be secured together with metallic strapping to reduce the potential for spillage due to weight shift. Mechanical puncture of a drum with the tines (i.e., the prongs) of the forklift will be avoided.

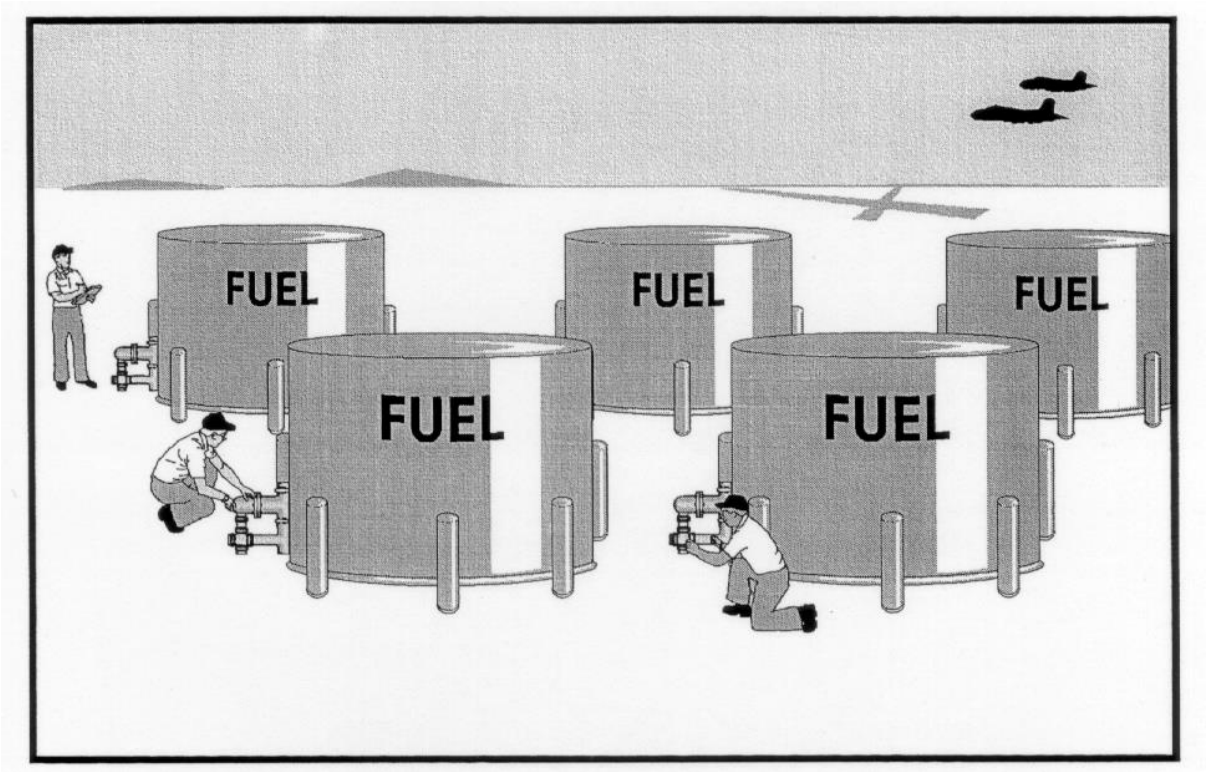
**Applications.** Significant materials and wastes will be transported according to federal, state, and local regulations at all times

**Training.** Personnel will be trained in hazardous material/waste spill prevention procedures.

**Effectiveness and Cost.** This practice is a highly effective, moderate-cost BMP.

**Limitations.** None

**BMP 071 - KEEP TANKS, PIPING, AND VALVES IN GOOD CONDITION**




**Potential Pollutants and Sources.** Tanks, piping, and valves may leak fuel or other significant materials due to corrosion, loose fittings, poor welding, or improperly or poorly fitted gaskets. This can expose these materials to storm. water, which can transport them to storm drains and/or receiving waters.

**Practices.** Tanks, piping, and valves will be kept in good working condition. Tanks, piping, or valves which are leaking will be repaired or replaced.

**Applications.** Tanks, piping, and valves will be inspected monthly and kept in good condition at all times. If applicable, preventive maintenance will be performed.

The frequency for implementing of this BMP has been provided as general guidance. However, a facility operator may wish to establish a more suitable frequency. This will require SWPPP implementers to make judgments based on facility operations and conditions. To assign frequencies other than what has been suggested (i.e., more or less frequent), the following criteria will be considered and rated High, Medium, or Low. If many of the criteria are assigned a High rating, the frequency may be increased. Similarly, if many criteria are assigned a Low rating, the frequency may be decreased. However, the goal of implementing this BMP will be to minimize exposure of pollutants to storm water.

Table 071 – Implementation Frequency Criteria

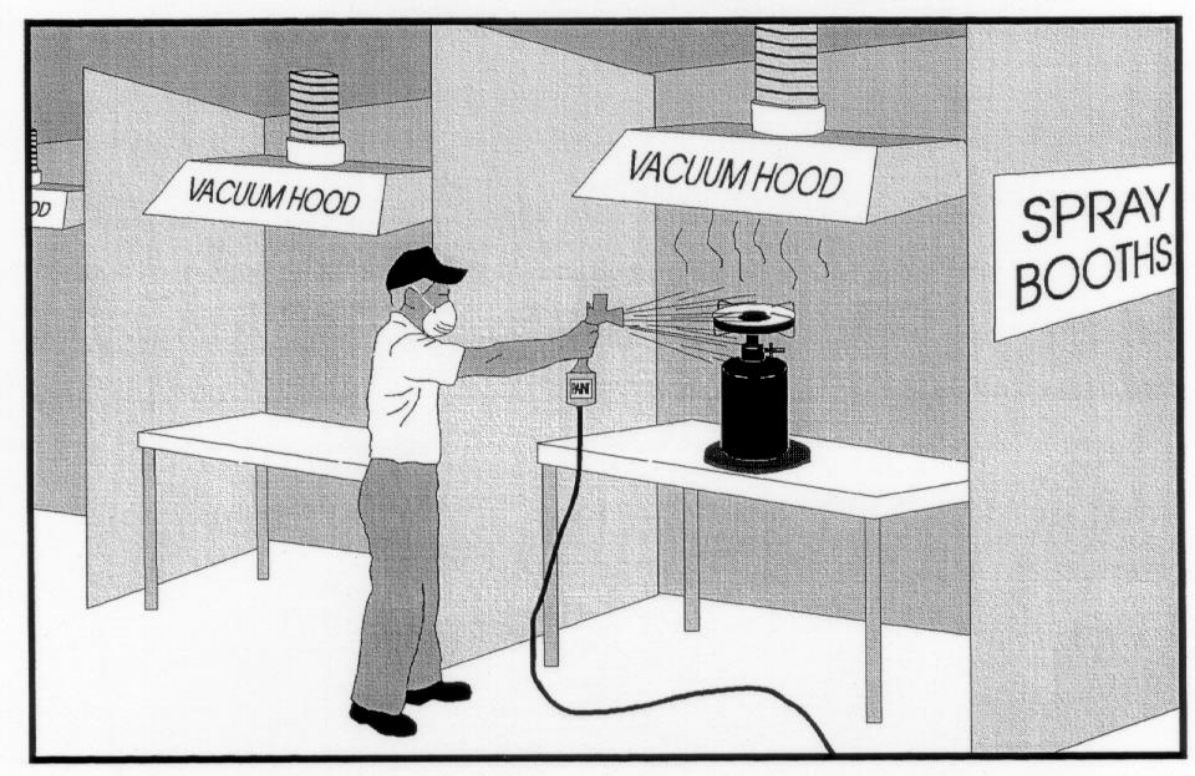
| **CRITERIA** | **RATING** H=High M=Medium L=Low |
|---|---|
| Probability of exposure of significant materials to storm water | |
| Quantity of significant materials potentially exposed | |
| Toxicity of significant materials potentially exposed | |
| Frequency of use of tanks, piping, and valves | |
| Intensity of use of tanks, piping, and valves | |
| Old age or poor condition of tanks, piping, and valves | |
| Evidence of exposure (e.g., stains on ground surface) | |
| Proximity of source area to outfall or receiving water | |
| Sensitivity of receiving water to potentially exposed significant materials (e.g., waters with beneficial uses such as human contact, recreation, significant species habitat, etc.) | |

**Training.** Personnel will be trained to regularly inspect for leaks or conditions that could lead to the discharge of chemicals, or storm water contact with waste materials. Personnel will be trained to routinely inspect equipment before each use. Tanks, piping and valves which are not frequently used will be inspected weekly. Procedures for notifying the appropriate maintenance personnel if a leak is found will be established.

**Effectiveness and Cost.** Keeping tanks, piping, and valves in good condition is a highly effective BMP. The cost of repairing or replacing piping and valves is typically low. The cost of repairing or replacing tanks will vary based on the size of the tank and its present condition.

**Limitations.** None

**BMP 077 - VACUUM PARTICULATE WASTES FROM SANDING OR PAINTING OPERATIONS**




**Potential Pollutants and Sources.** Sanding, in preparation for painting, and painting itself creates wastes that may become exposed to storm water and transported to storm drains and/or receiving waters.

**Practices.** Containment of paint-related wastes can be accomplished by performing painting and sanding activities in facilities equipped with a vacuum and filters.

**Applications.** This practice will be used in all sanding and painting operations.

**Training.** Personnel will be instructed in procedures for proper operation of vacuum and filters.

**Effectiveness and Cost.** Performing sanding and painting operations under vacuum is a highly effective, usually moderate-cost BMP. However, costs for large-scale sanding and painting activities (e.g., ships and large equipment) could be high.

**Limitations.** The size of some operations may make implementation of this practice difficult.

**BMP 092 - PROPERLY DISPOSE OF SEDIMENT GENERATED BY CLEANING SANITARY SEWER LINES**


**Potential Pollutants and Sources.** The cleaning of sewer lines and manholes generates sediments. These sediments contain both inorganic and organic materials, are odorous, and are contaminated with microorganisms and heavy metals which, if improperly managed, can become exposed to storm water. These materials can then be transported to storm drains and/or receiving waters.

**Practices.** Sediments generated during the cleaning of sewer lines and manholes will be disposed properly. This will often require disposal in permitted landfills.

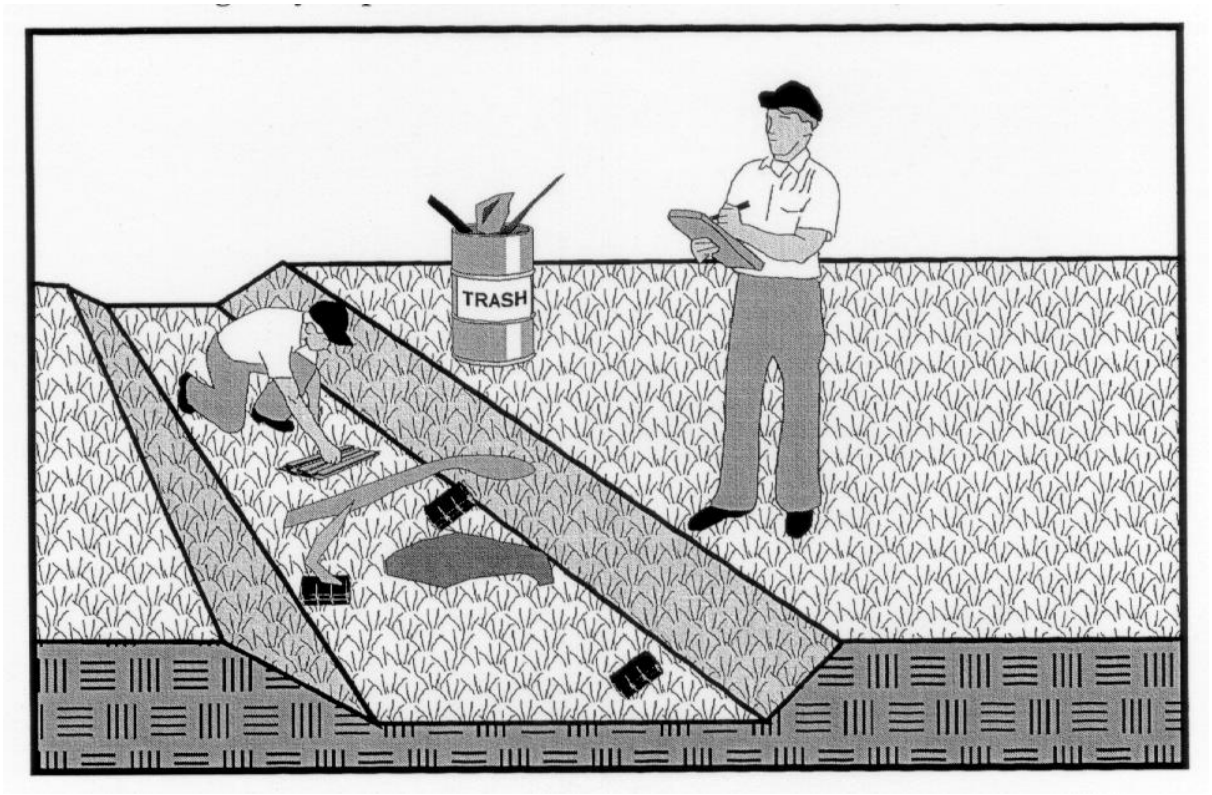
**Applications.** This BMP will be used whenever cleaning the sewer line.

**Training.** Personnel will be trained regarding the proper disposal of the sediments.

**Effectiveness and Cost.** Properly disposing of sediments is a moderately effective, low-cost BMP.

**Limitations.** None

**BMP 110 - REGULARLY INSPECT AND MAINTAIN STORM WATER CONVEYANCE SYSTEMS**




**Potential Pollutants and Sources.** Over time, storm water conveyance systems may fill up with sediments and clog. Also, drainage swales may erode and be a source of sediment pollution to storm water.

**Practices.** Storm water conveyance systems will be regularly inspected and maintained. This will include inspection of drainage swales and outfall pipes to ensure that the area is not eroding.

Other storm water conveyance systems, such as oil/water separators, catch basins, and detention ponds, will be inspected and properly maintained.

**Applications.** Storm water conveyance systems will be inspected monthly. The frequency for implementing of this BMP has been provided as general guidance. However, a facility operator may wish to establish a more suitable frequency. This will require SWPPP implementers to make judgments based on facility operations and conditions. To assign frequencies other than what has been suggested (i.e., more or less frequent), the following criteria will be considered and rated High, Medium, or Low. If many of the criteria are assigned a High rating, the frequency may be increased. Similarly, if many criteria are assigned a Low rating, the frequency may be decreased. However, the goal of implementing this BMP will be to minimize exposure of pollutants to storm water.

Table 110 – Implementation Frequency Criteria

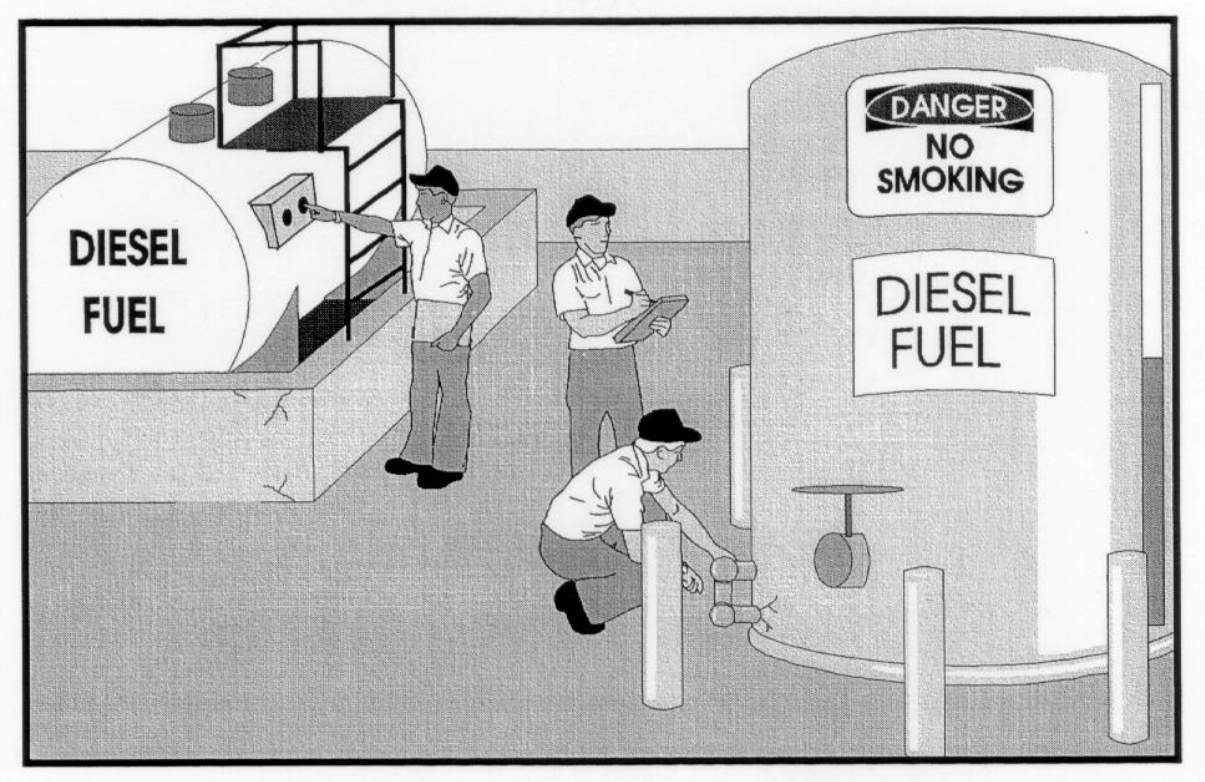
| **CRITERIA** | **RATING** H=High M=Medium L=Low |
|---|---|
| Probability of exposure of significant materials to storm water in area draining to storm water conveyance system | |
| Quantity of significant materials potentially exposed in area draining to storm water conveyance system | |
| Toxicity of significant materials potentially exposed in area draining to storm water conveyance system | |
| Frequency of use of significant materials potentially exposed in area draining to storm water conveyance system | |
| Evidence of exposure (e.g., stains on pavement, evidence of significant materials in drainage system) | |
| Proximity of source area to outfall or receiving water | |
| Sensitivity of receiving water to potentially exposed significant materials (e.g., waters with beneficial uses such as human contact, recreation, significant species habitat, etc.) | |

**Training.** The Storm Water Pollution Prevention Personnel will assign personnel responsible for inspections. Personnel will be provided a copy of a site plan showing the location of all storm water conveyance systems which need to-be inspected.

**Effectiveness and Cost.** This is a moderately effective, low-cost BMP.

**Limitations.** None

**BMP 111 - REGULARLY INSPECT AND TEST EQUIPMENT**




**Potential Pollutants and Sources.** Regular inspection and testing of equipment should prevent breakdowns and failures, which can result in the exposure of significant materials to storm water.

**Practices.** Equipment will be regularly inspected and tested. These inspections will uncover conditions such as cracks or slow leaks which could cause breakdowns or failures that result in discharges of chemicals to storm sewers or surface waters.

The following is a list of some of the equipment that will be included in the inspection and testing program:

- Aboveground storage tanks
- Machinery
- Material storage areas
- Pressure release valves
- Process and material handling equipment
- Pumps and piping
- Wastewater treatment plants

**Applications.** Equipment will be inspected and tested monthly.

The frequency for implementing of this BMP has been provided as general guidance. However, a facility operator may wish to establish a more suitable frequency. This will require SWPPP implementers to

make judgments based on facility operations and conditions. To assign frequencies other than what has been suggested (i.e., more or less frequent), the following criteria will be considered and rated High, Medium, or Low. If many of the criteria are assigned a High rating, the frequency may be increased. Similarly, if many criteria are assigned a Low rating, the frequency may be decreased. However, the goal of implementing this BMP will be to minimize exposure of pollutants to storm water.

Table 111 – Implementation Frequency Criteria

| **CRITERIA** | **RATING** H=High M=Medium L=Low |
|---|---|
| Probability of exposure of significant materials to storm water | |
| Frequency of use of equipment | |
| Intensity of use of equipment | |
| Old age or poor condition of equipment and systems | |
| Evidence of exposure (e.g., stains on pavement, etching of concrete) | |
| Proximity of source area to outfall or receiving water | |
| Sensitivity of receiving water to potentially exposed significant materials (e.g., waters with beneficial uses such as human contact, recreation, significant species habitat, etc.) | |

**Training.** An effective preventive maintenance program will include the following:

- Identification of equipment, systems, and facility areas that will be inspected.
- Schedules for periodic inspections or tests of these equipment and systems.
- Appropriate and timely adjustment, repair, or replacement of equipment and systems.
- Maintenance of complete records on inspections, equipment and systems.

**Effectiveness and Cost.** This is a highly effective, low-cost BMP.

**Limitations.** None

**BMP 113 - CONDUCT PERSONNEL TRAINING REGARDING THE SWPPP**


**Description of Pollutant Source.** When properly trained, personnel are more capable of preventing spills, responding safely and effectively to an accident when it occurs, and recognizing situations that could lead to storm water contamination.

**Practices.** Personnel at all levels of responsibility will be trained in the components and goals of the SWPPP.

**Applications.** Training will be conducted quarterly and at new personnel orientations.

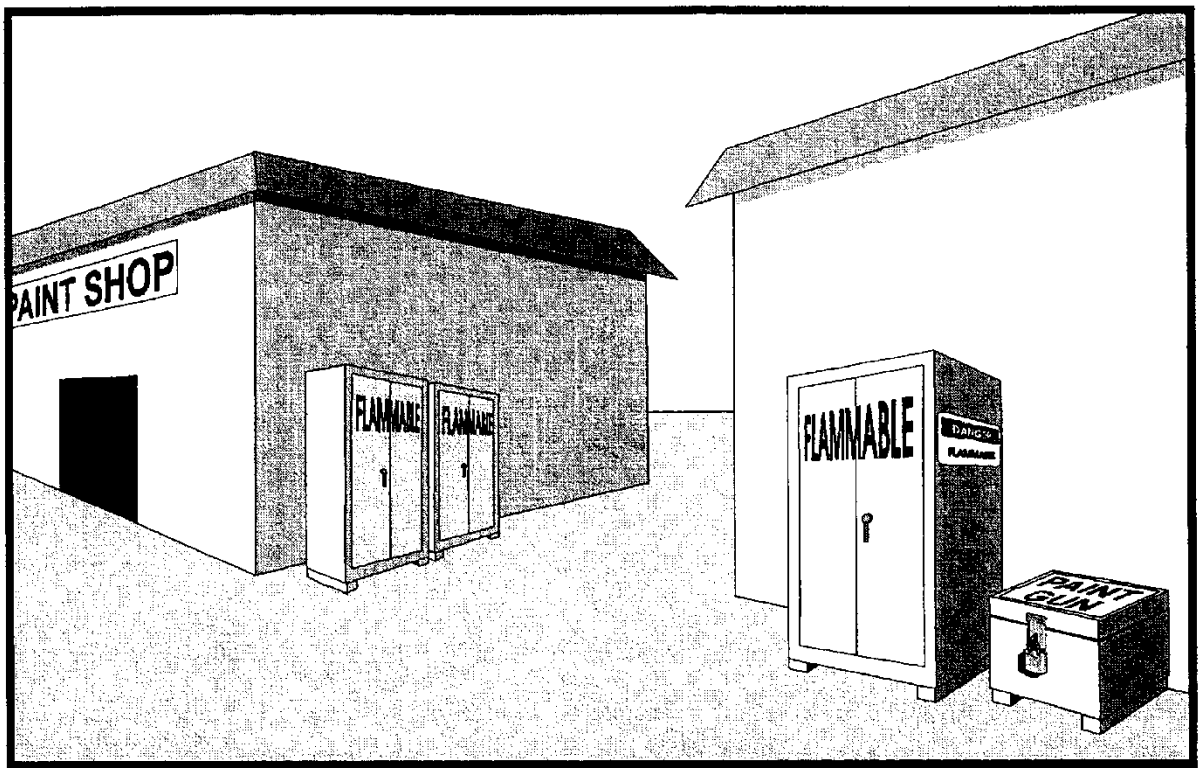
**Training.** Training will address each component of the SWPPP, including how and why tasks are to be implemented. Topics will include:

- Good housekeeping
- Material management practices
- Spill prevention and response

**Effectiveness and Cost.** This is a highly effective, moderate-cost BMP.

**Limitations.** None

**BMP 115 - STORE CONTAINERS INSIDE SECONDARY CONTAINMENT**




**Potential Pollutants and Sources.** Improper storage of containers of significant materials can result in the release of materials and chemicals that can cause storm water runoff pollution. Secondary containment can prevent storm water runoff pollution.

**Practices.** Containers will be properly stored. Containers of significant materials will be stored inside secondary containment cabinets appropriate to the size and quantity of the substances stored. Cabinets will have covered shelves and provide secondary containment for spills of the substances that spill inside the cabinets. In many instances the cabinets will be locked to restrict access to the substances. Metal lockers typically used to store flammable substances are usually appropriate for preventing contact between significant materials and storm water.

The secondary containment will be placed away from vehicle traffic routes to reduce the potential for mechanical impact and accidental spills.

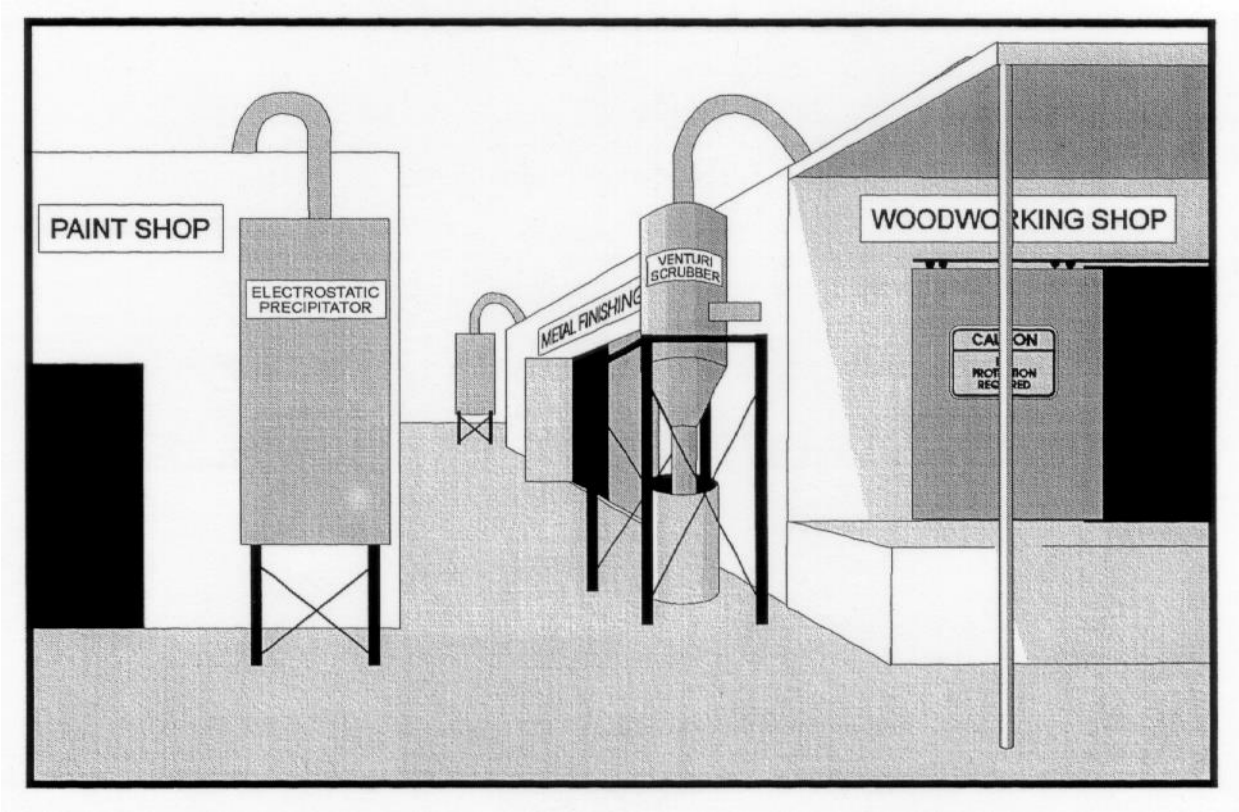
A manifest list of the materials stored inside the locker should be posted on or inside the locker.

**Applications.** Containers will always be properly stored.

**Training.** Personnel will be trained in preventing substances stored outside from entering the storm water and storing substance effectively.

**Limitations.** None

**BMP 116 - CONTROL DUST AND PARTICULATES**




**Potential Pollutants and Sources.** Many indoor and outdoor industrial processes can generate significant quantities of dust and particulates. These materials contain pollutants that can be exposed to storm water if uncontrolled. Examples of industrial processes which generate significant quantities of dust and particulates include metal finishing, painting, sanding, grinding, sawing, milling, sandblasting, welding and cement manufacture.

**Practices.** The emission of dust and particulates from indoor and outdoor industrial processes will be controlled. Control measures include the use of filters, baghouses, electrostatic precipitators, cyclone concentrators, waterwalls and other measures.

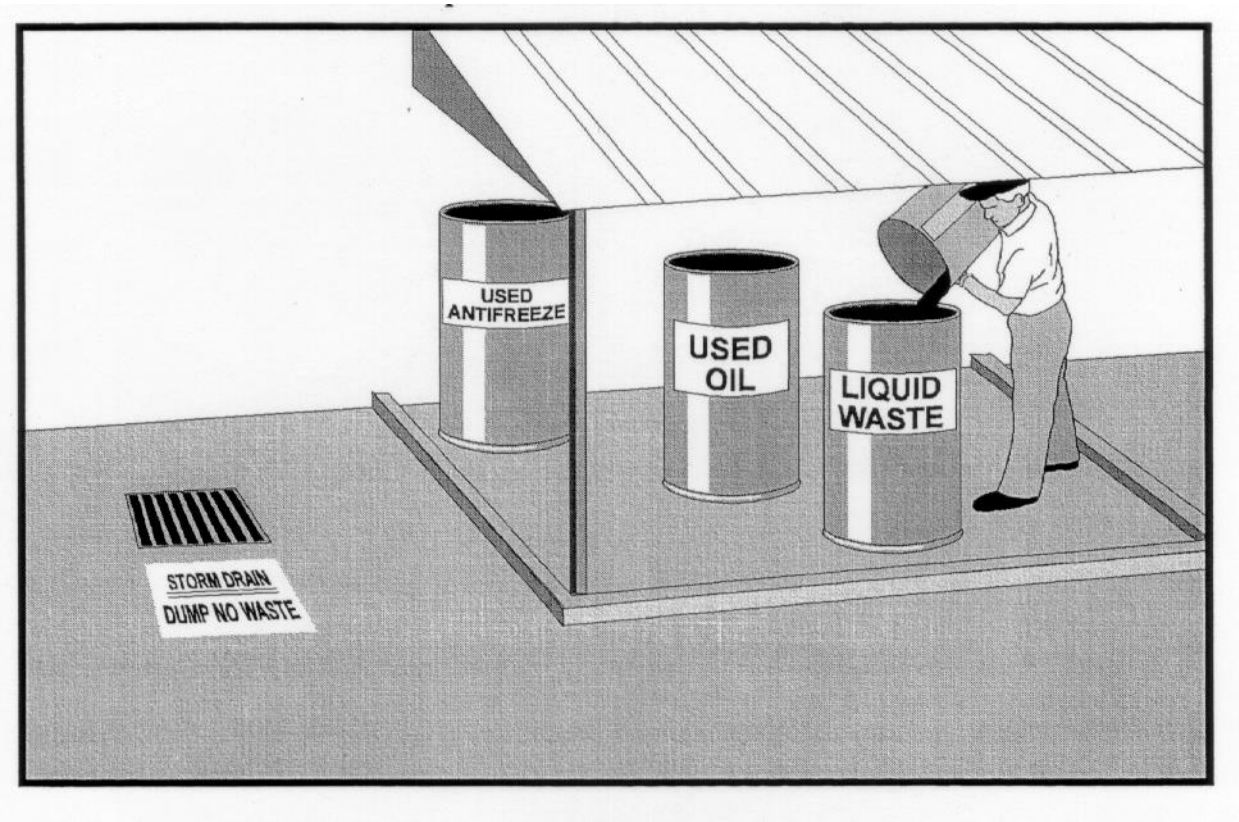
Applications. All industrial processes which generate dust and particulates will be fitted with dust control devices.

**Training.** Personnel will be trained to properly use and maintain dust and particulate control equipment.

**Effectiveness and Cost.** This is an effective, moderate-cost BMP.

**Limitations.** It may not be possible to control outdoor processes.

**BMP 117 - DO NOT POUR OR DEPOSIT WASTE INTO STORM DRAINS**




**Potential Pollutants and Sources.** Waste poured or deposited into storm drains contains pollutants that can enter the storm drain system and receiving waters without treatment.

**Practices.** Waste will not be poured or deposited into storm drains or storm drain connections. All wastes will be disposed properly or recycled. Refer also to BMP 027, "Stencil Signs On Storm Drain Inlets."

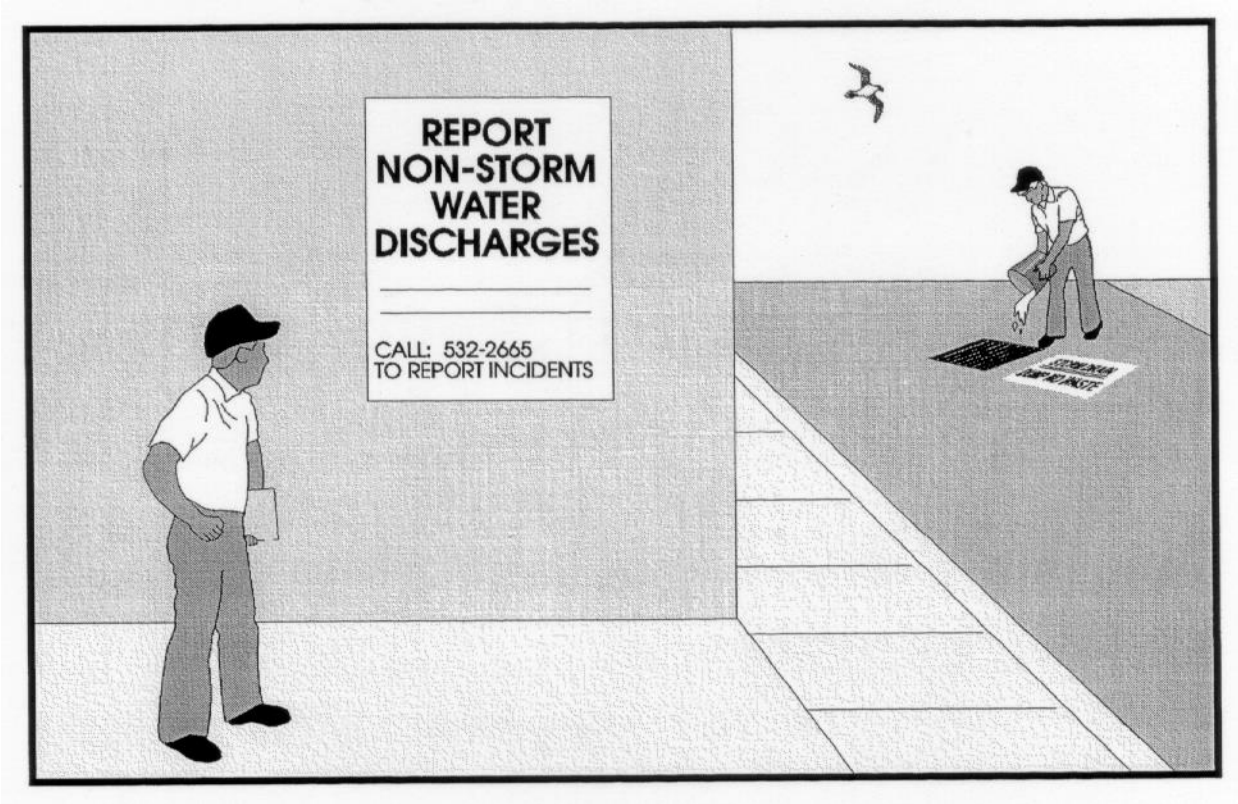
**Applications.** Wastes will always be properly disposed.

**Training.** Personnel will be trained in proper disposal procedures. Signs will be posted at storm drain inlets.

**Effectiveness and Cost.** This is a highly effective, low-cost BMP.

**Limitations.** None

**BMP 118 - ROUTINELY REPORT ANY OBSERVED NON-STORM WATER DISCHARGES**




**Potential Pollutants and Sources.** Unknown significant materials may be present in non-storm water discharges resulting from improper disposal of wastes or illicit connections to the storm drain system. These non-storm water discharges drain to receiving waters without treatment.

**Practices.** Adequate routine reporting procedures will be developed and made available to all personnel who may observe either an act of illegal dumping or an unexplained non-storm water discharge. Information regarding reporting procedures will be posted in all industrial facilities. A member of the pollution prevention team will be designated to respond to reports.

**Applications.** Reporting forms will be made available at all times.

**Training.** Training will be performed as part of BMP 009 training.

**Effectiveness and Cost.** This is an effective BMP, and the costs are low.

**Limitations.** None

## BEST MANAGEMENT PRACTICE MS4 001 FOR FIRE HOSE HYDROSTATIC TESTING AND FIRE HYDRANT FLUSHING

Fire hose hydrostatic testing and fire hydrant flushing water are authorized non-storm water discharges when all the below requirements have been met.

- Fire hose hydrostatic testing process shall only use potable water for testing.

- With the exception of residual water, fire hoses to be tested shall not be contaminated with any substance, pollutant or material.

- Discharge area should be free of excessive debris (dirt), trash or storm water pollutants/contaminants like oils, or other spilled substances.

- Prior to the start of hydrostatic testing, check the discharge/test area for signs of sedimentation, dirt or other debris. If present, sweep or otherwise properly manage.

- If debris or contaminates are unable to be removed, cover or otherwise protect any nearby storm drain catch basin or inlets. Disperse any accumulated water from around the catch basin after activity is completed.

- Whenever possible, direct discharged waste water towards a vegetated area.

- Collect and dispose of any accumulated debris created by the discharge process

- Observations of the test water must be conducted each time test water is released from the fire hoses for signs of contaminates.

- If test water shows any signs of contaminates, including but not limited to those listed below, the discharge will immediately be terminated and the water must be managed by another method.

  - The presence of an Oily Sheen;
  - Any Discoloration, Odors or Turbidity;
  - Any other sources of contamination that will affect water quality.

- Ensure site personnel conducting hydrostatic testing of fire hoses are familiarized with these BMP requirements.

- Fire Hydrant flushing is conducted by NAVFAC Utilities Department IAW the NPDES Permit, GENERAL WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF HYDROSTATIC TEST WATER AND POTABLE WATER TO SURFACE WATERS AND STORM DRAINS OR OTHER CONVEYANCE SYSTEMS WITHIN THE SAN DIEGO REGION, ORDER NO. R9-2010-0003, NPDES NO. CAG679001. Call 619-556-8946 to schedule.

***For additional information or questions on BMPs required on discharging fire hose hydrostatic test water please contact the NBSD Environmental Trouble Desk at 556-1537.***

*Naval Base San Diego*
*Municipal Storm Water Program*
*May 2015*

**ATTACHMENT 7**

**MS4 STORMWATER SOLUTIONS**

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**MS4 STORMWATER SOLUTIONS**

1. Administration and Support
2. Automotive Repair and Maintenance
3. Facility Maintenance, Painting, and Surface Prep
4. Food Establishments
5. Golf Course and Landscaping
6. Process Wastewater Discharges
7. Prohibited Discharges
8. Residential and Bachelor Quarters
9. Retail Exchange and Commissary
10. Warehousing and Loading Areas

Attachment 7

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## *Additional Stormwater Resources*

*I Love a Clean San Diego*
*www.ilacsd.org*
- - - - - -
*San Diego Think Blue Campaign*
*www.sandiego.gov/thinkblue*
- - - - - -
*Project Clean Water*
*www.projectcleanwater.org*
- - - - - -
*CNRSW*
*https://www.cnic.navy.mil/regions/cnrsw/om/environmental_support.html*

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*The main objective is to enhance the quality of storm water at NBSD through education and the implementation of various Best Management Practices (BMPs). BMPs are designed to prevent or reduce the contact of non-storm water discharges with significant materials or equipment, and to minimize, to the extent practicable, the flow or volume of non-storm water discharges listed in this pamphlet.*

## *Municipal Stormwater Program Environmental Contacts*

***Nick Popaditch***
***NBSD Environmental Department***
***Municipal Stormwater Lead***
**nicholas.a.popaditch@navy.mil**
***619-556-0995***

## *Illicit or Unauthorized Discharge Reporting*

***Please contact the NBSD Environmental Trouble Desk at 619-556-1537 or NBSD Command Duty Officer at 619-247-8897 for afterhours reporting.***

**Naval Base San Diego**
**Municipal Stormwater Program**
**March 2018**

# Stormwater Solutions

## Administration and Support

## Good housekeeping

*Accumulated dirt and sediments can accumulate near storm drain catch basins. Regular sweeping and cleaning will help prevent any excessive build-up of these materials.*

- *Storm drains should be protected from sweeping and cleaning wastes. Sweep in a direction away from the storm drains, open doorways or dock openings to prevent dirt and debris from leaving the area. If possible sweep in a manner that will minimize dirt and materials from becoming airborne.*

- *Cover storm drains during sweeping if there is likelihood that debris will enter the drain during sweeping activity.*

- *Regular pavement sweeping should be conducted to reduce the amount of suspended solids from entering the storm drain system.*

## Cover Open Bins and Dumpsters

*Storm water may be contaminated by trash, debris, oils or other pollutants if it is allowed to run freely through recycling and trash bins. Strong winds may also blow loose materials and debris such as shredded paper if they are left uncovered.*

- *Open bins, dumpsters, or other containers used for storage of recyclable materials or trash should be covered with an impervious material at the beginning of each storm event or extremely high winds.*

- *Areas around bins or dumpsters should be checked periodically for loose materials and debris during loading and unloading. Areas should be cleaned up if necessary.*

- *If necessary relocate dumpsters and bins away from storm drains.*

## Leaking Vehicles and Equipment

*Regular inspection of equipment and vehicles will help prevent pollutants from entering the storm drain system by identifying poorly operating equipment and scheduling prompt repairs.*

- *Keep equipment in good working condition and inspected regularly for leaks or worn parts.*

- *Equipment which is leaking or in poor working condition should be repaired or replaced as soon as practical.*

- *Drip pans should be placed under any leaking vehicles or other equipment until it can be repaired or replaced.*

## Spill Control

*Spills of significant materials may be exposed to stormwater and transported to the storm drain conveyance system if not handled appropriately.*

- *Immediately contain and clean up small spills whenever possible. Use "dry" methods to clean it up (e.g., rags, or absorbents). Do not hose down spilled materials.*

- *Collect spilled (non-hazardous) materials for reuse or recycling, where possible, and properly dispose of non-recyclable wastes and spent absorbents as hazardous waste.*

- *Contact emergency response teams to contain and clean up larger spills or spills beyond your capability.*

## Material Management

*The proper management and disposal of used or unused materials is an important part of storm water management in avoiding contaminates from entering water ways.*

*It is important, and against environmental regulations to place the following items into dumpsters:*

- *Used Batteries; Dry Cells, Button Batteries Wet Cell and so on.*

- *Consumer Electronics; Televisions, Fax Machines, Copiers, Printers and their cartridges, Computers, Microwaves, Telephones, etc...*

- *Fluorescent Lamps; All types.*

- *Rags, Absorbents or debris contaminated with oils. (e.g. shredder oils).*

- *Containers with residual cleaning compounds or products and non-empty aerosols.*

- *Any self-administered medical type drug or device (e.g. insulin and syringes).*

## *Additional Stormwater Resources*

*I Love a Clean San Diego*
*www.ilacsd.org*
- - - - - -
*San Diego Think Blue Campaign*
*www.sandiego.gov/thinkblue*
- - - - - -
*Project Clean Water*
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**Naval Base San Diego**
**Municipal Stormwater Program**
**March 2018**

# Stormwater Solutions

## Auto Repair and Maintenance

## Good housekeeping

*Accumulated dirt and sediments can accumulate in the work area or near storm drain catch basins. Regular sweeping and cleaning will help prevent any excessive build-up of these materials.*

- *Storm drains should be protected from sweeping and cleaning wastes. Sweep in a direction away from the storm drains, open doorways or dock openings to prevent dirt and debris from leaving the area. If possible sweep in a manner that will minimize dirt and materials from becoming airborne.*
- *Cover storm drains during sweeping if there is likelihood that debris will enter the drain during sweeping activity.*
- *Regular pavement sweeping should be conducted to reduce the amount of suspended solids from entering the storm drain system.*

## Spill Control

*Spills of significant materials may be exposed to stormwater and transported to the storm drain conveyance system if not handled appropriately.*

- *Immediately contain and clean up small spills whenever possible.*
- *Contact emergency response teams to contain and clean-up larger spills or spills beyond your capability.*
- *If spill kits are available at your location, check them periodically to see if they are adequately stocked and replace any used materials.*

## Cover Open Containers

*Stormwater may become contaminated by trash, debris, oils or other pollutants if it is allowed to run freely through recycling and trash bins. Strong winds may also blow loose materials and debris if they are left uncovered.*

- *Open bins or other containers used for storage of recyclable materials and trash should be covered with an impervious material at the beginning of each storm event or extremely high winds.*
- *Areas around bins or open containers should be checked periodically for loose materials and debris during loading and unloading.*

## Proper Containers

*Matching the appropriate storage container to the waste will reduce the risk of spills due to container failure and limit the potential of pollutants being discharged into the storm drain system. Proper container considerations include:*

- *Container type must be compatible with its contents. It is essential that all wastes and recyclable materials be stored in compatible containers to reduce the possibility of leaks and spills.*
- *Proper labeling identifies the material or waste and is essential to safe handling and disposal.*
- *Keep containers closed at all times. Containers used for storage of recyclable materials or wastes must have secure lids or closures which are kept closed to reduce potential spills or release of materials into the storm water runoff.*

## Portable Mats

*Whenever possible, place a spill type mat over the storm drain catch basins or inlets when significant bulk materials are stored in the area. The mat should be kept in good condition and replaced when its condition deteriorates.*

## Leaking Vehicles and Equipment

*Regular inspection of equipment and vehicles will help prevent pollutants from entering the storm drain system by identifying leaking or poorly operating equipment and scheduling prompt repairs.*

- *Keep equipment in good working condition and inspected regularly for leaks or worn parts.*
- *Equipment which is leaking or in poor working condition should be repaired or replaced as soon as practical.*
- *Drip pans should be placed under any leaking vehicles or other equipment until it can be repaired or replaced.*

## *Additional Stormwater Resources*

*I Love a Clean San Diego*
*www.ilacsd.org*
- - - - - -
*San Diego Think Blue Campaign*
*www.sandiego.gov/thinkblue*
- - - - - -
*Project Clean Water*
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**Naval Base San Diego**
**Municipal Stormwater Program**
**March 2018**

# Stormwater Solutions

## Facilities Maintenance,

## Painting and Surface Prep

## Berm Around Critical Areas

*A raised berm or dike should be constructed or provided around critical areas. This will provide secondary containment and prevent any spills or leaks from leaving the area and potentially contaminating storm water or nearby water ways.*

*This would include areas such as:*

- *Fuel Tanks, or Mobile Tankers*
- *Bulk Storage Tanks or Containers over 5 gallons in size.*

## Asphalt and Concrete Repair

*Storm drain and storm water inlets are inherently located either on or nearby roadways. Therefore care will need to be taken to protect these locations prior to breaking up asphalt or concrete or doing road repairs.*

- *During saw-cutting operations, use as little water as possible. Around work areas use gravel bags or appropriate barrier or absorbent material to contain or divert any runoff.*
- *Clean equipment including sprayers, supply lines, patch and paving equipment at the end of each day, and conduct all cleaning at a maintenance yard if possible.*
- *After breaking up old pavement, sweep up materials thoroughly. If uncontained residual road repair debris enters into catch basins of inlets, it can reduce the flow causing potential flooding.*
- *If slurry enters the storm drain system, remove material immediately.*

## Leaking Vehicles & Equipment

*Regular inspection of equipment and vehicles will help prevent pollutants from entering the storm drain system by identifying leaking or poorly operating equipment and scheduling prompt repairs.*

- *Keep equipment in good working condition and inspect regularly for leaks or worn parts.*
- *Equipment which is leaking or in poor working condition should be repaired or replaced as soon as practical.*
- *Drip pans should be placed under any leaking vehicles or other equipment until it can be repaired or replaced.*

## Exterior Painting and Paint Removal

*Old paint removed from the exterior of buildings or roadways can contain heavy metals that exceed water quality standards or be classified as hazardous waste.*

- *Paint chips coming off of building exteriors during maintenance or paint preparation are not allowed to enter into storm drains, catch basins, inlets, or adjacent water ways.*
- *Painting tools or equipment for interior or exterior work, regardless of paint applied, shall not be washed, rinsed or cleaned in a manner that will allow the rinse water to enter storm drains, catch basins, waterways, or contaminate the surrounding environment.*
- *To avoid spills all paint containers shall remain closed and sealed when not adding or removing the contents.*
- *For street striping, any loose or removed old paint must be collected and be properly managed. Do not sweep paint chips or debris into storm water catch basins or inlets.*

## Effective Irrigation Practices

*For water conservation and effective watering the following practices should be used whenever practical.*

- *Repair or replace broken water lines or sprinkler heads (within 72 hours of discovery).*
- *Adjust sprinkler heads as needed to prevent over watering or water flowing on to non-vegetated areas.*
- *Utilize low flow sprinkler heads or drip irrigation devices.*

## Cutting, Grinding and Welding

*Metals and some wooden products can contain toxic or regulated pollutants.*

- *Cover or block any nearby storm drains, catch basins, or curb inlets prior to starting the project.*
- *Clean-up the outdoor work area at the end of each work shift.*
- *Collect, contain and properly dispose of any accumulated or collected debris.*

## *Additional Stormwater Resources*

*I Love a Clean San Diego*
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- - - - - -
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**Naval Base San Diego**
**Municipal Stormwater Program**
**March 2018**

# Stormwater Solutions

## Food Establishments

## Good housekeeping

*Accumulated dirt and sediments can accumulate near storm drain catch basins. Regular sweeping and cleaning will help prevent any excessive build-up of these materials.*

- *Storm drains should be protected from sweeping and cleaning wastes. Sweep in a direction away from the storm drains, open doorways or dock openings to prevent dirt and debris from leaving the area. If possible sweep in a manner that will minimize dirt and materials from becoming airborne.*

- *Cover storm drains during sweeping if there is likelihood that debris will enter the drain during sweeping activity.*

- *Regular pavement sweeping should be conducted to reduce the amount of suspended solids from entering the storm drain system.*

## Cover Open Bins and Dumpsters

*Storm water may be contaminated by trash, debris, oils or other pollutants if it is allowed to run freely through recycling and trash bins. Strong winds may also blow loose materials and debris such as shredded paper if they are left uncovered.*

- *Open bins, dumpsters, or other containers used for storage of recyclable materials or trash should be covered with an impervious material at the beginning of each storm event or extremely high winds.*

- *Areas around bins or dumpsters should be checked periodically for loose materials and debris during loading and unloading. Areas should be cleaned up if necessary.*

- *If necessary relocate dumpsters and bins away from storm drains.*

## Portable Mats

*Whenever possible, place a spill type mat over the storm drain catch basins or inlets when significant bulk materials are stored in the area. The mat should be kept in good condition and replaced if its condition deteriorates.*

## Proper Containers

*Matching the containers to the waste or material will help reduce the risk of spills due to container failure and limit the potential of pollutants being discharged into the storm water. Proper container considerations include:*

- *Proper labeling identifies the material or waste and is essential to safe handling.*

- *Keep containers closed at all times. Containers used for storage of recyclable materials or wastes must have secure lids or closures which are kept closed to reduce potential spills or release of materials into the storm water runoff.*

## Food Establishment Wash Water

*With few exceptions most areas at NBSD Complexes are paved and have very little vegetation.*

- *To help reduce pollutant discharges to the bay, rivers or creeks washing down your work area is not allowed unless the wash water is free of contaminates, oils, dirt and debris and flows into a grassy or vegetated location.*

- *If outside washing is necessary, cover any nearby storm drain catch basins or inlets and disperse any pooled wash water away from these areas.*

## Cleaning and Maintenance

*The below practices are to help reduce storm water contamination from cleaning or maintenance.*

- *Rinse or wash water containing cooking grease or oils is not allowed to enter storm drains or water ways.*

- *Mop water or other type of similar type cleaning wastewater shall be discarded into the sewer system through a deep sink, floor drain or toilet, and not poured on the ground and allowed to evaporate.*

- *Ensure floor drains and deep sinks are plumbed so wastewater flows through interceptors and grease traps before entering the sewer system.*

- *Non-recycled discarded cooking greases or oils which have become solidified, that are placed into dumpsters shall be containerized with tight fitting lids or put into non-permeable bags to avoid leaching.*

## *Additional Stormwater Resources*

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- - - - - -
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**Naval Base San Diego**
**Municipal Stormwater Program**
**March 2018**

# Stormwater Solutions

## Golf Courses and Landscaping

## Good housekeeping

*Accumulated dirt and sediments can accumulate near storm drain catch basins. Regular sweeping and cleaning will help prevent any excessive build-up of these materials.*

- *Storm drains should be protected from sweeping and cleaning wastes. Sweep in a direction away from the storm drains, open doorways or dock openings to prevent dirt and debris from leaving the area. If possible sweep in a manner that will minimize dirt and materials from becoming airborne.*

- *Cover storm drains during sweeping if there is likelihood that debris will enter the drain during sweeping activity.*

## Application of Pesticides, Herbicides, and Fertilizers.

*Special care should be taken when applying pesticides, herbicides or fertilizers near or around storm drains, catch basins, inlets or water ways, where excess amounts or overspray could contribute to storm water contamination.*

*Below are some handling procedures to help minimize the migration of these materials into the environment.*

- *Provide secondary containment around materials if stored outdoors or if material from a spill could flow outdoors.*
- *Periodically check areas for spills, leaks, or unsafe storage methods and clean up as soon as possible.*
- *Store materials in enclosed sheds or buildings or under cover on an impervious surface.*
- *Cap or seal any un-rinsed containers prior to discarding into the trash.*
- *Avoid applying in windy conditions or applying towards creeks, rivers or other water ways.*

## Effective Irrigation Practices

*For water conservation and effective watering the following practices should be used whenever practical.*

- *When possible install automatic rain sensing shutoff devices to prevent irrigation during periods of precipitation.*
- *Repair or replace broken water lines or sprinkler heads (within 72 hours of discovery).*
- *Adjust sprinkler heads as needed to prevent over watering or water flowing on to non-vegetated areas.*
- *Utilize low flow sprinkler heads or drip irrigation devices.*

## Leaking Vehicles and Equipment

*Regular inspection of equipment and vehicles will help prevent pollutants from entering the storm drain system by identifying leaking or poorly operating equipment and scheduling prompt repairs.*

- *Keep equipment in good working condition and inspect regularly for leaks or worn parts.*
- *Equipment which is leaking or in poor working condition should be repaired or replaced as soon as practical.*
- *Drip pans should be placed under any leaking vehicles or other equipment until it can be repaired or replaced.*

## Exposed Grounds Maintenance Equipment

*Lawn mowing and grounds maintenance equipment may rust or leak oils and grease if stored directly on the ground or exposed to storm water.*

*If left uncovered, loose material such as grass clippings and debris can accumulate and flow into and clog storm drain catch basins. Used parts or containers stored directly on the pavement or ground that is exposed to storm water can transport pollutants into the storm drain system.*

- *When possible, lawn mowing and grounds maintenance equipment and used parts should be stored indoors and off the pavement or ground.*
- *If outdoor storage is necessary, equipment should be kept on appropriate racks, pallets, or in bermed areas and covered with a waterproof tarpaulin if exposed to the weather.*
- *Used parts or containers should be placed on pallets to prevent the bottoms from rusting.*
- *Lawn mowing and grounds maintenance equipment, and container storage should be inspected regularly to check for leaks or debris.*

## *Additional Stormwater Resources*

*I Love a Clean San Diego*
*www.ilacsd.org*
- - - - - -
*San Diego Think Blue Campaign*
*www.sandiego.gov/thinkblue*
- - - - - -
*Project Clean Water*
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*CNRSW*
*https://www.cnic.navy.mil/regions/cnrsw/om/environmental_support.html*

*This pamphlet supplements the Naval Base San Diego Storm Water Management Plan for* ***MUNICIPAL AREAS*** *on NBSD. This includes: NBSD, Broadway Complex, Mission Gorge Recreational Facility and Naval Medical Center, San Diego.*

*The main objective is to enhance the quality of storm water at NBSD through education and the implementation of various Best Management Practices (BMPs). BMPs are designed to prevent or reduce the contact of non-storm water discharges with significant materials or equipment, and to minimize, to the extent practicable, the flow or volume of non-storm water discharges listed in this pamphlet.*

## *Municipal Stormwater Program Environmental Contacts*

***Nick Popaditch***
***NBSD Environmental Department***
***Municipal Stormwater Lead***
**nicholas.a.popaditch@navy.mil**
***619-556-0995***

## *Illicit or Unauthorized Discharge Reporting*

***Please contact the NBSD Environmental Trouble Desk at 619-556-1537 or NBSD Command Duty Officer at 619-247-8897 for afterhours reporting.***

**Naval Base San Diego**
**Municipal Stormwater Program**
**March 2018**

# Stormwater Solutions

## Process Wastewater Discharges

## HVAC, Chillers and Refrigerators

*Although atmospheric condensate is an inherent function of these types of units, general maintenance information needs to be reviewed in determining storm water compliance issues.*

- *Determine if air conditioning and chiller units are treated with descaling or anti-algae agent. Any flushing agents or residues need to be properly disposed of so as not to by-pass through the condensate line.*
- *Determine if HVAC condenser tubes are annually flushed with any type of chemicals during servicing and how waste water is disposed. Tube cleaning solutions and run off must be captured and evaluated for proper disposal.*
- *Ensure defrost waters or other condensates do not come into contact with any pollutants directly or indirectly prior to discharge.*

## Cooling Towers, Reverse Osmosis and Deionization Units

*Cooling tower, reverse osmosis and deionization units may contain chemical additives that could impact water quality.*

- *Cooling tower discharges must be directed to the sanitary sewer.*
- *Ensure proper disposal of washing detergents or cleaning agents.*
- *Reject water from reverse osmosis units should not enter the storm drain. Reject water from reverse osmosis units should be diverted to the sanitary sewer.*
- *Back flush water from deionization units should be discharged into the sanitary sewer.*
- *All chemicals or additives must be placed into proper containment and stored AWAY from any storm drains.*

## Fire Suppression Systems Maintenance

*BMPs for discharges from the following: Fire Hydrant Flushing and Building Fire Suppression System Maintenance.*

- *Whenever possible, direct discharged waste water towards a vegetated area.*
- *If area is not debris or contaminate free, cover or otherwise protect any nearby storm drain catch basin or inlet. Disperse any accumulated water from around the catch basin after maintenance is completed.*
- *Discharge area should be free of excessive debris (dirt), trash or storm water contaminants like oils, or other spilled substances.*
- *Collect and properly dispose of any accumulated debris created by the discharge process.*

## Landscape Irrigation

*For water conservation and effective watering the following practices should be used whenever practical.*

- *When possible install automatic rain sensing shutoff devices to prevent irrigation during periods of precipitation.*
- *Repair or replace broken water lines or sprinkler heads (within 72 hours of discovery).*
- *Adjust sprinkler heads as needed to prevent over watering or water from flowing on to non-vegetated areas.*

## Potable Water Discharges

*Emergency Eyewash Stations and Showers, Drinking Water Fountains and Dechlorinated Swimming Pool Water.*

- *Discharge area should be free of excessive debris (dirt), trash or storm water contaminants like oils, or other spilled substances.*
- *If area is not debris or contaminate free, cover or otherwise protect any nearby storm drain catch basin or inlet.*
- *For swimming pool discharges, water must be de-chlorinated and the discharge line placed as near to the discharge point as possible.*

## Utility Vaults

*Accumulated waste water discharged from Electrical Switching Stations, Utility or Telephone Vaults shall follow the requirements outlined within the* ***2014 NBSD Utility Vault and Manhole Dewatering BMPP****.*

## Hydro-Blasting and Pressure Washing

*Prior to outdoor cleaning insure that the area is free of contaminates or other pollutants.*

- *If the cleaning process will create debris or wastes like paint chips or oily residues, ensure that these are collected and contained along with any waste water. Waste water from this type of cleaning may elevate contaminate levels to above discharge limits or generate hazardous waste.*

## *Additional Stormwater Resources*

*I Love a Clean San Diego*
*www.ilacsd.org*
- - - - - -
*San Diego Think Blue Campaign*
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- - - - - -
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**Naval Base San Diego**
**Municipal Stormwater Program**
**March 2018**

# Stormwater Solutions

## Prohibited Discharges

## PROHIBITED DISCHARGES

*Below is a non-inclusive list of substances, materials or waste that are either listed in the NBSD Storm water discharge permit or other environmental regulations as being prohibited from being discharged into waterways, either directly or indirectly, from municipal areas.*

- *Waters contaminated with paint, solvents, or fuels;*
- *Food type oils and greases;*
- *General cleaning and steam cleaning waters (with or without cleaning compounds or detergents);*
- *Oils and fuel from leaks and spills;*
- *Trash, rubbish, dirt and floor sweepings;*
- *Discharges of substances or water not specifically authorized by the permit;*
- *The discharge that cause or contribute to the violation of water quality standards;*
- *Excess herbicides, fertilizers, and pesticides;*
- *Contaminated vehicle wash waters;*
- *Sewage or similar wastes;*

***In addition:***

### Regulated Non-Storm Water Discharges

*Some discharges of waste or process waters including diluted general cleaning materials from municipal locations can contain substances that can potentially cause significant and long lasting impacts to the environment and should be immediately reported, and the discharge terminated.*

### Other Regulated Items

*The proper management and disposal of used or unused materials is an important part of storm water management in avoiding contaminates from entering water ways.*

*It is important, and against environmental regulations to place the following items into dumpsters:*

- *Used Batteries; Dry Cells, Button Batteries Wet Cell, Car Batteries and so on.*
- *Consumer Electronics; Televisions, CD Players, Copiers, Printers and their cartridges, Computers, Microwaves, Telephones, etc...*
- *Fluorescent Lamps; All types.*
- *Containers with residual cleaning compounds or products and non-empty aerosols.*
- *Any self-administered medical type drugs or device (e.g. insulin and syringes).*
- *Any and all hazardous wastes, hazardous materials, universal wastes or hazardous substances.*
- *Automotive parts that still contain fluids or other substances (e.g. older brake pads containing asbestos).*

### Authorized Discharges

*Unless the specific discharge is listed below, all other non-storm water related discharges are prohibited:*

- *Atmospheric condensate from Refrigeration, A/C, and Compressors;*
- *Drinking fountain water;*
- *Uncontaminated Groundwater infiltration;*
- *Dechlorinated Swimming Pool Water;*
- *Emergency Eyewash Station water;*
- *Building Fire Suppression System Maintenance discharges;*
- *Uncontaminated Potable Water Sources.*

*If an allowable non-storm water discharge **comes in contact** with a pollutant or other source of contamination, that discharge will be re-classified as prohibited.*

***For additional questions on allowable discharges or to report unauthorized discharge to water ways, storm drains or catch basins during working hours please contact the NBSD Environmental Trouble Desk at 556-1537.***

## *Additional Stormwater Resources*

*I Love a Clean San Diego*
*www.ilacsd.org*
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*San Diego Think Blue Campaign*
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**Naval Base San Diego**
**Municipal Stormwater Program**
**March 2018**

# Stormwater Solutions

## Residential and Bachelor Quarters

## Personal Item Management

*The proper management and disposal of used or unused materials is an important part of storm water management in avoiding contaminates from entering water ways.*

*It is important, and against environmental regulations to place the following items into dumpsters:*

- *Used Batteries; Dry Cells, Button Batteries Wet Cell, Car Batteries and so on.*
- *Consumer Electronics; Televisions, CD Players, Copiers, Printers and their cartridges, Computers, Microwaves, Telephones, etc...*
- *Fluorescent Lamps; All types.*
- *Containers with residual cleaning compounds or products and non-empty aerosols.*
- *Any self-administered medical type drug or device (e.g. insulin and syringes).*

## Spill Control

*Small spills or leaks can remain undiscovered resulting in releasing pollutants into storm water runoff.*

- *To ensure that spills are discovered and cleaned-up as soon as possible, a periodic walk through of your area should be conducted regularly.*
- *If small spills or vehicle leaks are discovered, appropriate action is to be taken for containment and clean up.*
- *If necessary, contact trained spill personnel to contain and clean up spills or leaks beyond your capability.*
- *Drip pans should be placed under any leaking vehicles or other equipment until it can be repaired or replaced.*

## Cover Open Bins and Dumpsters

*Storm water may be contaminated by trash, debris, oils or other pollutants if it is allowed to run freely through recycling and trash bins. Strong winds may also blow loose materials and debris such as shredded paper if they are left uncovered.*

- *Open bins, dumpsters, or other containers used for storage of recyclable materials or trash should be covered with an impervious material at the beginning of each storm event or extremely high winds.*
- *Areas around bins or dumpsters should be checked periodically for loose materials and debris during loading and unloading. Areas should be cleaned up if necessary.*
- *If necessary relocate dumpsters and bins away from storm drains.*

## Wash Vehicles in Designated Area

*Most parking areas at NBSD are paved. Car washes are located throughout NBSD Complex. To control water from washing operations, equipment and vehicles shall be washed in designated areas.*

- *Privately owned vehicles and military members with vehicles who reside in BQ (residential) are urged to utilize MWR or other commercial car washes. Vehicle washing is only allowed in designated areas.*
- *Vehicles are to be rinsed off and rinse water allowed to drain off the vehicle before leaving the designated wash area.*

## Vehicle Maintenance

*As with vehicle washing, maintenance can also contribute to storm water contamination and staining of parking areas if performed in undesignated areas.*

- *All private vehicle maintenance conducted on Base, including exterior detailing, is to be done at NEX Service locations or MWR Auto Hobby Shops.*
- *Trash and debris removed from vehicles shall be placed in proper solid waste (trash) containers.*
- *Paint, cleaning products or solvents is not to be used on the exterior of vehicles outside designated areas.*

## *Additional Stormwater Resources*

*I Love a Clean San Diego*
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**Naval Base San Diego**
**Municipal Stormwater Program**
**March 2018**

# Stormwater Solutions

## Retail, Exchange and Commissary

## Good housekeeping

*Accumulated dirt and sediments can accumulate near storm drain catch basins. Regular sweeping and cleaning will help prevent any excessive build-up of these materials.*

- *Storm drains should be protected from sweeping and cleaning wastes. Sweep in a direction away from the storm drains, open doorways or dock openings to prevent dirt and debris from leaving the area. If possible sweep in a manner that will minimize dirt and materials from becoming airborne.*
- *Cover storm drains during sweeping if there is likelihood that debris will enter the drain during sweeping activity.*
- *Regular pavement sweeping should be conducted to reduce the amount of suspended solids from entering the storm drain system.*

## Spill Control

*Small spills or leaks can remain undiscovered resulting in releasing pollutants into storm water runoff.*

- *To ensure that spills are discovered and cleaned-up as soon as possible, a periodic walk through of your area should be conducted regularly.*
- *If small spills or vehicle leaks are discovered, appropriate action is to be taken for containment and clean up.*
- *If necessary, contact trained spill personnel to contain and clean up spills or leaks beyond your capability.*
- *Drip pans should be placed under any leaking vehicles or equipment until it can be repaired or replaced.*

## Cover Open Bins and Dumpsters

*Storm water may be contaminated by trash, debris, oils or other pollutants if it is allowed to run freely through recycling and trash bins. Strong winds may also blow loose materials and debris such as shredded paper if they are left uncovered.*

- *Open bins, dumpsters, or other containers used for storage of recyclable materials and trash should be covered with an impervious material at the beginning of each storm event or extremely high winds.*
- *Areas around bins or dumpsters should be checked periodically for loose materials and debris during loading and unloading. Areas should be cleaned up if necessary.*
- *If necessary relocate dumpsters and bins away from storm drains.*

## Portable Mats

*Whenever possible, place a spill type mat over the storm drain catch basins or inlets when significant bulk materials are stored in the area. The mat should be kept in good condition and replaced if its condition deteriorates.*

## HVAC, Chillers and Refrigerators

*Although atmospheric condensate is an inherent function of these types of units, general maintenance information needs to be reviewed in determining storm water compliance issues.*

- *Determine if air conditioning and chiller units are treated with descaling or anti-algae agent. Any flushing agents or residues need to be properly disposed of so as to not by-pass through the condensate line.*
- *Determine if HVAC condenser tubes are flushed with any type of chemicals during servicing and how waste water is disposed. Tube cleaning solutions and run off must be captured and evaluated for proper disposal.*
- *Ensure defrost waters or other condensates do not come into contact with any pollutants directly or indirectly prior to discharge.*

## Proper Containers

*Matching the containers to the waste or material will help reduce the risk of spills due to container failure and limit the potential of pollutants being discharged into the storm water. Proper container considerations include:*

- *Proper labeling identifies the material or waste and is essential to safe handling.*
- *Keep containers closed at all times. Containers used for storage of recyclable materials or wastes must have secure lids or closures which are kept closed to reduce potential spills or release of materials into the storm water runoff.*

## *Additional Stormwater Resources*

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- - - - - -
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**Naval Base San Diego**
**Municipal Stormwater Program**
**March 2018**

# Stormwater Solutions

## Warehouse and Loading Areas

## Good housekeeping

*Accumulated dirt and sediments can accumulate near storm drain catch basins. Regular sweeping and cleaning will help prevent any excessive build-up of these materials.*

- *Storm drains should be protected from sweeping and cleaning wastes. Sweep in a direction away from the storm drains, open doorways or dock openings to prevent dirt and debris from leaving the area. If possible sweep in a manner that will minimize dirt and materials from becoming airborne.*
- *Cover storm drains during sweeping if there is likelihood that debris will enter the drain during sweeping activity.*
- *Regular pavement sweeping should be conducted to reduce the amount of suspended solids from entering the storm drain system.*

## Spill Control

*Small spills or leaks can remain undiscovered resulting in releasing pollutants into storm water runoff.*

- *To ensure that spills are discovered and cleaned-up as soon as possible, a periodic walk through of your area should be conducted regularly.*
- *If small spills or vehicle leaks are discovered, appropriate action is to be taken for containment and clean up.*
- *If necessary, contact trained spill personnel to contain and clean up spills or leaks beyond your capability.*
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- *Areas around bins or dumpsters should be checked periodically for loose materials and debris during loading and unloading. Areas should be cleaned up if necessary.*
- *If necessary relocate dumpsters and bins away from storm drains.*

## Portable Mats

*Whenever possible, place a spill type mat over the storm drain catch basins or inlets when significant bulk materials are stored in the area. The mat should be kept in good condition and replaced if its condition deteriorates.*

## Proper Containers

*Matching the containers to the waste or material will help reduce the risk of spills due to container failure and limit the potential of pollutants being discharged into the storm water. Proper container considerations include:*

- *Proper labeling identifies the material or waste and is essential to safe handling.*
- *Keep containers closed at all times. Containers used for storage of recyclable materials or wastes must have secure lids or closures which are kept closed to reduce potential spills or release of materials into the storm water runoff.*

## Leaking Vehicles and Equipment

*Regular inspection of equipment and vehicles will help prevent pollutants from entering the storm drain system by identifying leaking or poorly operating equipment and scheduling prompt repairs.*

- *Keep equipment in good working condition and inspect regularly for leaks or worn parts.*
- *Equipment which is leaking or in poor working condition should be repaired or replaced as soon as practical.*
- *Drip pans should be placed under any leaking vehicles or other equipment until it can be repaired or replaced.*

**ATTACHMENT 8**

**ACTION MATRIX**

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| Minimum Control Measure #1: Public Education and Outreach | | | | |
|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 1.1** Perform annual municipal facility inspections. Complete Municipal Facility Inspection Form (MFIF - Attachment 1) to include verification of storm water map (feedback corrections as needed). Record site visit into Municipal Facility Master Spreadsheet (MFMS - Attachment 5). | Perform annual municipal facility inspection. | (1) Accomplish annual municipal facility inspections.<br>(2) Complete MFIF for each facility visit.<br>(3) Record facility visit into MFMS.<br>(4) Annotate storm water map changes tracked in MFIF.<br><br>(5) Update municipal facility POCs for each facility. | Accomplished facility inspections at Broadway Complex for 7 buildings, NMCSD for 1 building, NBSD (Dryside and Wetside) for 167 buildings, and Admiral Baker Golf Course for 47 buildings. Each inspection was recorded in the MFMS. Building monitor and facility information was gathered enabling NBSD Env to categorize facilities by the building's primary function/operation. Some facilities were visited more than one occasion to provide follow-up information to the building monitor. Facility inspections identified storm drain features on the facility map that needs updating for accuracy. | NBSD Environmental staff continued to conduct the annual municipal facility inspections in 2017. Accomplished facility inspections at Broadway Complex for 7 buildings, NBSD (Dryside and Wetside) for 71 buildings, and Admiral Baker Golf Course for 47 buildings. Each inspection was recorded in the MFMS. Building monitor and facility information was gathered, enabling NBSD Environmental to build upon previous year efforts to categorize facilities by the building's primary function/operation. Some facilities were visited on more than one occasion to provide follow-up information to the building monitor. NBSD Environmental was not fully staffed during 2017 and was unable to achieve the same field presence as in past years. NBSD Environmental will be fully staffed during 2018 and field presence will be increased. |
| | Update storm water maps annually. | (1) Provide map discrepancies for annual map update.<br>(2) Verify that maps are corrected. | A storm drain placed on the map closest to Building 72 was not found during a facility inspection, a correction was made to the map. Outfalls placed on the map running along Chollas Creek around the bridge at the mouth of the creek were not found during semi-annual outfall inspections, corrections were made to the map. | No map discrepancies were identified during the 2017 facility inspection or the semi-annual outfall inspections. NBSD Environmental will continue to monitor storm drain system and identify discrepancies to be updated on the map. |

| Minimum Control Measure #1: Public Education and Outreach | | | | |
|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 1.2** Provide training to facility POCs to increase environmental and storm water knowledge and awareness. Use training events and POC contact opportunities to distribute storm water awareness materials. | Perform monthly Environmental training focusing on proper handling, disposal of waste with coverage of storm water process BMPs. Provide storm water awareness fliers to training attendees requesting additional storm water information. | (1) Provide training to facility POCs during inspections.<br><br>(2) Distribute storm water awareness fliers at training events. | Performed monthly storm water training to hazardous waste coordinators. There has been 85 hazardous waste coordinators trained. Quarterly training is conducted with building monitors, there has been 66 building monitors trained. The Public Works production division was given storm water training for 59 employees. MS4 BMP handouts, tri-folds, and instructions on ECATTS training were distributed to trained personnel via email. A training log was also included in the email for trained personnel to conduct internal training. | Continued to perform monthly storm water training to hazardous waste coordinators during 2017. The overall number of hazardous waste coordinators who received storm water BMP training increased to 346 during 2017. Additionally, the number of building monitors given storm water BMP training during quarterly trainings increased to 84. NBSD Environmental staff will continue to promote participation in trainings during outreach activities with municipal tenants in 2018. |
| | Encourage facility POCs to perform ECATTS storm water training modules. | (1) Determine total number of ECATTS storm water courses taken each FY. | FY16 to date, number of personnel that have taken the stormwater basic information course is 13, stormwater comprehensive overview is 8, and stormwater for contractors is 24. | During 2017, the total number of personnel who completed ECATTS storm water related training increased to 50. During 2017, the number of personnel that completed the storm water basic information course is 9, storm water comprehensive overview is 11, and storm water for contractors is 30. NBSD Environmental staff will continue to provide information regarding ECATTS courses during public outreach activities with municipal tenants in 2018. |
| | Provide training to facility POCs during facility inspections. | (1) Determine tenant's storm water awareness and track training effectiveness with follow-on inspections. | This is a requirement for FY17 and has already started during the first round of facility inspections this current year. Many facility POCs were not familiar with facility-wide municipal BMPs and were provided the proper training and information to pass storm water awareness to others. Specific-facility BMPs assigned will be issued to each facility once SWPPPs have been developed. | The primary focus of the 2017 Municipal Facility Inspection was to get a more comprehensive building monitor list as well as gauge the tenant's knowledge of facility-wide storm water BMPs applicable to municipal facilities. Information regarding facility-wide municipal BMPs was provided to tenants both during municipal facility inspections and regularly scheduled environmental trainings. |

| Minimum Control Measure #1: Public Education and Outreach | | | | |
|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 1.3** Participate in public outreach events. Provide outreach messaging (posters, fliers, etc) that educate on storm water awareness and knowledge. Distribute storm water awareness materials. | Coordinate outreach event participation, ensure participants and materials are ready. | (1) Appoint staff member to coordinate events, ensure participation, and provide materials for each event. | NBSD Environmental staff participated in the San Diego Green Building Conference and Expo, Marine Corps Air Station (MCAS) Miramar Air Show, Industrial Environmental Association (IEA) Earth Day Fair, and Main Street Clean Up. | NBSD Environmental staff participated in Rideshare Month, NBSD Main Street Clean-Up, TIP Campaign, eWaste Electronics Event, Earth Day NBSD Clean-Up, Main Street Clean-Up, Annual Bike2Work, Annual NASSCO Neighborhood Clean-Up, Operation Clean Sweep, National Clean-Up Day, and MCAS Miramar Airshow. |
| | Track outreach participation and maintain internal booth attendance tally. | (1) Maintain participation in outreach events.<br><br>(2) Maintain attendance tally for each event. | The San Diego Green Building Conference and Expo had 300 attendees, MCAS Miramar Air Show had over 700,000 patrons, IEA Earth Day Fair had 79 visitors, and the Main Street Clean-up had 400 participants from 18 commands working together to rid Barrio Logan of nearly three tons of trash. Main Street Cleanup is held twice a year, alternating each time between National City and Barrio Logan, and is part of NBSD's overall "good neighbor" outreach to its stakeholders outside the fence line of the base. | The NBSD Main Street Cleanup had approximately 300 participants from 16 commands worked together to pick up trash along an approximately 5 mile radius beginning and ending at Mariner's Park. Approximately 200 civilians and Sailors from NBSD participated in the Annual NASSCO Neighborhood Clean-up. The MCAS Miramar Air Show had over 700,000 patrons. |

| Minimum Control Measure #1: Public Education and Outreach | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 1.4**<br>Communicate with partners/neighbors (i.e. other Metro bases and NASSCO) to improve storm water education and outreach efforts. | Meet with partners and neighbors to determine areas to align public education and outreach goals/efforts. | (1) Track meetings with partners and neighbors.<br><br>(2) Maintain partner/neighbor interaction.<br><br>(3) Promote partner developed programs. | NBSD Environmental will begin tracking involvement with partners and neighbors in FY17. | Regular meetings occur between NBSD Environmental staff and water program leads of the other San Diego Metro bases (Naval Base Coronado and Naval Base Point Loma). Regular contact is kept in order to exchange ideas and ensure consistency between the three Navy Metro Instillations municipal storm water programs. In addition to contact with the Navy Metro water program leads, collaboration occurs between NBSD Environmental staff and NASSCO. NBSD Environmental staff work together with NASSCO to share on-site rain gauge data as well as ensure BMPs are implemented while performing work on piers and the NBSD Graving Dock. |

| Minimum Control Measure #1: Public Education and Outreach | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 1.5** Apply appropriate pollution prevention message and install storm drain markers at high visibility storm drains. | Develop appropriate pollution prevention message. Survey and verify storm water maps storm drain locations and requirements for message and marker. | (1) Develop appropriate message to display on storm drains.<br>(2) Conduct survey of storm drains.<br>(3) Identify storm drains that need message and marker.<br>(4) Maintain maintenance requirements for storm drains. | During a survey by NBSD Environmental over 90% of the storm drains on the Wetside have been marked and labeled with a message to the public saying "No Dumping Drains To Bay". About 80% of the storm drains on the Dryside have been marked and labeled with the same public message. The condition of some of the markers are poor with the message faded from UV rays or have been damaged from vehicle traffic. | Storm drain markers were inspected during the 2017 annual municipal facility inspections. There was no need to install markers during 2017 since approximately 99% of storm drains were labeled based on findings of field surveys. |
| | Request funding (via US Navy Environmental Portal) for pollution prevention message and markers for storm drains. | (1) Request funding for storm drain message and markers.<br>(2) With available funding, increase properly maintained and marked storm drains from FY 17 to 18. | The Navy has funded a project to replace the existing plastic markers with metal markers riveted into the ground surface. The project is expected to be completed by the end of this current FY. | 750 metal markers were installed at storm drains from 2 May 2016 to 30 Sept 2016. No additional storm drain markers were needed during 2017. NBSD Environmental staff will continue to monitor the maintenance needs and coordinate the replacement of storm drain markers, as needed, in 2018. |

| Minimum Control Measure #1: Public Education and Outreach | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 1.6** Develop existing NBSD CNIC and Facebook website to include storm water information. Allow access to Environmental Support link from NBSD Homeport/Facebook page. The Environmental Support link takes viewers to storm water info related to NBSD including spill prevent/report, community involvement, outreach events, and process BMPs. | Incorporate storm water info on CNIC/Facebook webpage. Program webpage to allow viewers to navigate through storm water materials. Monitor number of times the website has been viewed. | (1) Develop content for websites and coordinate it with PAO/ IT.<br><br>(2) Establish visitor counter for website(s).<br><br>(3) Review websites annually. | There has not been a permanent PAO since the SWMP was finalized. This requirement is in the planning stages with the newly hired PAO in June 2016 and should be completed by the end of the current FY. | Coordination with a permanent PAO still could not be established during 2017. Contact has been established with the NBSD PAO and collaboration on website counters and content will begin during 2018. |

| Minimum Control Measure #2: Public Involvement/Participation | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 2.1** Adopt the Industrial storm water program's Pre-Rain Inspection notifications. This includes sending an email to remind facility POCs to conduct "regular housekeeping" and other BMPs when NOAA forecasts a 50% chance or greater for precipitation. A similar notice will be sent to a limited group within the municipal areas. | Identify municipal facilities that can benefit from pre-rain inspections and can take proactive measures that may improve storm water quality. Train facility POCs on action to take for Pre-Rain procedures. Email tenants when NOAA forecasts a chance of precipitation 50% or greater. | (1) Identify municipal POCs to participate in Pre-Rain program.<br>(2) Train facility POC on required Pre-rain actions.<br>(3) Maintain Pre-rain email notifications that were sent to all identified municipal POCs for all NOAA forecasts chance of rain 50% or greater. | The annual facility inspections have identified some facilities that will be participating in the water program's pre-rain inspections. By the end of the current FY, select building monitors will be included in the pre-rain email notifications delivered to industrial operators. | No municipal facility building monitors have been added to the pre-rain inspection email distribution list as of 2017. As of 2017, several municipal facility building monitors have been added to the weather update email distribution list. This pre-rain notification serves as a reminder for the municipal tenants to ensure that facility-wide municipal BMPs are being properly implemented on site. |

| Minimum Control Measure #2: Public Involvement/Participation | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 2.2** Utilizing established websites (i.e. MCM 1.6), participate, develop, and advertise on-base and neighborhood community clean-up events. | Work with PAO to identify existing cleanup events and develop way to increase participants (e.g. advertise on websites). | (1) Identify cleanup events (day/time/loc).<br><br>(2) Promote events. | Effort to complete this task will begin in FY17. | NBSD Environmental participated and promoted the NBSD Main Street Clean-Up, Earth Day NBSD Clean-Up, Main Street Clean-Up, Annual NASSCO Neighborhood Clean-Up, and National Clean-Up Day. |

| Minimum Control Measure #2: Public Involvement/Participation | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 2.3** Utilizing established websites (see MCM 1.6) and post SWMP online. Within SWMP, provide a point of contact to enable feedback mechanism from public. Inform tenants during site inspections about SWMP and where they can find it. | Notify Tenants/Patrons via email or face-to-face interaction about SWMP updates and changes. | (1) Coordinate with PAO/IT to allow public comment on SWMP on internet. | There has not been a permanent PAO since the SWMP was finalized. This requirement is in the planning stages with the newly hired PAO in June 2016 and should be completed by the end of the current FY. | The draft 2016 Storm Water Management Plan was released for public review and comment on 26 September 2016, with comments due by 26 October 2016 on the CNIC Public Website NBSD Environmental page. No comments were received. |
| | We will encourage public involvement to clean-up areas by attending/participating in public events such as NBSD "Go Green" Booth. | (1) Identify storm water issues that a group effort can address.<br>(2) Develop partners to come together.<br>(3) Provide information during outreach events. | Effort to complete this task will begin in FY18. | Effort to complete this task will begin in FY18. |

| Minimum Control Measure #3: Illicit Discharge Detection and Elimination | | | | |
|---|---|---|---|---|
| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 3.1** Develop, provide and promote an Illicit Discharge Hotline. | Provide a number for the public to call and ensure phone is reachable and responsive. | (1) Maintain NBSD Environmental Illicit Discharge program and phone number.<br>(2) Track total calls to phone number.<br>(3) Work with PAO to increase audience and awareness of program. | The Environmental phone number for illicit discharges is provided to the public with the distribution of tri-folds, afloat guide, and storm water training sessions. The illicit discharge hotline will be placed on the web by end of current FY. | The Environmental phone number for illicit discharges is provided to the public with the distribution of tri-folds, afloat guide, and storm water training sessions. The Afloat Guide as well as the 2016-2017 SWMP containing contact numbers could be found on the CNIC NBSD website. |

| Minimum Control Measure #3: Illicit Discharge Detection and Elimination | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 3.2** Public oil recycling and HW turn-in program. | Accept oil and HW from NBSD tenants and patrons. | (1) Verify and maintain Autoport oil recycling service through FY 18.<br>(2) Contact Autoport to determine quantities collected.<br>(3) Inform tenants of service during facility inspections. | NEX Autoport actively accepts approximately 20-25 gallons per month of used oil for recycling. MWR Auto Hobby actively accepts 250-300 gallons per month of used oil for recycling. | NEX Autoport continues to actively accept approximately 20-25 gallons per month of used oil for recycling. MWR Auto Hobby continues to actively accept 250-300 gallons per month of used oil for recycling. Municipal tenants whose operations involve oil and HW were informed of the public oil recycling and HW turn-in program during the annual municipal facility inspections. |

| Minimum Control Measure #3: Illicit Discharge Detection and Elimination | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 3.3** Create a better understanding of the storm water conveyance system at NBSD by verifying, and updating outfalls and storm sewer maps. Actively inspect and update outfall and storm sewer condition. Request maintenance funds for storm sewers that are inoperable or need maintenance. | Inventory and create a Storm Sewer System Map of NBSD. Show location of all known storm sewers and outfalls and the names and locations of all waters of the US that receive discharge from those outfalls. | (1) Maintain and review past records showing Illicit Connections/Illicit Discharges and records mapping out storm water conveyance systems.<br>(2) Schedule and track map changes and incorporate semi-annual inspections into this overall effort.<br>(3) NBSD Environmental will conduct semi-annual surveys of 80 outfalls. | The illicit connection - illicit discharge (ICID) survey was last performed between May and August 2012 by the Alliance Compliance Group Joint Venture under contract number N62473-06-D-2206, Task Order No. 0109. The ICID survey investigated facilities constructed or modified between January 2007 and March 2011. Additionally data was reviewed from the ICID survey performed between May and June 2007 by MARRS Services, Inc. under contract number N68711-03-D-5103, Delivery Order 0048. The ICID survey investigated facilities on NBSD that were constructed or modified from FY2002 through March 2007. NBSD Environmental continues to conduct semi-annual surveys on municipal outfalls. | On Sept. 20, 2017, Amec Foster Wheeler performed an assessment of a DLA Scrap Compound/Recycling Center storm drain line which was determined to be clogged by a sandbag. Additionally, a non-storm water discharge at outfall 72 was traced to air conditioner condensate and watering of plants at the NEX. NBSD Environmental continues to conduct semi-annual surveys on municipal outfalls. |

| Minimum Control Measure #3: Illicit Discharge Detection and Elimination | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 3.4** During NBSD Outreach Events (MCM 1.3), provide materials to target audiences on pertinent information regarding the hazards that are generally associated with illegal discharges and improper disposal of waste. | During Outreach Events, distribute NBSD handouts on information regarding the hazards that are generally associated with illegal discharges and improper disposal of waste. | (1) Appoint staff to maintain storm water material (i.e. brochures, fliers) and provide materials to personnel manning booth.<br>(2) Present information at hosted booth during outreach events.<br>(3) Track the number of people visiting booth from FY 16 to FY 18.<br>(4) Provide Pollution Prevention/Storm Water Awareness message during pre-movie commercials for on-base movies.<br>(5) Track the number of movies played during year and approximate number of personnel in attendance. | On 27 August 2016, during Operation Clean Sweep, there were 65 people that visited the NBSD Environmental outreach booth. In September 2016, at the MCAS Miramar Air Show, there were 287 people that visited the NBSD Environmental outreach booth. The Base Movie Theatre presents a Storm Water Slide during movie previews that plays approximately 80-100 movies on a weekly rotation with an average audience of 30-50 people during weekdays and 300-400 people during weekends. | NBSD Environmental Staff was unable to keep a firm attendance tally for the public outreach booth during FY17 due to the short staffing of the NBSD Environmental office. Efforts will be made in FY18 to maintain accurate attendance tallies for outreach events. |

| Minimum Control Measure #4: Construction Site Runoff Control | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 4.1** Perform National Environmental Policy Act (NEPA) review of all construction projects. | All NEPA documents are signed by appropriate SMEs and leadership. Prior to construction, determine size and impact of construction project. Implement construction requirements for larger (>1 acre) and smaller (<1 acre) projects. These are provided to the contractor to implement prior to construction. | **Projects >1 Acre** (1) Verify Construction General Permit requirements and Site Specific SWPPPs are assigned. **Projects < 1 Acre** (2) Verify NBSD BMPs for Construction Activities Less Than One Acre of Land are assigned. | On-going effort. | On-going effort. |

| Minimum Control Measure #4: Construction Site Runoff Control | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 4.2** Monitor all construction sites to verify requirements are being implemented. | Perform routine monitoring for all construction activities. | (1) NAVFAC Construction Manager (CM) conducts site visits at least once per week to ensure SWPPP or NBSD Policy is being implemented. | Construction managers typically perform a site visit once a week. They also work as a team with the Engineering Technician (ET) on the project, who inspects the site more often, roughly 2-3 times per week. These inspections are not recorded, and there is not a form that is completed. However, the contractor submits daily production and daily QC reports to us, and if there are any comments from the site visit the CM or ET will add them to the QC report for that day. During these visits the CM and ET are looking for contract compliance, which includes SWPPP and NBSD policies. | Construction managers typically perform a site visit once a week. They also work as a team with the Engineering Technician (ET) on the project, who inspects the site more often, roughly 2-3 times per week. These inspections are not recorded, and there is not a form that is completed. However, the contractor submits daily production and daily QC reports to the CM or ET, and if there are any comments from the site visit the CM or ET will add them to the QC report for that day. During these visits the CM and ET are looking for contract compliance, which includes SWPPP and NBSD policies. |
| | | (2) Conduct routine site visit to ensure SWPPP or NBSD Policy is being implemented. | NBSD Environmental continue to regularly visit all construction activities ensuring SWPPP and NBSD policies are fully implemented. | Construction sites were visited by NBSD Environmental staff quarterly throughout 2017. Additionally, construction sites were visited as complaints were received or during other environmental inspections performed on base. |
| | | (3) Run semi-annual SMARTS queries for larger sites. | NBSD Environmental has regularly run SMARTS queries for larger construction sites to ensure an NOI for a CGP has been submitted and adhered to. | NBSD Environmental continues to regularly run SMARTS queries for larger construction sites to ensure an NOI for a CGP has been submitted and adhered to. |

| Minimum Control Measure #5: Post Construction Runoff Control | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **Method A: California General Construction Permit** | | | | |
| **MCM 5.1 Design & Planning:** It is mandated by DOD Policy (UFC 3-210-10) that construction or expansion of buildings or impervious area exceeding 5,000 Square Feet incorporate LID to reduce runoff to pre-construction (natural) hydrologic conditions for up to the 24-hour 95th percentile storm event. This is part of the NEPA process for all CONST projects on NBSD. | Incorporate LID during the design and planning phase to meet DOD requirements. If applicable, determine the requirements and plan for any recurring maintenance. | (1) Determine size of construction activity.<br>(2) For > 5,000 SF, require LID to meet DOD policy.<br>(3) Verify LID features in design.<br>(4) RFI for maintenance cost. If applicable, request recurring maintenance or service contract to fund future maintenance. | On-going effort during NEPA review. Various LID features located throughout wet and dryside of NBSD. | On-going effort during NEPA review. Various LID features located throughout wet and dryside of NBSD. An inventory of LID features as well as facility specific structural BMPs will be complied in 2018. |
| **MCM 5.2 Construction:** During routine site inspections, verify LID is being built to design specs. | Monitor construction sites. | (1) Perform routine site visits.<br>(2) Verify LIDs are built per design. | On-going effort during CM and ET inspections. | On-going effort during CM and ET inspections. |

| Minimum Control Measure #5: Post Construction Runoff Control | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **Method A: California General Construction Permit** | | | | |
| **MCM 5.3 Post-Construction:** Evaluate LID features for effectiveness and maintenance requirements during routine inspections. Evaluate sites for potential future LID implementation. | Monitor sites annually and provide feedback for maintenance or incorporation of new LID. | (1) Record site visit to LID feature in MFMS. (2) Maintenance requirements or LID needs are noted. (3) Coordinate with FMS to generate work request to fund maintenance. | On-going effort during annual municipal facility inspections. Various LID features located throughout wet and dryside of NBSD documented site visits in MFMS. | On-going effort during annual municipal facility inspections. Various LID features located throughout wet and dryside of NBSD site visits are documented in MFMS. |

| Minimum Control Measure #6: Pollution Prevention/Good Housekeeping | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 6.1** During facility inspections, develop and establish facility specific BMPs for municipal facilities. | Facility specific BMPs are determined for each municipal facility during facility inspection. | (1) Identify facility BMPs and train facility POC on BMPs.<br>(2) Update BMPs during each facility inspection as needed. | On-going effort site visits include all elements to be reviewed. | On-going effort site visits include all elements to be reviewed. |

| Minimum Control Measure #6: Pollution Prevention/Good Housekeeping | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 6.2** Maintain storm drain operability. | Visually inspect storm drains during facility inspections to ensure they are operable (i.e. not full of sediment or other obstructions). | (1) Identify and track inoperable storm drains in MFMS.<br>(2) Make notifications and track progress to return storm drains to operability in MFMS.<br>(3) Encourage facilities to take ownership of storm drains (i.e. training and understanding Base tenants requirements of 200' perimeter maintenance.) on their site. | Facility Building Monitors are trained quarterly, site media managers are trained monthly, storm water e-mail notifications are sent regularly, and site visits are performed annually to train personnel and reinforce the NBSD Base policy of 200' perimeter responsibilities for storm drain/site BMP requirements. | Facility Building Monitors are trained quarterly, site media managers are trained monthly, storm water e-mail notifications are sent regularly, and site visits are performed annually to train personnel and reinforce the NBSD Base policy of 200' perimeter responsibilities for storm drain/site BMP requirements. |

| Minimum Control Measure #6: Pollution Prevention/Good Housekeeping | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 6.3** Assess facility for exposed materials. Coordinate with facility POC, Recycling, DRMO, and HAZWASTE Facility to remove exposed materials. | Conduct annual inspection and work with Environmental media partners to maintain situational awareness for facilities. Coordinate with appropriate facilities to remove exposed materials. | (1) Identify and track status of exposed materials during inspections. (2) Inform facility POC on who to coordinate with to remove exposed materials. | Municipal sites are visited annually to reinforce site BMP requirements. | NBSD Environmental staff continued to visit municipal facilities annually. A purpose of the annual municipal facility inspections is to provide training to the facility building monitor regarding storm water BMPs and spill response procedures, if the facility's primary function involves the handing of HW. This effort is aimed to reduce the potential for pollutants in storm water runoff from municipal facilities. |

| Minimum Control Measure #6: Pollution Prevention/Good Housekeeping | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 6.4** Liquid materials storage and management. | Inspect above ground storage tanks monthly to ensure employment of proper storage procedures (e.g. ensure berm valves are closed for containment areas). | (1) Verify that inspections are occurring on a monthly basis. | Above ground storage tanks are required at a minimum to be inspected by Tenant commands, normally performed weekly if associated with a Health permit and monthly by NBSD Environmental. | Above ground storage tanks are continue to be inspected by Tenant commands, normally performed weekly if associated with a Health permit, and monthly by NBSD Environmental. Coordination of the NBSD Environmental monthly inspections is done through the HW program. |
| | Municipal facilities that have HW permits are inspected monthly by HW program. HW inspection support proper storm water protection procedures are employed. | (1) Verify that inspections are occurring on a monthly basis. | HW inspections are on-going monthly at the 90-day accumulation areas. | HW inspections are on-going monthly at the 90-day accumulation areas. |

| Minimum Control Measure #6: Pollution Prevention/Good Housekeeping | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 6.5** Incorporate pre-existing SWPPP BMPs for facilities that were previously industrial but now designated as municipal. | Determine all facilities previously assigned as industrial, in the 2013 Storm Water Pollution Prevention Plan, and are currently re-designated as municipal. | (1) Use 2013 SWPPP to identify municipal facilities.<br><br>(2) Update SWPPPs for municipal facilities and incorporate BMPs to SWMP.<br><br>(3) Develop BMPs for facilities that do not have an existing SWPPP. | On-going effort to develop SWPPPs after completing a thorough facility inspection on all municipal facilities. | No SWPPPs were developed for any municipal facilities during FY17. Finding from the FY18 annual facility inspections will be reviewed to determine if any municipal facilities will have SWPPPs developed. Additionally, past guidance documents will be reviewed that can be used as the basis for the development of municipal facility specific SWPPPs. |
| **MCM 6.6** Perform Semi-annual dry weather monitoring. | As part of the SWMP Monitoring Plan, NBSD Environmental monitors 80% of outfalls and traces dry weather flows. | (1) Conduct Semi-Annual outfall inspections.<br>(2) Trace dry weather flows to source and eliminate if possible.<br>(3) Sample unknown/unauthorized flows per the Monitoring Plan. | Completed per the SWMP. | Completed per the SWMP. |

| Minimum Control Measure #6: Pollution Prevention/Good Housekeeping | | | | |
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| **Best Management Practices** | **Task** | **Measurable Goals** | **2016 Results and Updates** | **2017 Results and Updates** |
| **MCM 6.7** Issue Deficiency Notices (DN) as required. This enforcement measure can be taken for non-compliance with any and all MS4 requirements. | Perform inspections and issue deficiency notices to be internally monitored as needed. | (1) Conduct Inspections.<br>(2) Issue DNs for facilities that are not taking corrective action.<br>(3) Monitor results internally. | DNs have been issued during FY16 and were followed-up with additional training. | No DNs were issued during annual facility inspections. The primary focus of the annual facility inspections during 2017 was to establish a more robust building monitor list in addition to providing NBSD Environmental staff the opportunity to build rapport with the municipal facility building monitors. |

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**ATTACHMENT 9**

**SWMP REVISIONS/SUMMARY OF CHANGES**

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**SWMP REVISIONS/SUMMARY OF CHANGES**

| REVISION | REVISED BY | DATE |
|---|---|---|
| The Zone Inspection Schedule does not match dates annual facility inspections were performed and has been removed from SWMP. | Anthony Yamat | July 1, 2016 |
| Updated phone number to the NBSD Environmental office. | | |
| Revised annual facility inspection form for construction inspection applicability. | | |
| Inserted MFMS and provided a better definition of its purpose and contents throughout the SWMP. | | |
| MCM tables were revised to accurately reflect text changes in the main body. | | |
| Changed Navy ID discharge point for the Medical Center catch basin to 54 from 78 for accuracy. | | |
| Action matrix included as an Attachment to the SWMP. | | |
| The draft 2016 Storm Water Management Plan was released for public review and comment on 26 September 2016, with comments due by 26 October 2016 on the CNIC Public Website NBSD Environmental page: <http://www.cnic.navy.mil/regions/cnrsw/installations/navbase_san_diego/om/envenvironmen_support.html> No comments were received. | Anthony Yamat | October 26, 2016 |
| Portions of the SWMP main body text were updated for clarity. | Nicholas Popaditch | December 15, 2017 |
| Section 1.1 Storm Water Management Plan Organization was added to the SWMP. Existing language summarizing the organization of the SWMP was removed. | | |

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| The Adopt a Storm Drain program (MCM 2.2) was removed from the SWMP. The program was removed due to the facilities responsibility to maintain storm water BMPs within 250 feet of the facility boundary. The program promotes the idea that storm drain monitoring is optional when it is actually required. | Nicholas Popaditch | December 15, 2017 |
| The Certification Statement (Section 4.0) was removed from the SWMP. In future versions of the SWMP, the Certification Official Signature will only be required when submitting the SWMP to the SDWQRCB. | | |
| Column for 2017 Results and Updates was added to Attachment 8 Action Matrix. Text in action matrix updated to reflect main body of the SWMP. Additionally, the 2016 Results and Updates of Attachment 8 for MCM 3.3 was updated to reflect the ICID Survey performed in 2012. | | |
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| | | |

Attachment 9

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# NBSD ENVIRONMENTAL
# STORM WATER PROGRAM
# DECEMBER 15, 2017