NAVFAC
Naval Facilities Engineering Systems Command
NAVFAC Southwest

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

September 2022

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ACRONYMS AND ABBREVIATIONS

µS/cm	microSiemens per centimeter
ACSCE	Annual Comprehensive Site Compliance Evaluation
AST	aboveground storage tank
BMP	best management practice
CDO	Command Duty Officer
CFR	Code of Federal Regulations
CGP	Construction General Permit
CIWQS	California Integrated Water Quality System
CM	Construction Manager
CNIC	Commander, Navy Installations Command
CNRSW	Commander, Navy Region Southwest
COGEN	co-generation plant
DN	deficiency notice
DLA	Defense Logistics Agency
DOD	United States Department of Defense
ECATTS	Environmental Compliance Assessment, Training, and Tracking
EISA	Energy Independence and Securities Act
EMS	Environmental Management System
ENV	Environmental
EPA	United States Environmental Protection Agency
FMS	Facilities Maintenance Specialist
FY	fiscal year
HM	hazardous material
HW	hazardous waste
ICID	Illicit Connection and Illicit Discharge
ID	identification
IEPD	Installation Environmental Program Director
IT	Information Technology
KO	Contracting Officer
LID	low-impact development
MCM	minimum control measure
MEP	maximum extent practicable
MFIF	Municipal Facility Inspection Form
MFMS	Municipal Facility Master Spreadsheet
MGRF	Mission Gorge Recreational Facility
MS4	Municipal Separate Storm Sewer System
MWR	Morale, Welfare, and Recreation

NAL	numeric action level
NASSCO	National Steel and Shipbuilding Company
NAVFAC	Naval Facilities Engineering Systems Command
NAVFAC SW	Naval Facilities Engineering Command Southwest
Navy	United States Department of the Navy
NBSD	Naval Base San Diego (including Mainside Complex, NMCSD, MGRF)
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
NPDES	National Pollutant Discharge Elimination System
NTU	nephelometric turbidity unit
OPNAV	Office of the Chief of Naval Operations
PAO	Public Affairs Officer
Permit	Naval Base San Diego National Pollutant Discharge Elimination System (NPDES) Permit, Order No. R9-2013-0064 as amended by R9-2017-0009, NPDES No. CA0109169
PM	Project Manager
POC	point of contact
POL	petroleum, oil, and lubricant
PRD	Permit Required Document
PWD	Public Works Department
QIFVI	Quarterly Industrial Facility Visual Inspection
QSE	qualifying storm event
RCRA	Resource Conservation and Recovery Act
RLD	risk level designation
RV	recreational vehicle
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
SPCC	Spill Prevention Control and Countermeasures
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
UFC	Unified Facilities Code
UST	underground storage tank

Section 1 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. CA0109169, referred to in this plan 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. Per Permit requirements, the SWMP is to be reviewed annually and revised as necessary (NPDES Permit, Attachment L, Section III). A summary of changes to the SWMP will be prepared for each annual review. The identified inadequacies, and any planned efforts to address the identified inadequacies, will be maintained in the Annual Review Summary (Attachment 9) 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. Because no precise definition of MEP exists, NBSD is afforded maximum flexibility to manage its municipal storm water program to address local storm water issues. Furthermore, the SWMP serves as the central document that identifies, describes, assigns, and implements NBSD best management practices (BMPs) to control municipal discharges throughout NBSD 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 for these BMPs are specific to an MCM (where parameters are 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). BMP specifics are defined in the BMP Tables (Section 2) with support documents provided in Attachments 1 through 9 and Figures 1 through 3.

As part of the SWMP, the Permit also requires NBSD to submit a written plan for monitoring pollutants in non-industrial storm water discharges from municipal areas at 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, including listed pollutants, representative locations, and schedules for monitoring, are provided in Section 3 of the SWMP. The monitoring results that are prescribed in the Monitoring section will be submitted annually (via the California Integrated Water Quality System [CIWQS]) with the Storm Water Annual Report (NPDES Permit, Attachment E, Section IX(B)(3)).

1.1 STORM WATER MANAGEMENT PLAN ORGANIZATION

The SWMP has four sections with appropriate tables, figures, and attachments that describe 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 as follows:

- **Section 1.0: Background** – Describes the organization of this SWMP, the NBSD installation, Permit regulations, and the NBSD storm water program.

- **Section 2.0: Best Management Practices (BMPs) for the Six Minimum Control Measures** (MCMs) – Describes the requirements of each MCM and the plan for addressing those requirements.

- **Section 3.0: Observations, Monitoring, and Recordkeeping** – Provides details on 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** – Provides a list of sources used in the preparation of the SWMP.

- **Attachments**:

    1. Municipal Facility Inspection Form (MFIF) and POC Questionnaire
    2. Storm Water Discharge Visual Observations Form
    3. Non-Storm Water Discharge Visual Observations Form
    4. Pre-Rain Visual Inspection Checklist
    5. Municipal Facility Master Spreadsheet (MFMS)
    6. Municipal Separate Storm Sewer System (MS4) Best Management Practices (BMPs)
    7. MS4 Storm Water Solutions
    8. Action Matrix
    9. NBSD Municipal Facility Hotspot Assessment Form
    10. Hotspot Facility Inspection Form
    11. Construction Site Inspection Form
    12. SWMP Revisions/Summary of Changes

1.2 NBSD INSTALLATION DESCRIPTION

As described in the Permit, NBSD is composed of the following four complexes: Mainside Complex (NBSD), Naval Medical Center San Diego (NMCSD), Broadway Complex (including 750 and 1220 Pacific Highway), and Mission Gorge Recreational Facility (MGRF). With the exception of Broadway Complex, which does not have a system of conveyances consistent with the meaning in the Phase II storm water regulations, each of these sites are included in this SWMP.

1.2.1 Mainside Complex

NBSD proper is located at 32nd Street and Harbor Drive approximately 3 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, National City to the south and east, and San Diego Bay to the west. NBSD includes a base population of more than 35,000 military and civilian personnel with more than 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 the Regional Commissary Store, Naval Dental and Medical Clinics, Naval Legal Service Office Trial Judiciary, Environmental Preventive 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 two areas of the Mainside Complex are described as the wet side and the dry side. 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 11 berthing piers, a mole pier, a graving dock, two channels, and various quay walls that have a total shoreline measurement of approximately 5 miles.

1.2.2 Mission Gorge Recreational Facility

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 northern and northwestern edges of the property. Most of the natural habitat onsite occurs either within the San Diego River or along very steep slopes (25–50 percent or greater). Most 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 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).

1.2.3 Naval Medical Center San Diego

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 Navy teaching hospitals. It provides training for enlisted hospital corpsmen and junior medical officers and nurses. Surface drainage flows to the south and east through catch basins and curb inlets down concrete swales or end-of-pipe outfalls toward Switzer Creek on Florida Drive and west toward Interstate 5. NMCSD is designated as 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 1-3) with pink color coding for the three complexes within NBSD. Non-municipal areas are covered by NBSD Industrial Storm Water Pollution Prevention Plan (SWPPP).

1.4 NON-STORM WATER DISCHARGES

Section 1.4.1 lists categories of Permit-authorized non-storm water discharges. The list may be modified if the SDRWQCB or NBSD determines that any of the permitted discharge categories contain quantities of pollutants that may cause or contribute to an exceedance of a water quality standard(s). In this case, the discharge category 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 Department Office during normal business hours at (619) 556-1537, or the NBSD Command Duty Officer at (619) 247-8897/9247 for times outside normal business hours.

1.4.1 Authorized Non-Storm Water Discharges

The following non-storm water discharges are authorized:

1. Diverted stream flows
2. Rising ground waters
3. Uncontaminated ground water infiltration
4. Uncontaminated pumped ground water, and discharges from foundation drains, crawl space pumps, and footing drains
5. Springs
6. Drinking fountain water and emergency eye wash water
7. Atmospheric condensate, including refrigeration, air conditioning, and compressor condensate
8. Flows from riparian habitats and wetlands
9. Discharges from potable water sources
10. Discharges from individual residential car washing
11. Dechlorinated swimming pool discharges, excluding saline swimming pool discharges
12. Seawater infiltration, where the seawater is discharged back into the seawater source
13. Building fire suppression system maintenance discharges (e.g., sprinkler line flushing)

1.4.2 Conditions of Authorization

The authorized non-storm water discharges identified above are authorized only if all of the following conditions are satisfied:

1. The non-storm water discharges are not in violation of any SDRWQCB requirement.
2. The non-storm water discharges are not in violation of any municipal or federal agency ordinance or requirement.
3. BMPs are implemented for municipal areas to prevent or reduce the contact of non-storm water discharges with significant materials or equipment (as defined on page A-8 of the Permit) that would cause contaminant concentrations in discharges to exceed benchmarks or contribute to water quality degradation and minimize, to the MEP, the flow or volume of non-storm water discharges.

4. 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

Firefighting Discharges

Emergency firefighting 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, and possible training activities, such as those performed at the Training Support Center, will follow BMP MS4 001 (Attachment 6) for Firefighting Hydrostatic Testing discharges.

Fire Hydrant Flushing

Periodic flushing of fire hydrants, a necessary maintenance activity, is conducted by NAVFAC SW Utilities following BMP MS4 001 (Attachment 6) for Firefighting Hydrostatic Testing and Fire Hydrant Flushing discharges.

Utility Vault and Manhole Dewatering Discharges

Utility vaults and manholes located throughout NBSD can accumulate water from storm water, bay water intrusion, and groundwater infiltration. Discharges from the underground structures to surface waters will comply with all the specifications, limitations, provisions, and monitoring requirements within the Permit and the current NBSD Utility Vault Plan (NAVFAC SW, 2018).

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 and correct leaks (e.g., broken sprinkler heads) within a reasonable time of learning of the leak.
- Properly design and aim sprinkler heads.
- Eliminate irrigation during precipitation events.

1.5 COMMANDER, NAVY INSTALLATIONS COMMAND, NAVAL FACILITIES ENGINEERING COMMAND, PUBLIC WORKS DEPARTMENT, AND ENVIRONMENTAL COMPLIANCE DEPARTMENT OVERVIEW

COMMANDER, NAVY INSTALLATIONS COMMAND

Commander, Navy Installations Command (CNIC) provides uniform program, policy, and funding management and is the authority responsible for all Navy shore installations under the Chief of Naval Operations. Naval Facilities Engineering Systems Command (NAVFAC) is a critical enabler for CNIC in executing its responsibilities and mission success.

CNIC is responsible for upkeep and readiness of all Navy bases and other shore installations. It generates requirements for all construction, maintenance, and support within six domestic naval regions and five regions overseas. CNIC is partnered with NAVFAC to support delivery of shore installation facilities, engineering products, and services. NAVFAC further supports CNIC and naval installations with its

numerous Public Works Departments (PWDs) throughout the world that serve as the forward-deployed delivery point for facilities engineering and acquisition support.

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND (NAVFAC)

NAVFAC is a global military command with a headquarters element and component commands that work together as one team to provide facilities engineering, contingency engineering, and expeditionary support to the Navy, Marine Corps, various federal agencies, and other United States Department of Defense (DoD) clients. NAVFAC manages the planning, design, and construction of shore facilities for Navy activities worldwide.

PUBLIC WORKS DEPARTMENT

NAVFAC uses PWDs as service delivery platforms to provide facilities engineering and acquisition support to installations and their tenant commands. PWDs provide diverse facilities maintenance, acquisition, transportation, utilities, housing, engineering, environmental division, and life cycle management services.

ENVIRONMENTAL COMPLIANCE DEPARTMENT

The NBSD Environmental Compliance Department manages efforts to ensure that NBSD maintains compliance with Installation environmental permits. The department is composed of the following environmental media groups: Air Quality, Hazardous Waste (HW)/Resource Conservation and Recovery Act (RCRA), Tanks, National Environmental Policy Act (NEPA), Environmental Management System (EMS), and Water Quality. The Installation Environmental Program Director (IEPD) is the lead representative and manages department personnel. The Water Program consists of an overall Water Program Lead and support personnel. The Water Program Lead is responsible for developing and updating the SWMP, implementing the timetables for the six MCMs, and ensuring that the observations and sampling requirements 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 into the SWMP established activities from the industrial program that will benefit the municipal program. Additionally, programs from other environmental media groups have been integrated into the SWMP to ensure maximum coverage and utilization of resources.

Section 2 Best Management Practices for the Six Minimum Control Measures

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, protect water quality, prevent or reduce the contact of non-storm water discharges with significant materials or equipment, and minimize, to the MEP, the flow or volume of non-storm water discharges. In accordance with 40 Code of Federal Regulations (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 measurable goals that fulfill the requirements of the following 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
6. Pollution Prevention and Good Housekeeping

In this section, each MCM category is addressed, starting with Permit requirements and then providing 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

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 employees (military, civilians, contractors, and retailers), patrons (military family members and others with Base access), and occupants (those who live on Base) about actions and practices they can take to reduce pollutants in storm water runoff. The program aims to provide awareness and knowledge to these target audiences about activities that have potential adverse effects on water quality so that they can prevent these activities and thereby improve overall water quality.

Background

MCM 1 uses six BMPs (identified as MCMs 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 consists 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: Development of 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 to municipal facilities are an effective BMP for public education and outreach on storm water impacts because they provide one-on-one interaction between NBSD Environmental Department staff and "tenants." The term tenant, as used throughout this SWMP, is defined as the municipal facility point of contact (POC), also known as the building monitor. The tenant at each facility can assist the Water Program and directly distribute educational materials to employees, staff, and customers to improve awareness of and knowledge about storm water quality. The intent of the facility visits is to maintain updated building and POC information, record facilities' storm water structures and runoff flows on maps, and determine baseline needs (environmental training and storm water requirements). Routine municipal facility inspections will be documented on the Municipal Facility Inspection Form (MFIF) in Attachment 1.

So far, facility visits have been conducted annually (to the extent possible) for all municipal-designated tenants located on NBSD. In 2020, a MS4 Hotspot Assessment was performed across the main base and satellite facilities. An initial assessment was conducted using facility knowledge and records to prioritize potential hotspots for physical visits. The initial survey identified the majority of municipal facilities as having low risk of impacting water quality. Twenty-seven facilities were deemed to have a potential elevated threat to water quality and were assessed in person. Assessments were performed in person using a modified version of the Center for Watershed Protection Municipal Hotspot Facility Assessment Form (Attachment 9) and facility operator interviews. Eight hotspots were identified by tallying a combination of the assessment form score, facility operations and practices, proximity to receiving water, and any other factors that could increase risk of pollutant discharges. Hotspot facilities are identified in Table 1. Table 1 is organized by facility-specific SWPPP Section identifier (ID). It identifies facilities by facility name and associated building numbers. Facility site maps are provided at the end of each facility-specific SWPPP. Generally, a score of 14 or higher on the assessment form would indicate that the facility poses a higher threat to water quality and is designated a Hotspot; however, the assessment team was free to use discretion in some cases to designate certain facilities as Hotspots even when the assessment form score was lower than 14. The identified hotspot facilities will be inspected quarterly and the inspections documented on the Municipal Hotspot Facility Inspection Form (Attachment 10). Facility operator BMP implementation training will be performed at the time of each facility inspection. Operators will be sent regular weather notification emails to prepare for forecasted rain events and a specific list of BMPs to follow for each facility. Hotspot status for all facilities will be reviewed annually and hotspots may be added or removed depending on changes at each facility.

The NBSD Environmental Department will interview the POC(s) for each hotspot facility using a questionnaire addendum (Attachment 1). The intent of the interview(s) is to identify environmental training requirements and target audiences, and to determine whether the facility implements appropriate BMPs. The interview will also provide tenants with an opportunity to ask environmental questions or provide feedback on the program. For example, if the tenant needs information on how to dispose of waste, the NBSD Environmental Department has prepared and will distribute (upon request) waste disposal information sheets. If the tenant instead requests information on conducting turn-in of government items (e.g., printers, metal shelving, etc.), then the NBSD Environmental Department will provide standard operating procedures (SOPs) and conduct training. 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) documents municipal site visits, interactions with building monitors, and facility inspections performed.

For construction sites, Water Program personnel will conduct routine inspections to provide oversight and guidance with construction site BMP implementation. The Construction Site Inspection Form

(Attachment 11) will be used for these sites. In this way, construction sites will be incorporated into the SWMP program. These routine visits serve the same purpose as facility visits to municipal facilities.

Table 1. Hotspot Index by SWPPP Section

Facility-Specific SWPPP Section	Facility Name	Building No.
1	Defense Logistics Agency Scrap Compound	3655
2	Defense Logistics Agency Warehouse	66, 3483, 3581
3	Navy Exchange Homegoods	3379
4	Admiral Baker Golf Course	141
5	Auto Skills Center	3234
6	32nd Street Gas Station	337, 3122, 3272, 3341
7	Hazardous Material Minimization Center	3322
8	Naval Medical Center San Diego Loading Docks/Storage/COGEN	1H, 7, 8, 23, 33, 35, 36

COGEN = co-generation plant

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2.1.1.1 Defense Logistics Agency Scrap Compound (Building 3655)

The Defense Logistics Agency – Disposition Services Scrap Compound (DLA Scrap Compound; Figure 2.1.1.1-1) is in the south-central portion of the Base, west of Cummings Road and north of Mole Road. The facility is used to separate, store, and sell scrap metal, electronic waste, surplus materials and equipment, and used tires. Incoming scrap materials are weighed at a scale outdoors on the northern side of Building 3655. A concrete containment area on the northern side of the facility is used to segregate and store recyclable materials. Building 3655, in the southwestern corner of the facility, is used to store electronic waste. Sergio Rhoads (619-512-0591) is the point of contact for the facility.

A scrap and sellable materials sorting and storage area is on a concrete containment area on the northern side of the facility. Scrap materials that are delivered to the DLA Scrap Compound through the entrance gate at the southwestern corner of the facility are unloaded from trucks on the northern side of Building 3655. Scrap metal materials are segregated and stored within the concrete containment area. Significant materials, including gasoline, diesel fuel, and oils, are not accepted at the facility and are removed from items prior to acceptance.

Storm water runoff from the concrete containment area flows in a southeasterly direction into a drain located on the southeastern side of the containment area, flows into a sump, and is automatically pumped into an 8,000-gallon aboveground storage tank (AST) in the northeastern corner of the facility, until the AST is full. Storm water runoff accumulated in the AST is released to the sanitary sewer system beginning 24 hours after the end of the rain event. When the AST is full, the pump automatically turns off and additional storm water runoff may overflow the sump onto the paved surface adjacent to the concrete containment area and flow in a southeasterly direction into a storm drain in the southeastern corner of the facility. The catch basin in the southeastern corner of the facility is equipped with an Ultra-Grate Guard® catch basin grate filter designed to eliminate trash and reduce the amount of sediment and oil and grease entering the storm water conveyance system. The Ultra Grate Guard® is maintained by facility personnel, as necessary. Storm water runoff from the southern portion of the facility flows in a southeasterly direction into a storm drain located in the southeastern corner of the facility.

Significant materials and their associated wastes are handled and stored at the DLA Scrap Compound using the following methods:

- Aluminum, cast iron, copper and steel wire, stainless steel, light steel, scrap machinery (heavy steel), motors/copper bearings, miscellaneous metals, scrap metal, steel furniture, appliances, used tires, and pipes are transferred using dollies and forklifts into a concrete containment area north of Building 3655.
- Precious metals, including zinc, brass, copper, and lead, are stored inside 55-gallon drums that are transferred into locked conex storage containers indoors on the southwestern side of Building 3655.
- Electronic scrap and used tires are transferred under temporary tents located outdoors east of Building 3655 until the materials are sold, disposed of, or relocated.
- Electronic scrap, designed for outdoor use, is unloaded from trucks using a forklift and stored outdoors on wooden pallets in the southeastern corner of the facility, east of the tents storing electronics and tires.

- Incoming materials and equipment are unloaded from trucks using forklifts and may be temporarily staged outdoors, west of Building 3655, prior to being stored within the concrete containment area, inside Building 3655, or within the cover of the tents east of Building 3655.
- Outgoing materials and equipment are loaded onto trucks by forklift on the southern side of the concrete containment area.
- Scrap metal is placed inside an uncovered scrap metal rolloff bin outdoors within the concrete containment area north of Building 3655.
- Cardboard is placed inside uncovered rolloff bins outdoors on the western end of the facility.
- Trash is placed inside an uncovered trash rolloff bin east of the concrete containment area.

Best Management Practices

Best management practices (BMPs) are presented in Tables 2.1.1.1-1 through 2.1.1.1-3. The tables identify the relationship between three major activities: good housekeeping, material loading and unloading, and material storage. For each activity, routes of exposure, significant materials, and BMPs are presented. The BMPs used at NBSD come from Appendix E, Best Management Practices, of the *Naval Base San Diego Storm Water Pollution Prevention Plan* (MMEC Group, 2021). The following BMPs are applicable to DLA Scrap Compound:

- Perform Regular Cleaning (003)
- Train Employees to Properly Dispose of Waste (009)
- Store Waste and Recycling Materials in Proper Containers (016)
- Keep Equipment and Vehicles Clean (028)
- Properly Dispose of Obsolete Equipment, Inoperable Vehicles, and Surplus Materials (032)
- Check Vehicles and Equipment for Leaks (033)
- Park Vehicles on an Impervious Surface (037)
- Use Drip Pans under Leaking Equipment (044)
- Properly Store Containers (054)
- Do Not Store Used Parts or Containers Directly on Ground (057)
- Store Liquids and Significant Materials within a Building or Covered Area (061B)

The SWPPP will be revised on the basis of changes to activities, routes of exposure, significant materials, or BMPs. Table 2.1.1.1-4 documents deficiencies and corrective actions.

Table 2.1.1.1-1
BEST MANAGEMENT PRACTICES FOR GOOD HOUSEKEEPING AT THE DLA SCRAP COMPOUND (BUILDING 3655)

Routes of Exposure	• Direct exposure of material • Accumulation of trash and sediment • Spills or leaks during material transfer, or during storage and disposal of waste
Significant Material	• Metals • Electronic waste • Used tires • Trash
Best Management Practices	☐ Check vehicles for leaks when they arrive at the facility. ☐ Store significant materials under cover when possible. ☐ Do not store significant materials directly on the ground. ☐ Identify the location of spill control equipment. ☐ Do not dispose of used or leftover materials in the sanitary sewer or storm drains. ☐ Use dry methods to clean up drips and spills on the floor. ☐ Promptly dispose of used absorbent materials. ☐ Keep equipment clean and in good condition. ☐ Clean work area at end of the day's activities. ☐ Dispose of trash in trash cans, recyclable materials in recycling bins, and metal debris in the scrap metal hopper.

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Table 2.1.1.1-2
BEST MANAGEMENT PRACTICES FOR MATERIAL LOADING AND UNLOADING AT THE DLA SCRAP COMPOUND (BUILDING 3655)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer
Significant Material	• Metals • Electronic waste • Used tires • Trash
Best Management Practices	□ Place trash in trash cans or the covered trash dumpster. □ Cover the trash dumpster after use. □ Check the covered trash dumpster for leaks and replace if necessary. □ Keep material loading and unloading areas clean.

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Table 2.1.1.1-3
BEST MANAGEMENT PRACTICES FOR MATERIAL STORAGE AT THE DLA SCRAP COMPOUND (BUILDING 3655)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer
Significant Material	• Metals • Electronic waste • Used tires • Trash
Best Management Practices	☐ Regularly check stored vehicles and equipment for leaks. ☐ Store trash in the covered trash dumpster and make sure the lid is in place. ☐ Store uncovered trash cans under cover. ☐ Regularly inspect the outdoor trash dumpster and drums for corrosion or deterioration. ☐ Train employees in proper storage measures and spill cleanup. ☐ Promptly cleanup spills. ☐ Routinely sweep parking and storage areas. ☐ Pick up scrap metal found on the ground and place in the scrap metal bin. ☐ Pick up trash and place in trash cans.

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TABLE 2.1.1.1-4
FACILITY FINDINGS AND CORRECTIVE ACTIONS

Date	Deficiency Description/ No Deficiency Statement	Corrective Action	Observer

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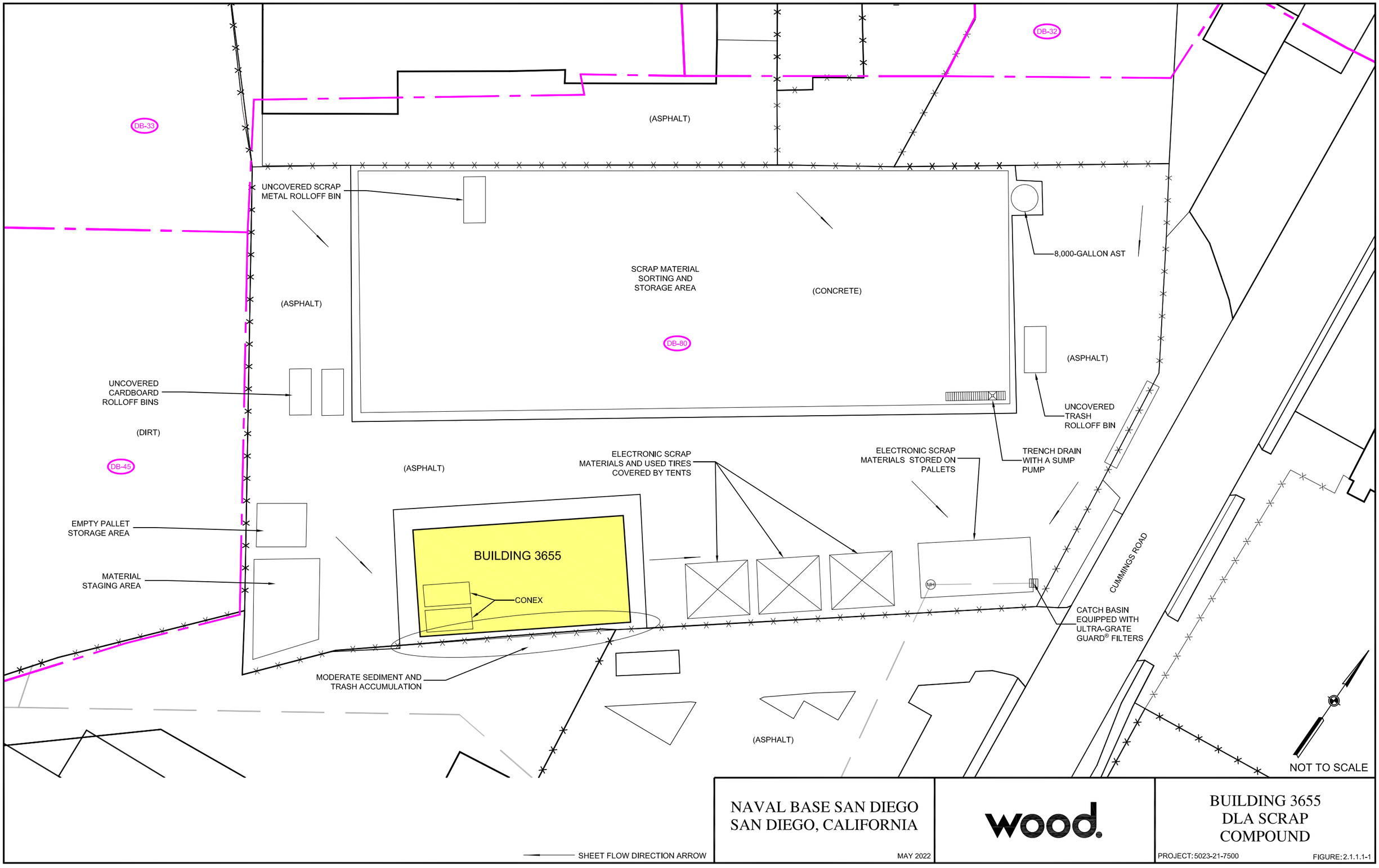

NAVAL BASE SAN DIEGO
SAN DIEGO, CALIFORNIA

MAY 2022

wood.

BUILDING 3655
DLA SCRAP
COMPOUND

PROJECT: 5023-21-7500

FIGURE: 2.1.1.1-1

2.1.1.2 Defense Logistics Agency Warehouse (Buildings 66, 3483, and 3581)

The Defense Logistics Agency Warehouse (DLA Warehouse; Figure 2.1.1.2-1) is on Cummings Road within NBSD. It is to the west of the Hazardous Material Minimization Center (Building 3322). This facility is used to process and dispose of hazardous and significant materials from activities related to base operations. Arturo Navarro (619-512-0500) is the point of contact for the facility.

The goal of the DLA Warehouse is to get the most use out of the hazardous and significant materials, and then dispose of the materials in a manner that minimizes both cost and environmental risk. Materials are either stored on this facility or sent to the Defense Logistics Agency – Scrap Compound to be sorted.

Storm water runoff from the DLA Warehouse flows over land into storm drain inlets east and west of Building 3581, and east and west of Building 3483, with multiple outfall locations that all convey to Paleta Creek.

Significant materials and their associated wastes are handled and stored at the DLA Warehouse using the following methods:

- Miscellaneous materials are stored in covered areas on wooden pallets west of Buildings 66 and 3581 and east of Building 3483. If there is an overflow of materials, the excess is staged uncovered on pallets adjacent to the covered storage areas previously mentioned.
- Diesel fuel is stored inside Building 3581.
- Trash is placed inside an uncovered trash rolloff bin southeast of Building 66.

Best Management Practices

Best management practices (BMPs) are presented in Tables 2.1.1.2-1 and 2.1.1.2-2. The tables identify the relationship between two major activities: material loading and unloading, and material storage. For each activity, routes of exposure, significant materials, and BMPs are presented. The BMPs used at NBSD come from Appendix E, Best Management Practices, of the *Naval Base San Diego Storm Water Pollution Prevention Plan* (MMEC Group, 2021). The following BMPs are applicable to DLA Warehouse:

- Perform Regular Cleaning (003)
- Train Employees to Properly Dispose of Waste (009)
- Store Waste and Recycling Materials in Proper Containers (016)
- Keep Equipment and Vehicles Clean (028)
- Properly Dispose of Obsolete Equipment, Inoperable Vehicles, and Surplus Materials (032)
- Check Vehicles and Equipment for Leaks (033)
- Park Vehicles on an Impervious Surface (037)
- Use Drip Pans under Leaking Equipment (044)
- Properly Store Containers (054)
- Do Not Store Used Parts or Containers Directly on Ground (057)

- Store Liquids and Significant Materials within a Building or Covered Area (061B)

The SWPPP will be revised on the basis of changes to activities, routes of exposure, significant materials, or BMPs. Table 2.1.1.2-3 documents deficiencies and corrective actions.

Table 2.1.1.2-1
BEST MANAGEMENT PRACTICES FOR MATERIAL LOADING AND UNLOADING AT THE DLA WAREHOUSE (BUILDINGS 66, 3483, AND 3581)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer
Significant Material	• Diesel Fuel • Metals • Trash
Best Management Practices	□ Conduct transfers of liquids between containers indoors or under cover. □ Minimize the time that 55-gallon drums are stored outdoors awaiting transfer. □ Place containers of liquid in secondary containment when not in use. □ After transferring liquids, check the ground for residue. If residue is present on the ground, clean using dry methods. □ Inspect and maintain the berm for the hazardous substance storage area. □ Place trash in trash cans or the covered trash dumpster. □ Cover the trash dumpster after use. □ Check the covered trash dumpster for leaks and replace if necessary. □ Keep material loading and unloading areas clean.

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Table 2.1.1.2-2
BEST MANAGEMENT PRACTICES FOR MATERIAL STORAGE AT THE DLA WAREHOUSE (BUILDINGS 66, 3483, AND 3581)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer
Significant Material	• Diesel Fuel • Metals • Trash
Best Management Practices	□ Park vehicles awaiting repair in the covered vehicle storage area. □ Regularly, check stored vehicles and equipment for leaks. □ Place drip pans under leaking vehicles awaiting repair. □ Store containers of liquid stored outdoors in the bermed and covered hazardous substance storage area. □ Store trash in the covered trash dumpster and make sure the lid is in place. □ Store uncovered trash cans under cover. □ Regularly, inspect the hazardous substances storage area for leaks or spills. □ Regularly, inspect the outdoor trash dumpster, drums, and flammable materials storage lockers for corrosion or deterioration. □ Train employees in proper storage measures and spill cleanup. □ Promptly cleanup spills. □ Routinely sweep parking and storage areas. □ Pick up trash and place in trash cans.

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TABLE 2.1.1.2-3
FACILITY FINDINGS AND CORRECTIVE ACTIONS

Date	Deficiency Description/ No Deficiency Statement	Corrective Action	Observer

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SMALL BOATS STORED ON RACKS

4TH STREET

BUILDING 66

DB-06

(ASPHALT)

(ASPHALT)

BUILDING 3581

(ASPHALT)

DB-20

COVERED MISC. MATERIALS STORED ON PALLETS

UNCOVERED TRASH ROLLOFF BIN

(ASPHALT)

(ASPHALT)

BUILDING 3483

MISC. MATERIALS STORED ON PALLETS COVERED BY TARP

MISC. MATERIALS STORED ON PALLETS

DB-24

DB-26

BUILDING 3222

MISC. MATERIALS STORED ON PALLETS

(ASPHALT)

MISC. MATERIALS STORED ON PALLETS

DB-23

MH

DB-25

MH

CI

SOUTHALL STREET

CI

23

24

25

26

SAN DIEGO BAY

SHEET FLOW DIRECTION ARROW

NOT TO SCALE

NAVAL BASE SAN DIEGO
SAN DIEGO, CALIFORNIA

MAY 2022

wood.

BUILDINGS 66, 3483 & 3581
DLA WAREHOUSE

PROJECT: 5023-21-7500

FIGURE: 2.1.1.2-1

2.1.1.3 Navy Exchange Homegoods (Building 3379)

The Navy Exchange Homegoods (NEX Homegoods; Figure 2.1.1.3-1) is south of Callagan Highway and west of 32nd Street within NBSD. It is next to the Navy Exchange Department Store (Building 3187A). This facility is used by base personnel to purchase home and outdoor living products. Daniel Contreras (619-954-2103) is the point of contact for the facility.

Vehicles owned by customers are parked in the parking lot north of Building 3379. Vehicles owned by employees are parked in the parking lot south of Building 3379. Products to stock the store are brought to the facility by trucks that unload in truck docks on the southeastern corner of Building 3379. There is a partially bermed outdoor garden center on the southwestern corner of Building 3379.

Storm water runoff from the facility flows over land into storm drain inlets on all sides of Building 3379, including a trench drain that runs along the western side of the outdoor garden center. Flow from this facility is conveyed to Chollas Creek, which is south of the NEX Homegoods store.

Significant materials and their associated wastes are handled and stored at the NEX Homegoods store using the following methods:

- Delivery trucks that use diesel fuel park in the loading docks on the southeastern corner of Building 3379.
- Trash is stored in a covered trash dumpster south of Building 3379.
- Recycled cardboard is stored in two uncovered rolloff recycling bins south of Building 3379.
- Packaged fertilizer is stored on wooden pallets south of Building 3379 for customers to purchase from the garden center.

Best Management Practices

Best management practices (BMPs) are presented in Tables 2.1.1.3-1 through 2.1.1.3-3. The tables identify the relationship between three major activities: material loading and unloading, material storage, and watering in the garden center. For each activity, routes of exposure, significant materials, and BMPs are presented. The BMPs used at NBSD come from Appendix E, Best Management Practices, of the *Naval Base San Diego Storm Water Pollution Prevention Plan* (MMEC Group, 2021). The following BMPs are applicable to NEX Homegoods:

- Perform Regular Cleaning (003)
- Train Employees to Properly Dispose of Waste (009)
- Store Waste and Recycling Materials in Proper Containers (016)
- Keep Equipment and Vehicles Clean (028)
- Properly Dispose of Obsolete Equipment, Inoperable Vehicles, and Surplus Materials (032)
- Check Vehicles and Equipment for Leaks (033)
- Park Vehicles on an Impervious Surface (037)
- Use Drip Pans under Leaking Equipment (044)

- Do Not Store Used Parts or Containers Directly on Ground (057)
- Store Liquids and Significant Materials within a Building or Covered Area (061B)

The SWPPP will be revised on the basis of changes to activities, routes of exposure, significant materials, or BMPs. Table 2.1.1.3-4 documents deficiencies and corrective actions.

Table 2.1.1.3-1
BEST MANAGEMENT PRACTICES FOR MATERIAL LOADING AND UNLOADING AT NEX HOMEGOODS (BUILDING 3379)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer
Significant Material	• Metals • Trash • Packaged fertilizer/nitrates • Oil
Best Management Practices	□ Conduct transfers of liquids between containers indoors or under cover. □ Place containers of liquid in secondary containment when not in use. □ After transferring liquids, check the ground for residue. If residue is present on the ground, clean using dry methods. □ Place trash in trash cans or the covered trash dumpster. □ Cover the trash dumpster after use. □ Check the covered trash dumpster for leaks and replace if necessary. □ Keep material loading and unloading areas clean.

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Table 2.1.1.3-2
BEST MANAGEMENT PRACTICES FOR MATERIAL STORAGE AT NEX HOMEGOODS (BUILDING 3379)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer
Significant Material	• Metals • Trash • Packaged fertilizer/nitrates
Best Management Practices	□ Regularly check stored vehicles and equipment for leaks. □ Place drip pans under leaking vehicles awaiting repair. □ Store containers of liquid stored outdoors in the bermed and covered hazardous substance storage area. □ Store trash in the covered trash dumpster and make sure the lid is in place. □ Store uncovered trash cans under cover. □ Regularly inspect the outdoor trash dumpster for corrosion or deterioration. □ Train employees in proper storage measures and spill cleanup. □ Promptly cleanup spills. □ Routinely sweep parking and storage areas. □ Pick up trash and place in trash cans.

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TABLE 2.1.1.3-3
BEST MANAGEMENT PRACTICES FOR GARDEN CENTER WATERING AT NEX HOMEGOODS (BUILDING 3379)

Routes of Exposure	• Water discharged directly to ground or trench drain within the garden center
Significant Material	• Garden water runoff
Best Management Practices	□ Avoid overwatering to reduce excess water entering the storm water trench drain. □ Sweep watering area to remove debris.

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TABLE 2.1.1.3-4
FACILITY FINDINGS AND CORRECTIVE ACTIONS

Date	Deficiency Description/ No Deficiency Statement	Corrective Action	Observer

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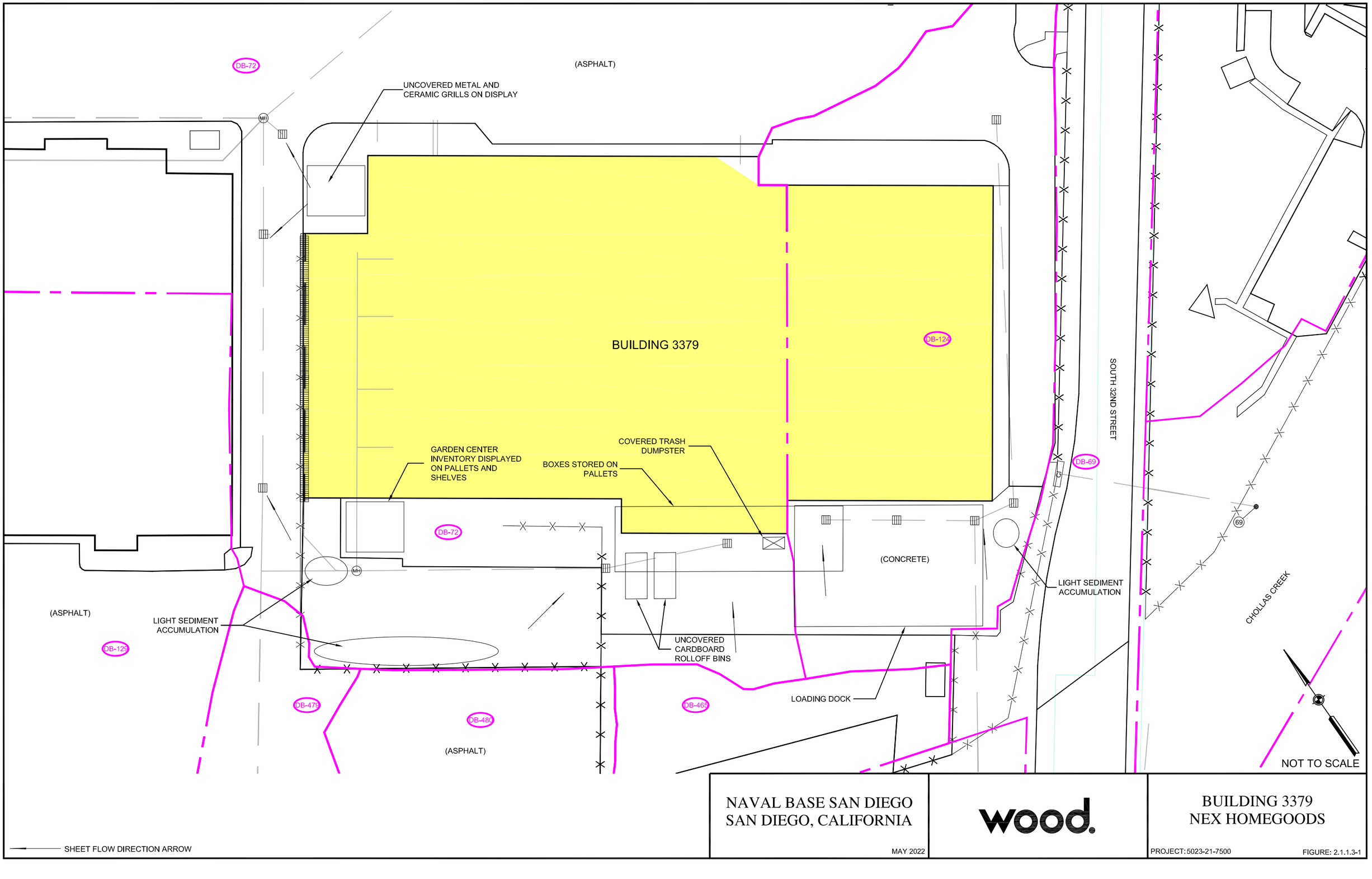

NAVAL BASE SAN DIEGO
SAN DIEGO, CALIFORNIA

MAY 2022

wood.

BUILDING 3379
NEX HOMEGOODS

PROJECT: 5023-21-7500

FIGURE: 2.1.1.3-1

2.1.1.4 Admiral Baker Golf Course (Building 141)

The Admiral Baker Golf Course (Figure 2.1.1.4-1) is within the Admiral Baker Recreation Center on Admiral Baker Road, northwest of the San Diego River. This facility is used by base personnel to play golf. Rose Connors (619-862-5346) and Austin Daniells (619-339-1509) are the points of contact for the clubhouse and gold course, respectively.

Building 141 is a golf course groundskeeping facility. Vehicles owned by employees are parked in the parking lot north of Building 141. Groundskeeping vehicles, including pickup trucks, riding mowers, tractors, and carts, are parked northwest of Building 141.

Storm water runoff from the facility flows southeast over land via sheet flow past Building 141. Flow from this facility is conveyed to the San Diego River, which is southeast of Building 141 and flows through parts of the Admiral Baker Golf Course.

Significant materials and their associated wastes are handled and stored at the Admiral Baker Golf Course using the following methods:

- Small quantities of significant materials, including acetylene, hydraulic fluid, oil, and oxygen, are stored in a flammable materials storage locker north of Building 141.
- Lead-acid batteries are stored in a covered storage area north of Building 141.
- Trash is stored in two covered trash dumpsters north of Building 141.
- Non-metal recyclables are stored in a covered recyclables bin north of Building 141.
- A tractor with a drip pan placed underneath is stored north of Building 141.
- Fuel for equipment is stored in an aboveground storage tank (AST) north of Building 141.

Best Management Practices

Best management practices (BMPs) are presented in Tables 2.1.1.4-1 through 2.1.1.4-4. The tables identify the relationship between four major activities: vehicle and equipment repair and maintenance, material loading and unloading, material storage, and equipment fueling. For each activity, routes of exposure, significant materials, and BMPs are presented. The BMPs used at NBSD come from Appendix E, Best Management Practices, of the *Naval Base San Diego Storm Water Pollution Prevention Plan* (MMEC Group, 2021). The following BMPs are applicable to Admiral Baker Golf Course:

- Perform Regular Cleaning (003)
- Train Employees to Properly Dispose of Waste (009)
- Store Waste and Recycling Materials in Proper Containers (016)
- Keep Equipment and Vehicles Clean (028)
- Properly Dispose of Obsolete Equipment, Inoperable Vehicles, and Surplus Materials (032)
- Check Vehicles and Equipment for Leaks (033)
- Park Vehicles on an Impervious Surface (037)

- Designate Special Areas for Draining or Replacing Fluids (038)
- Use Drip Pans under Leaking Equipment (044)
- Conduct Maintenance within a Building or Covered Area (047)
- Properly Store Containers (054)
- Do Not Store Used Parts or Containers Directly on Ground (057)
- Store Liquids and Significant Materials within a Building or Covered Area (061B)

The SWPPP will be revised on the basis of changes to activities, routes of exposure, significant materials, or BMPs. Table 2.1.1.4-5 documents deficiencies and corrective actions.

Table 2.1.1.4-1
BEST MANAGEMENT PRACTICES FOR VEHICLE AND EQUIPMENT REPAIR AND MAINTENANCE AT ADMIRAL BAKER GOLF COURSE (BUILDING 141)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer and maintenance, or during storage and disposal of waste
Significant Material	• Batteries • Fuel (diesel and gasoline) • Hydraulic fluid • Trash • Used oil
Best Management Practices	☐ Check vehicles for leaks when they arrive at the facility. ☐ Conduct maintenance indoors whenever feasible. ☐ Do not conduct maintenance in the washing area or in areas sloping to a storm drain. ☐ Identify the location of spill control equipment prior maintenance. ☐ Place a portable oil collector or drip pan under the vehicle prior to draining fluids. ☐ Transfer fluids from the drip pan into an appropriate container after completing vehicle maintenance. ☐ Use dry methods to clean up drips and spills on the floor. ☐ Promptly dispose of used absorbent materials. ☐ Keep equipment clean and in good condition. ☐ Clean work area at end of the day's activities. ☐ Place trash in trash cans or the covered trash dumpster. ☐ Cover the trash dumpster (trash and recycling receptacles) after use. ☐ Check the covered trash dumpster (trash and recycling receptacles) for leaks and replace if necessary.

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Table 2.1.1.4-2
BEST MANAGEMENT PRACTICES FOR MATERIAL LOADING AND UNLOADING AT ADMIRAL BAKER GOLF COURSE (BUILDING 141)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer
Significant Material	• Batteries • Fuel • Hydraulic fluid • Trash • Used oil
Best Management Practices	□ Conduct transfers of liquids between containers indoors or under cover. □ Minimize the time that 55-gallon drums are stored outdoors awaiting transfer. □ Place containers of liquid in secondary containment when not in use. □ After transferring liquids, check the ground for residue. If residue is present on the ground, clean using dry methods. □ Transfer fluids from the drip pan into an appropriate container after completing vehicle maintenance. □ Place trash in trash cans or the covered trash dumpster. □ Cover the trash dumpster (trash and recycling receptacles) after use. □ Check the covered trash dumpster (trash and recycling receptacles) for leaks and replace if necessary.

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Table 2.1.1.4-3
BEST MANAGEMENT PRACTICES FOR MATERIAL STORAGE AT ADMIRAL BAKER GOLF COURSE (BUILDING 141)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer
Significant Material	• Batteries • Fuel • Hydraulic fluid • Trash • Used oil
Best Management Practices	□ Regularly check stored vehicles and equipment for leaks. □ Place drip pans under leaking vehicles awaiting repair. □ Store trash in the covered trash dumpster and make sure the lid is in place. □ Store uncovered trash cans under cover. □ Regularly inspect the hazardous substances storage area for leaks or spills. □ Regularly inspect the outdoor trash dumpster, drums, and flammable materials storage lockers for corrosion or deterioration. □ Train employees in proper storage measures and spill cleanup. □ Promptly cleanup spills. □ Routinely sweep parking and storage areas. □ Pick up trash and place in trash cans.

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Table 2.1.1.4-4
BEST MANAGEMENT PRACTICES FOR EQUIPMENT FUELING AT ADMIRAL BAKER GOLF COURSE (BUILDING 141)

Routes of Exposure	• Direct exposure of material • Spills or leaks during fueling
Significant Material	• Gasoline • Spent absorbent
Best Management Practices	Monitor fueling operations. Make sure that employees do not top off vehicles. Train employees in proper storage measures and spill cleanup. Identify the location of spill control equipment. Do not dispose of used or leftover materials in the sanitary sewer. Use dry methods to clean up drips and spills on the floor. Promptly dispose of used absorbent materials. Keep equipment clean and in good condition. Promptly clean up spills.

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TABLE 2.1.1.4-5
FACILITY FINDINGS AND CORRECTIVE ACTIONS

Date	Deficiency Description/ No Deficiency Statement	Corrective Action	Observer

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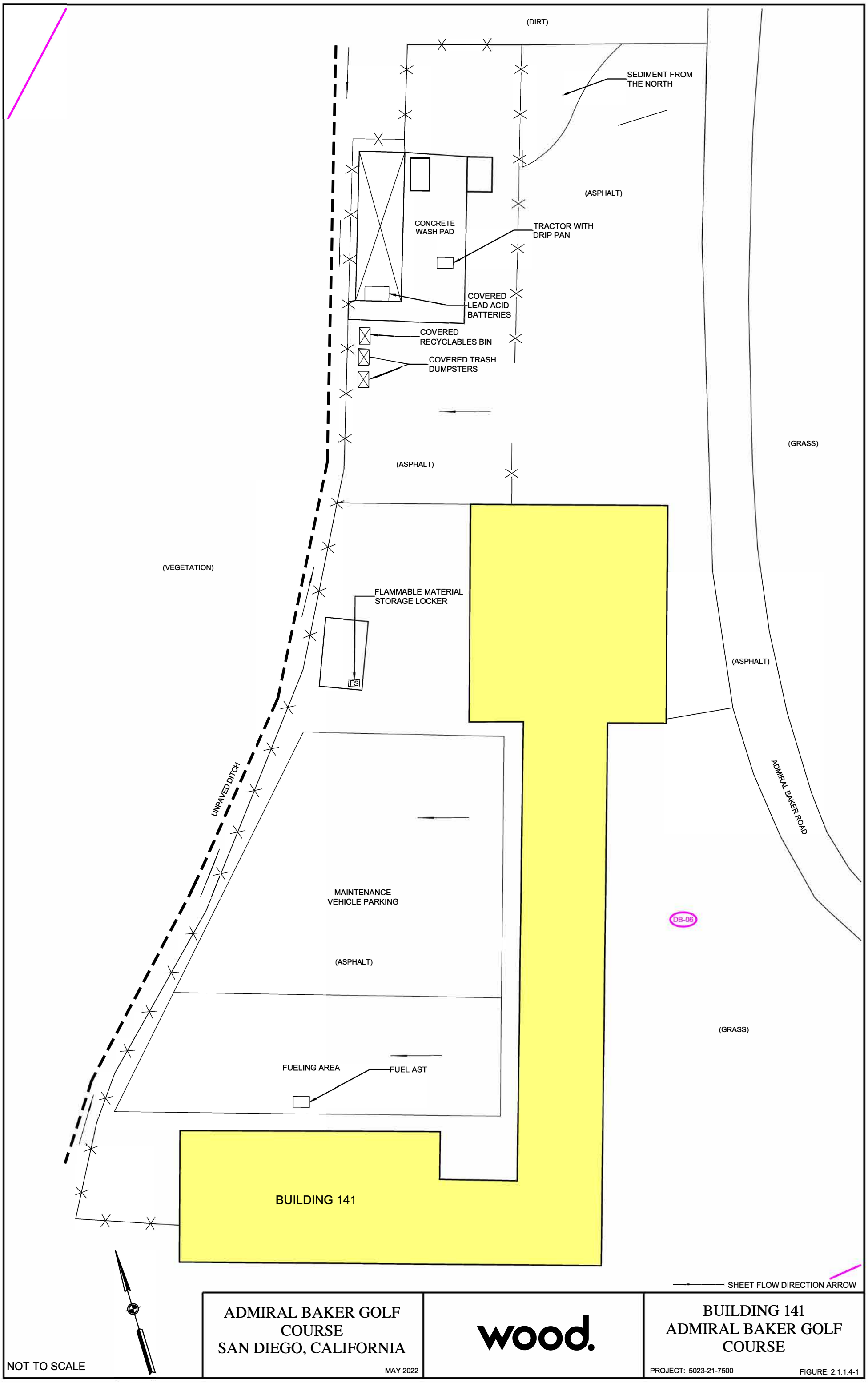

ADMIRAL BAKER GOLF COURSE
SAN DIEGO, CALIFORNIA

MAY 2022

wood.

BUILDING 141
ADMIRAL BAKER GOLF COURSE

PROJECT: 5023-21-7500

FIGURE: 2.1.1.4-1

2.1.1.5 Auto Skills Center (Building 3234)

The Auto Skills Center (Figure 2.1.1.5-1) is on Recreation Way within NBSD. It is next to Paleta Creek and west of a parking lot used for the racquetball courts. This facility is used by base personnel to service private vehicles. Randy Allen (619-556 -7031) is the point of contact for the facility.

Vehicles owned by base personnel are serviced and maintained at repair stalls inside and adjacent to Building 3234. Car maintenance fluids and parts, including motor oil, lubricants, and filters, are brought to the facility by the base personnel servicing their vehicles. A bermed vehicle cleaning area south of Building 3234 is connected to an oil/water separator, which discharges into the sanitary sewer system. Covered vehicle storage areas are located south and west of Building 3234. Southeast of Building 3234 are a covered and bermed hazardous substance storage area and an uncovered storage area.

Storm water runoff from the facility flows over land into storm drain inlets east, south, and west of Building 3234. Flow from this facility is conveyed to Paleta Creek.

Significant materials and their associated wastes are handled and stored at the Auto Skills Center using the following methods:

- Used oil is drained from vehicles into a portable oil collector inside Building 3234.
- Batteries, engine oil, and antifreeze are sold from within Building 3234.
- Fifty-five-gallon drums of hazardous waste are stored in the covered and bermed hazardous substance storage area southeast of Building 3234.
- Used air filters are stored in a 55-gallon drum on a containment pallet in the covered and bermed hazardous substance storage area southeast of Building 3234.
- Trash is stored in a covered trash dumpster southeast of Building 3234 and covered trash cans east of Building 3234.
- A bermed vehicle cleaning area is located south of Building 3234. Waste wash water from this area flows to an oil/water separator that discharges into the sanitary sewer system.
- Vehicles being rebuilt are stored in the covered vehicle storage areas west and south of Building 3234.
- Scrap metal is stored in a covered scrap metal bin southeast of Building 3234.
- Cardboard is stored in a covered recyclables bin southeast of Building 3234.

Best Management Practices

Best management practices (BMPs) are presented in Tables 2.1.1.5-1 through 2.1.1.5-4. The tables identify the relationship between four major activities: vehicle and equipment repair and maintenance, vehicle and equipment cleaning, material loading and unloading, and material storage. For each activity, routes of exposure, significant materials, and BMPs are presented. The BMPs used at NBSD come from Appendix E, Best Management Practices, of the *Naval Base San Diego Storm Water Pollution Prevention Plan* (MMEC Group, 2021). The following BMPs are applicable to Auto Skills Center:

- Perform Regular Cleaning (003)

- Train Employees to Properly Dispose of Waste (009)
- Store Waste and Recycling Materials in Proper Containers (016)
- Keep Equipment and Vehicles Clean (028)
- Properly Dispose of Obsolete Equipment, Inoperable Vehicles, and Surplus Materials (032)
- Check Vehicles and Equipment for Leaks (033)
- Park Vehicles on an Impervious Surface (037)
- Designate Special Areas for Draining or Replacing Fluids (038)
- Drain All Fluids from Stored or Salvaged Vehicles and Equipment (039)
- Completely Drain Oil Filters Before Disposal (040)
- Wash Equipment and Vehicles in Designated Area (041)
- Use Drip Pans under Leaking Equipment (044)
- Perform Equipment Maintenance at Designated Areas (045)
- Conduct Maintenance within a Building or Covered Area (047)
- Properly Store Containers (054)
- Do Not Store Used Parts or Containers Directly on Ground (057)
- Store Liquids and Significant Materials within a Building or Covered Area (061B)

The SWPPP will be revised on the basis of changes to activities, routes of exposure, significant materials, or BMPs. Table 2.1.1.5-5 documents deficiencies and corrective actions.

Table 2.1.1.5-1
BEST MANAGEMENT PRACTICES FOR VEHICLE AND EQUIPMENT REPAIR AND MAINTENANCE AT THE AUTO SKILLS CENTER (BUILDING 3234)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer and maintenance, or during storage and disposal of waste
Significant Material	• Antifreeze/coolant • Batteries • Engine oil • Trash
Best Management Practices	☐ Check vehicles for leaks when they arrive at the facility. ☐ Conduct maintenance indoors whenever feasible. ☐ Do not conduct maintenance in the washing area or in areas sloping to a storm drain. ☐ Identify the location of spill control equipment prior maintenance. ☐ Place a portable oil collector or drip pan under the vehicle prior to draining fluids. ☐ Transfer fluids from the drip pan into an appropriate container after completing vehicle maintenance. ☐ Do not dispose of used or leftover materials in the sanitary sewer or storm drains. ☐ Use dry methods to clean up drips and spills on the floor. ☐ Promptly dispose of used absorbent materials. ☐ Keep equipment clean and in good condition. ☐ Clean work area at end of the day's activities. ☐ Dispose of trash in trash cans.

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Table 2.1.1.5-2
BEST MANAGEMENT PRACTICES FOR VEHICLE AND EQUIPMENT CLEANING AT THE AUTO SKILLS CENTER (BUILDING 3234)

Routes of Exposure	• Wash water discharged directly to ground or storm drain
Significant Material	• Antifreeze/coolant • Engine oil • Waste wash water
Best Management Practices	□ Conduct washing in covered and bermed power wash area or at an offsite facility. □ Check berm for cracks or breaks before conducting washing. □ Do not dispose of used or leftover materials in the wash area. □ Do not store or maintain equipment in the wash area. □ Post signs stating that only washing is allowed in the wash area. □ Sweep wash area to remove debris. □ Inspect and maintain the oil water separator.

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Table 2.1.1.5-3
BEST MANAGEMENT PRACTICES FOR MATERIAL LOADING AND UNLOADING AT THE AUTO SKILLS CENTER (BUILDING 3234)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer
Significant Material	• Antifreeze/coolant • Batteries • Engine oil • Trash
Best Management Practices	□ Conduct transfers of liquids between containers indoors or under cover. □ Minimize the time that 55-gallon drums are stored outdoors awaiting transfer. □ Place containers of liquid in secondary containment when not in use. □ After transferring liquids, check the ground for residue. If residue is present on the ground, clean using dry methods. □ Transfer fluids from the drip pan into an appropriate container after completing vehicle maintenance. □ Inspect and maintain the berm for the hazardous substance storage area. □ Place trash in trash cans or the covered trash dumpster. □ Cover the trash dumpster after use. □ Check the covered trash dumpster for leaks and replace if necessary. □ Keep material loading and unloading areas clean.

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Table 2.1.1.5-4
BEST MANAGEMENT PRACTICES FOR MATERIAL STORAGE AT THE AUTO SKILLS CENTER (BUILDING 3234)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer
Significant Material	• Antifreeze/coolant • Batteries • Engine oil • Trash
Best Management Practices	□ Park vehicles awaiting repair in the covered vehicle storage area. □ Regularly check stored vehicles and equipment for leaks. □ Place drip pans under leaking vehicles awaiting repair. □ Store containers of liquid outdoors in the bermed and covered hazardous substance storage area. □ Store trash in the covered trash dumpster and make sure the lid is in place. □ Store uncovered trash cans under cover. □ Regularly inspect the hazardous substances storage area for leaks or spills. □ Regularly inspect the outdoor trash dumpster, drums, and flammable materials storage lockers for corrosion or deterioration. □ Train employees in proper storage measures and spill cleanup. □ Promptly cleanup spills. □ Routinely sweep parking and storage areas. □ Pick up trash and place in trash cans.

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TABLE 2.1.1.5-5
FACILITY FINDINGS AND CORRECTIVE ACTIONS

Date	Deficiency Description/ No Deficiency Statement	Corrective Action	Observer

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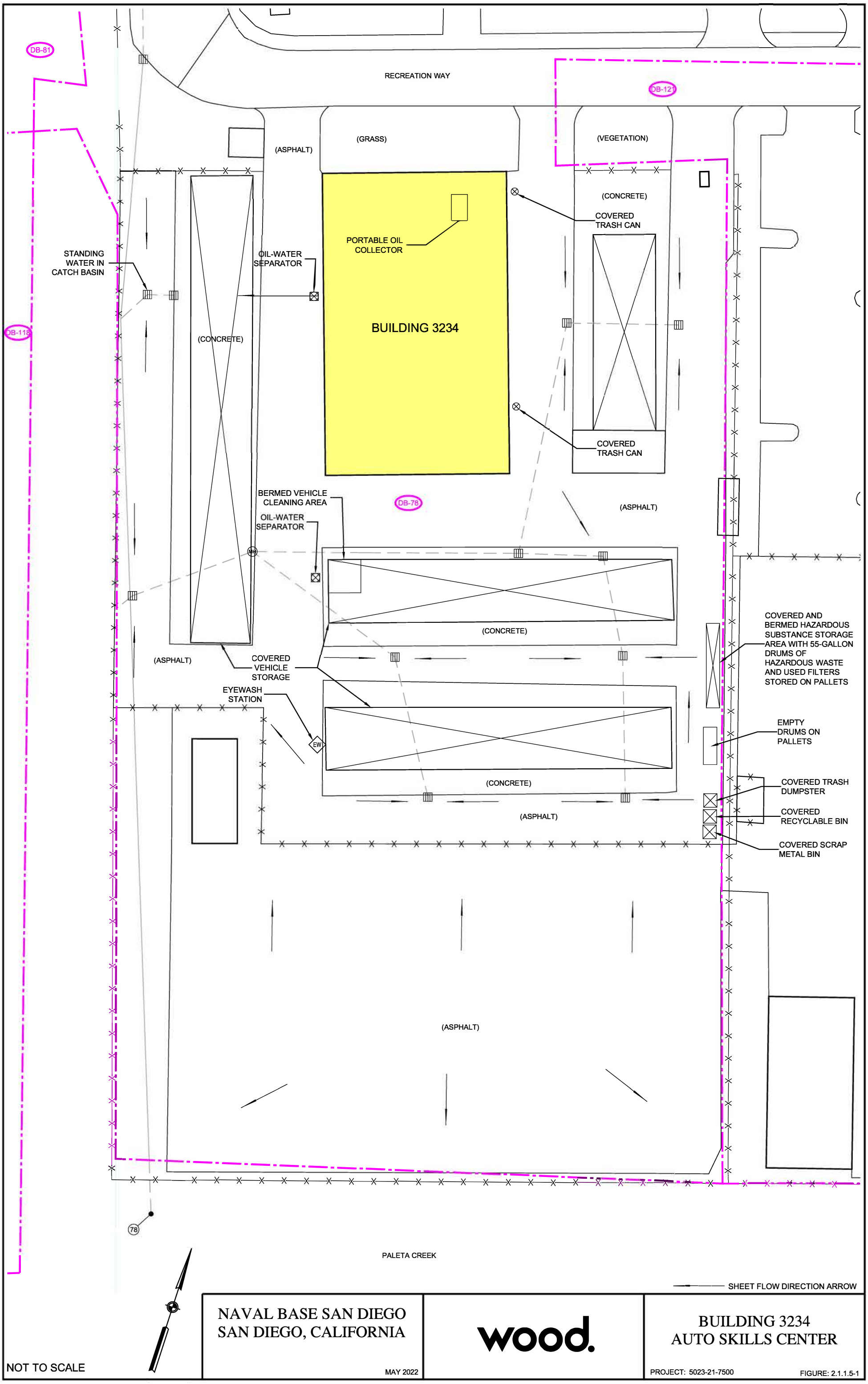

NAVAL BASE SAN DIEGO
SAN DIEGO, CALIFORNIA

MAY 2022

wood.

BUILDING 3234
AUTO SKILLS CENTER

PROJECT: 5023-21-7500

FIGURE: 2.1.1.5-1

2.1.1.6 32nd Street Gas Station (Buildings 337, 3122, 3272, and 3341)

The 32nd Street Gas Station (Figure 2.1.1.6-1) is on Norman Scott Road within NBSD. It is adjacent to 32nd Street (east of the facility) and Chollas Creek (north of the facility). This facility is used by base personnel to fuel and service private vehicles. Javier Fernandez (619-544-2106) is the point of contact for the facility.

The gas station consists of a gasoline dispensing area (Building 3272), an air and water dispensing area (Building 3121), and three underground storage tanks that contain the fuel. Car maintenance fluids and parts, including motor oil, can be purchased by base personnel from the convenience store located in Building 3122. The gasoline-dispensing area at Building 3272 was taken offline during summer 2022, and the three 20,000-gallon underground storage tanks (used for three different grades of gasoline) were removed as a result. The facility will no longer be used for fueling. General vehicle maintenance is performed by employees in covered garages within Buildings 3122 and 3341. Vehicle window tinting is also performed by employees outside Building 337.

Storm water runoff from the facility flows over land into storm drain inlets east of Building 3341, as well as north of Building 3272 directly into Chollas Creek. Storm water is also conveyed via downspouts located on top of Building 3272 and discharge into Chollas Creek.

Significant materials and their associated wastes are handled and stored at the 32nd Street Gas Station using the following methods:

- Used tires are stored on pallets in an uncovered storage area south of Building 3341 and in the covered vehicle storage inside of Building 3341.
- Trash is stored in covered trash cans north of Building 337 and in covered and uncovered trash cans north of Building 3341. Used absorbent used in cleaning up gasoline spills is stored in a 55-gallon drum on a wooden pallet near the fuel pumps and is disposed of as hazardous material by base employees.
- Spent absorbent used to clean up spills is stored in a 55-gallon drum located at Building 3272.

Best Management Practices

Best management practices (BMPs) are presented in Tables 2.1.1.6-1 through 2.1.1.6-4. The tables identify the relationship between four major activities: vehicle and equipment repair and maintenance, material loading and unloading, material storage, and fueling. For each activity, routes of exposure, significant materials, and BMPs are presented. he BMPs used at NBSD come from Appendix E, Best Management Practices, of the *Naval Base San Diego Storm Water Pollution Prevention Plan* (MMEC Group, 2021). The following BMPs are applicable to 32nd Street Gas Station:

- Perform Regular Cleaning (003)
- Train Employees to Properly Dispose of Waste (009)
- Store Waste and Recycling Materials in Proper Containers (016)
- Keep Equipment and Vehicles Clean (028)
- Properly Dispose of Obsolete Equipment, Inoperable Vehicles, and Surplus Materials (032)
- Check Vehicles and Equipment for Leaks (033)

- Park Vehicles on an Impervious Surface (037)
- Designate Special Areas for Draining or Replacing Fluids (038)
- Drain All Fluids from Stored or Salvaged Vehicles and Equipment (039)
- Completely Drain Oil Filters Before Disposal (040)
- Use Drip Pans under Leaking Equipment (044)
- Perform Equipment Maintenance at Designated Areas (045)
- Properly Store Containers (054)
- Do Not Store Used Parts or Containers Directly on Ground (057)
- Store Liquids and Significant Materials within a Building or Covered Area (061B)

The SWPPP will be revised on the basis of changes to activities, routes of exposure, significant materials, or BMPs. Table 2.1.1.6-5 documents deficiencies and corrective actions.

Table 2.1.1.6-1
BEST MANAGEMENT PRACTICES FOR VEHICLE AND EQUIPMENT REPAIR AND MAINTENANCE AT THE 32ND STREET GAS STATION (BUILDINGS 337, 3122, 3272, AND 3341)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer and maintenance, or during storage and disposal of waste
Significant Material	• Antifreeze/coolant • Batteries • Aerosols • Brake fluid • Propane • Used oil • Lubricants • Metals • Engine oil • Trash
Best Management Practices	☐ Check vehicles for leaks when they arrive at the facility. ☐ Conduct maintenance indoors whenever feasible. ☐ Do not conduct maintenance in the washing area or in areas sloping to a storm drain. ☐ Identify the location of spill control equipment prior maintenance. ☐ Place a portable oil collector or drip pan under the vehicle prior to draining fluids. ☐ Transfer fluids from the drip pan into an appropriate container after completing vehicle maintenance. ☐ Do not dispose of used or leftover materials in the sanitary sewer or storm drains. ☐ Use dry methods to clean up drips and spills on the floor. ☐ Promptly dispose of used absorbent materials. ☐ Keep equipment clean and in good condition. ☐ Clean work area at end of the day's activities. ☐ Dispose of trash in trash cans.

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Table 2.1.1.6-2
BEST MANAGEMENT PRACTICES FOR MATERIAL LOADING AND UNLOADING AT THE 32ND STREET GAS STATION (BUILDINGS 337, 3122, 3272, AND 3341)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer	
Significant Material	• Antifreeze/coolant • Batteries • Aerosols • Brake fluid • Propane	• Lubricants • Metals • Engine oil • Trash • Used oil
Best Management Practices	□ Conduct transfers of liquids between containers indoors or under cover. □ Minimize the time that 55-gallon drums are stored outdoors awaiting transfer. □ Place containers of liquid in secondary containment when not in use. □ After transferring liquids, check the ground for residue. If residue is present on the ground, clean using dry methods. □ Transfer fluids from the drip pan into an appropriate container after completing vehicle maintenance. □ Place trash in trash cans or the covered trash dumpster. □ Cover the trash dumpster after use. □ Check the covered trash dumpster for leaks and replace if necessary. □ Keep material loading and unloading areas clean.	

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Table 2.1.1.6-3
BEST MANAGEMENT PRACTICES FOR MATERIAL STORAGE AT THE 32ND STREET GAS STATION (BUILDINGS 337, 3122, 3272, AND 3341)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer
Significant Material	• Antifreeze/coolant • Batteries • Aerosols • Brake fluid • Propane • Lubricants • Metals • Engine oil • Trash • Used oil
Best Management Practices	□ Park vehicles awaiting repair in the covered vehicle storage area. □ Regularly, check stored vehicles and equipment for leaks. □ Place drip pans under leaking vehicles awaiting repair. □ Store containers of liquid stored outdoors in the bermed and covered hazardous substance storage area. □ Store trash in the covered trash dumpster and make sure the lid is in place. □ Store uncovered trash cans under cover. □ Regularly inspect the outdoor trash dumpster, drums, and flammable materials storage lockers for corrosion or deterioration. □ Train employees in proper storage measures and spill cleanup. □ Promptly cleanup spills. □ Routinely sweep parking and storage areas. □ Pick up trash and place in trash cans.

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TABLE 2.1.1.6-4
FACILITY FINDINGS AND CORRECTIVE ACTIONS

Date	Deficiency Description/ No Deficiency Statement	Corrective Action	Observer

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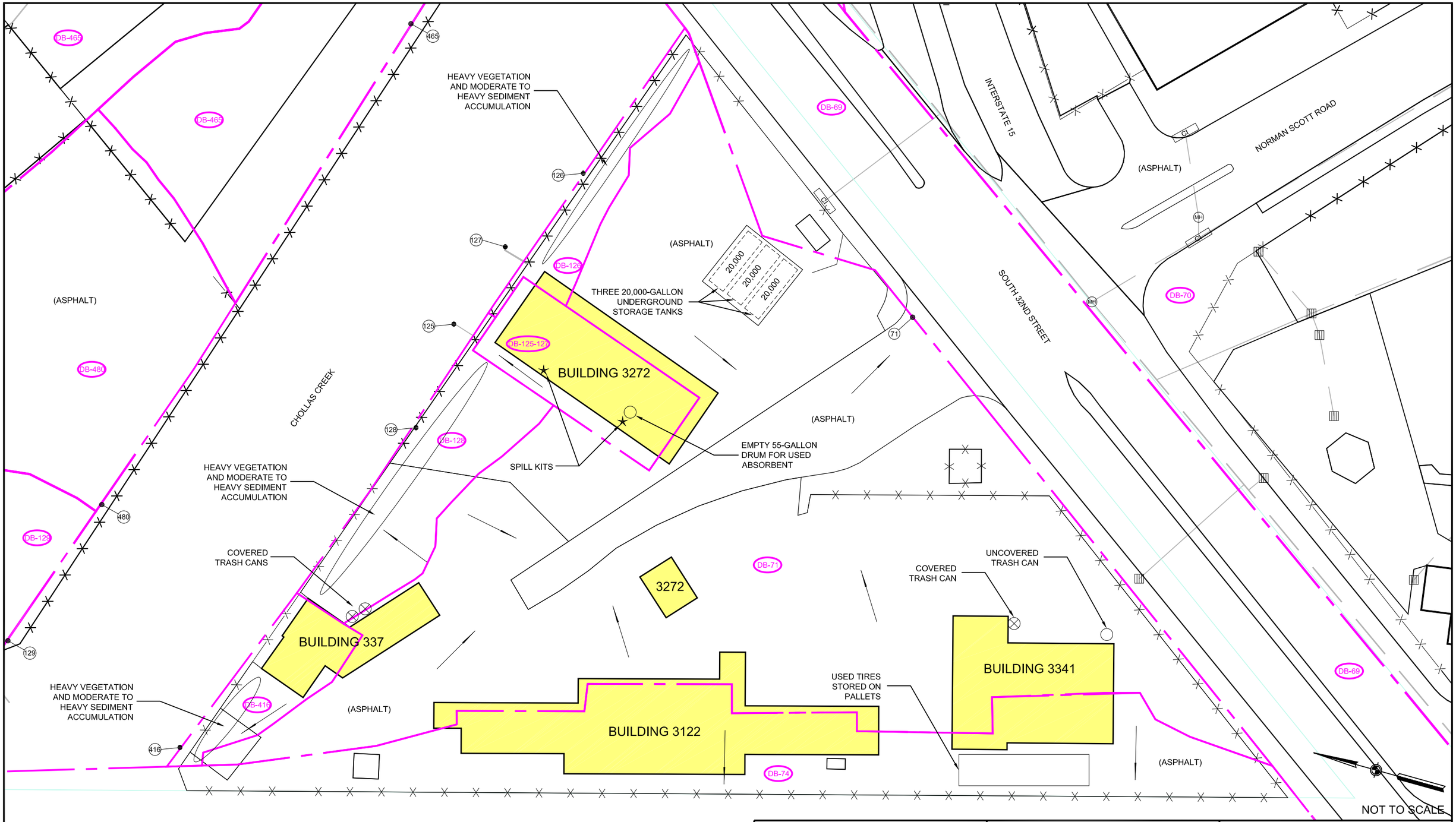

NAVAL BASE SAN DIEGO
SAN DIEGO, CALIFORNIA

MAY 2022

wood.

BUILDINGS 337, 3272, 3122 & 3341
32ND STREET GAS STATION

PROJECT: 5023-21-7500

FIGURE: 2.1.1.6-1

2.1.1.7 Hazardous Material Minimization Center (Building 3322)

The Hazardous Material Minimization Center (Figure 2.1.1.7-1) is on Cummings Road within NBSD. It is south of the Littoral Combat Ship Squadron 1 (Building 3304) and east of the Defense Logistics Agency Warehouse (Buildings 66, 3483, and 3581). This facility is used to process and dispose of hazardous and significant materials from activities related to base operations. Rex Del Mundo (619-556-9723) is the point of contact for the facility.

The goal of the Hazardous Material Minimization Center is to get the most use out of the hazardous and materials, and then dispose of the materials in a manner that minimizes both cost and environmental risk. Materials are stored inside Building 3322, with materials being staged outside only when they are being loaded into the facility or unloaded out.

Storm water runoff from the Hazardous Material Minimization Center flows over land into storm drain inlets containing filters with raised edges located west and southeast of Building 3322. Storm water runoff is conveyed to Paleta Creek.

Significant materials and their associated wastes are handled and stored at the Hazardous Material Minimization Center using the following method:

- Hazardous materials, including cleaning and adhesive compounds, vehicle maintenance fluids (such as antifreeze, brake fluid, hydraulic fluid, and lubricant oil), paint and paint removal products, and various pressurized gas containers, are stored inside of Building 3322. When hazardous materials are loaded or unloaded at the facility, the materials are staged either on containment pallets outdoors or in rolltop hazardous material containers, both of which are south of Building 3322.
- Trash is stored in a covered dumpster southeast of Building 3322.

Best Management Practices

Best management practices (BMPs) are presented in Tables 2.1.1.7-1 and 2.1.1.7-2. The tables identify the relationship between two major activities: material loading and unloading, and material storage. For each activity, routes of exposure, significant materials, and BMPs are presented. The BMPs used at NBSD come from Appendix E, Best Management Practices*,* of the *Naval Base San Diego Storm Water Pollution Prevention Plan* (MMEC Group, 2021). The following BMPs are applicable to Hazardous Material Minimization Center:

- Perform Regular Cleaning (003)
- Train Employees to Properly Dispose of Waste (009)
- Store Waste and Recycling Materials in Proper Containers (016)
- Keep Equipment and Vehicles Clean (028)
- Properly Dispose of Obsolete Equipment, Inoperable Vehicles, and Surplus Materials (032)
- Check Vehicles and Equipment for Leaks (033)
- Use Drip Pans under Leaking Equipment (044)
- Properly Store Containers (054)

- Do Not Store Used Parts or Containers Directly on Ground (057)
- Store Liquids and Significant Materials within a Building or Covered Area (061B)

The SWPPP will be revised on the basis of changes to activities, routes of exposure, significant materials, or BMPs. Table 2.1.1.7-3 documents deficiencies and corrective actions.

Table 2.1.1.7-1
BEST MANAGEMENT PRACTICES FOR MATERIAL LOADING AND UNLOADING AT THE HAZARDOUS MATERIAL MINIMIZATION CENTER (BUILDING 3322)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer	
Significant Material	• Antifreeze/coolant • Batteries • Detergents/surfactants • Desiccant • Hydraulic fluid • Various acids	• Lubricants • Metals • Grease • Trash • Paint/paint thinner • Various compressed gases
Best Management Practices	□ Conduct transfers of liquids between containers indoors or under cover. □ Minimize the time that 55-gallon drums are stored outdoors awaiting transfer. □ Place containers of liquid in secondary containment when not in use. □ After transferring liquids, check the ground for residue. If residue is present on the ground, clean using dry methods. □ Transfer fluids from the drip pan into an appropriate container after completing vehicle maintenance. □ Place trash in trash cans or the covered trash dumpster. □ Cover the trash dumpster after use. □ Check the covered trash dumpster for leaks and replace if necessary. □ Keep material loading and unloading areas clean.	

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Table 2.1.1.7-2
BEST MANAGEMENT PRACTICES FOR MATERIAL STORAGE AT THE HAZARDOUS MATERIAL MINIMIZATION CENTER (BUILDING 3322)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer	
Significant Material	• Antifreeze/coolant • Batteries • Detergents/surfactants • Desiccant • Hydraulic fluid • Various acids	• Lubricants • Metals • Grease • Trash • Paint/paint thinner • Various compressed gases
Best Management Practices	□ Regularly check stored vehicles and equipment for leaks. □ Place drip pans under leaking vehicles awaiting repair. □ Store trash in the covered trash dumpster and make sure the lid is in place. □ Store uncovered trash cans under cover. □ Regularly inspect the hazardous substances storage area for leaks or spills. □ Regularly inspect the outdoor trash dumpster, drums, and flammable materials storage lockers for corrosion or deterioration. □ Train employees in proper storage measures and spill cleanup. □ Promptly cleanup spills. □ Routinely sweep parking and storage areas. □ Pick up trash and place in trash cans.	

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TABLE 2.1.1.7-3
FACILITY FINDINGS AND CORRECTIVE ACTIONS

Date	Deficiency Description/ No Deficiency Statement	Corrective Action	Observer

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BUILDING 3322

(ASPHALT)

(ASPHALT)

(ASPHALT)

DB-26

DB-27

ROLLTOP
HAZARDOUS
MATERIAL
CONTAINERS

COVERED
TRASH DUMPSTER

MISC MATERIALS
ON PALLETS

ROLLTOP
HAZARDOUS
MATERIAL
CONTAINERS

MH

CI

26

SHEET FLOW DIRECTION ARROW

NOT TO SCALE

NAVAL BASE SAN DIEGO
SAN DIEGO, CALIFORNIA

MAY 2022

wood.

BUILDING 3322
HAZARDOUS MATERIAL
MINIMIZATION CENTER

PROJECT: 5023-21-7500

FIGURE: 2.1.1.7-1

2.1.1.8 Naval Medical Center San Diego Loading Docks/Storage/COGEN (Buildings 1H, 7, 8, 23, 33, 35, and 36)

The Naval Medical Center San Diego (NMCSD; Figure 2.1.1.8-1) is on Bob Wilson Drive within the grounds of Balboa Park, just east of Interstate-5. It is east Balboa Park Administration and west of the Balboa Park Golf Course. The primary purposes of NMCSD are used to provide health care services and train service members to be able to provide medical services while deployed.

NMCSD contains a co-generation plant (COGEN), Building 7, which is used to produce energy for the facility and use the heat produced for various purposes such as water heating. Building 23 is a cooling tower for the COGEN. A truck loading and unloading dock is on the southwestern corner of Building 1H. Outdoor material storage is distributed along the western side of Building 1H.

Storm water runoff from NMCSD flows over land into storm drain inlets north, east, and west of Building 1H, west of Building 23, and east and west of Building 7, which convey to San Diego Bay.

Significant materials and their associated wastes are handled and stored at NMCSD using the following methods:

- Petroleum, oil, and lubricant (POL) storage occurs onsite.
- Delivery trucks that use diesel fuel park in the loading docks on the southwestern corner of Building 1H.
- Cardboard is placed inside uncovered rolloff bins outdoors on the western side of Building 1H.
- Trash is placed inside uncovered trash rolloff bins west of the Building 1H. Trash is also placed in covered trash cans on the eastern side of Building 1H.
- Paint is stored on covered shelves inside Building 8.

Best Management Practices

Best management practices (BMPs) are presented in Tables 2.1.1.8-1 and 2.1.1.8-2. The tables identify the relationship between two major activities: material loading and unloading, and material storage. For each activity, routes of exposure, significant materials, and BMPs are presented. The BMPs used at NBSD come from Appendix E, Best Management Practices, of the *Naval Base San Diego Storm Water Pollution Prevention Plan* (MMEC Group, 2021). The following BMPs are applicable to NMCSD Loading Docks/Storage/COGEN:

- Perform Regular Cleaning 003)
- Train Employees to Properly Dispose of Waste (009)
- Store Waste and Recycling Materials in Proper Containers (016)
- Keep Equipment and Vehicles Clean (028)
- Properly Dispose of Obsolete Equipment, Inoperable Vehicles, and Surplus Materials (032)
- Check Vehicles and Equipment for Leaks (033)
- Park Vehicles on an Impervious Surface (037)

- Use Drip Pans under Leaking Equipment (044)
- Properly Store Containers (054)
- Do Not Store Used Parts or Containers Directly on Ground (057)
- Store Liquids and Significant Materials within a Building or Covered Area (061B)

The SWPPP will be revised on the basis of changes to activities, routes of exposure, significant materials, or BMPs. Table 2.1.1.8-3 documents deficiencies and corrective actions.

Table 2.1.1.8-1
BEST MANAGEMENT PRACTICES FOR MATERIAL LOADING AND UNLOADING AT NMCSD (BUILDINGS 1H, 7, 8, 23, 33, 35, AND 36)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer
Significant Material	• Acetylene • Batteries • Compressed oxygen • Fuel (diesel and gasoline) • Hydraulic fluid • Lubricants • Metals • Trash
Best Management Practices	□ Conduct transfers of liquids between containers indoors or under cover. □ Minimize the time that 55-gallon drums are stored outdoors awaiting transfer. □ Place containers of liquid in secondary containment when not in use. □ Employ proper handling procedures when transferring fuel to the AST associated with the COGEN plant. □ After transferring liquids, check the ground for residue. If residue is present on the ground, clean using dry methods. □ Transfer fluids from the drip pan into an appropriate container after completing vehicle maintenance. □ Place trash in trash cans or the covered trash dumpster. □ Cover the trash dumpster after use. □ Check the covered trash dumpster for leaks and replace if necessary. □ Keep material loading and unloading areas clean.

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Table 2.1.1.8-2
BEST MANAGEMENT PRACTICES FOR MATERIAL STORAGE AT NMCSD (BUILDINGS 1H, 7, 8, 23, 33, 35, AND 36)

Routes of Exposure	• Direct exposure of material • Spills or leaks during material transfer
Significant Material	• Acetylene • Batteries • Compressed oxygen • Fuel (diesel and gasoline) • Hydraulic fluid • Lubricants • Metals • Trash
Best Management Practices	□ Park vehicles awaiting repair in the covered vehicle storage area. □ Regularly, check stored vehicles and equipment for leaks. □ Place drip pans under leaking vehicles awaiting repair. □ Store trash in the covered trash dumpster and make sure the lid is in place. □ Store uncovered trash cans under cover. □ Regularly inspect the outdoor trash dumpster, drums, and flammable materials storage lockers for corrosion or deterioration. □ Train employees in proper storage measures and spill cleanup. □ Promptly cleanup spills. □ Routinely sweep parking and storage areas. □ Pick up trash and place in trash cans.

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TABLE 2.1.1.8-3
FACILITY FINDINGS AND CORRECTIVE ACTIONS

Date	Deficiency Description/ No Deficiency Statement	Corrective Action	Observer

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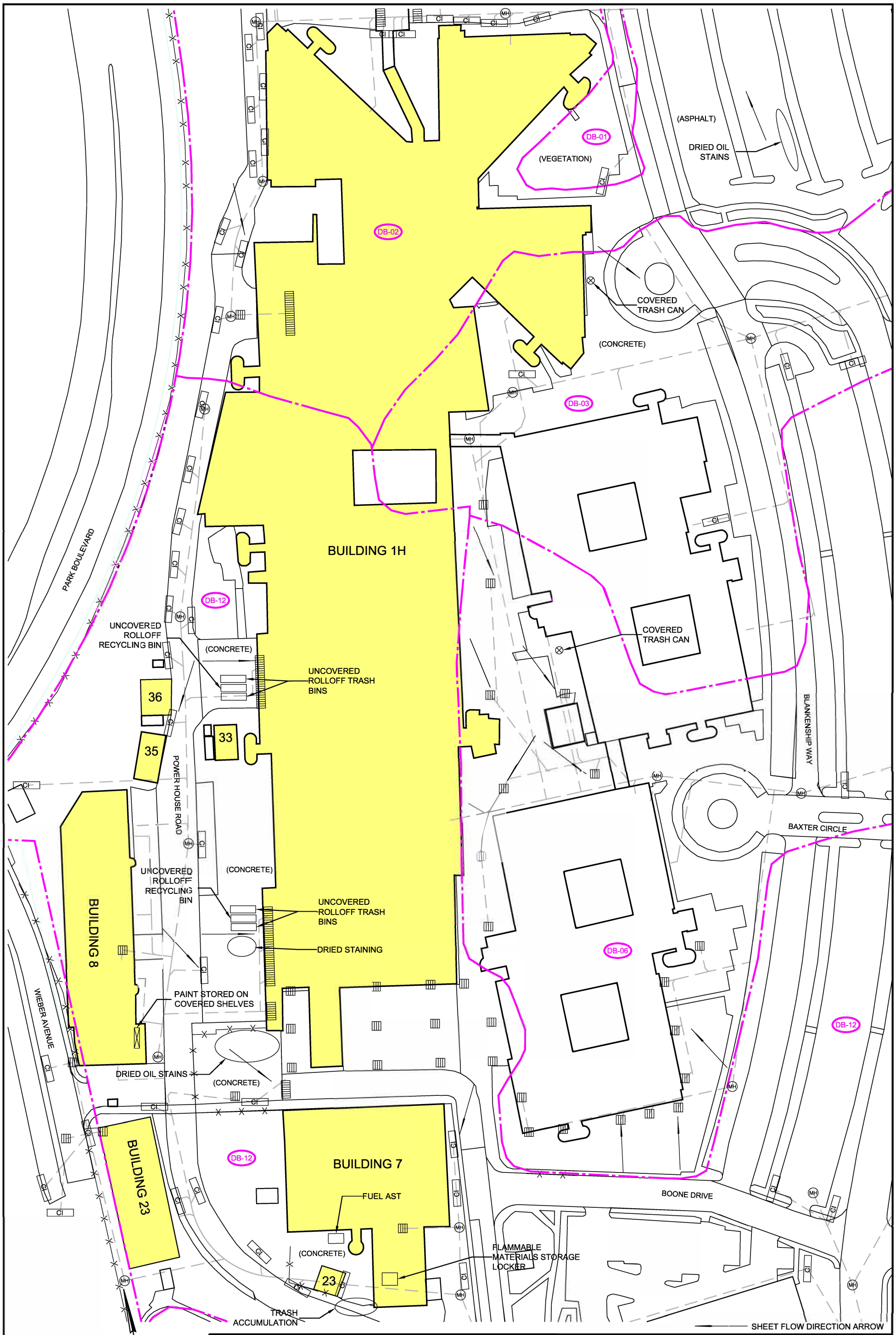

NOT TO SCALE

NAVAL MEDICAL CENTER
SAN DIEGO
SAN DIEGO, CALIFORNIA

MAY 2022

wood.

BUILDINGS 1H, 7, 8, 23, 33, 35 & 36
NMCSD LOADING DOCKS / STORAGE / COGEN

PROJECT: 5023-21-7500

FIGURE: 2.1.1.8-1

2.1.2 MCM 1.2: Environmental and SWMP Training

The NBSD Environmental Department has an established training program with an average audience of more than 300 trainees a year. The training emphasis is on HW; however, the main topics (proper management of hazardous materials (HM), proper disposal of HW, and spill cleanup 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 information tri-fold brochures called "Storm Water Solutions" (provided in Attachment 7) are designed for the core municipal areas and processes and are provided during training. The training session is three hours long, is performed monthly, and is required for municipal facility POCs who manage HW permits. A training roster is completed during each training session to document personnel in attendance. Digital copies of training rosters are maintained by the NBSD Environmental Department. Facility personnel that do not attend the training but manage HW or universal waste, or have an interest in the training, will be encouraged to attend. NBSD Environmental Department staff will communicate the dates and locations of training and will ensure that storm water fliers are distributed at the training sessions. In addition, the training will include 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 understanding and awareness of the environmental requirements and regulations established by the United States Environmental Protection Agency (EPA), the DoD, and state. ECATTS will be promoted to tenants and contractors working on the Base. ECATTS has 10 storm water modules pertinent to military base employees, related personnel, and construction contractors. Information on ECATTS will be provided to tenants and contractors alike during facility inspections and visits. During interviews, POCs will be asked whether they have taken ECATTS courses and will be encouraged to take ECATTS storm water courses as needed for their facility.

The NBSD Public Works Department also has a Building Monitor training program with quarterly classes. Each facility at NBSD has a Building Monitor who is the central POC for facility maintenance issues inside and outside of the facility. Building Monitors are key in identifying, reporting, and monitoring facility discrepancies and play a vital role in maintaining a clean and orderly Base. Building Monitors work with Facility Management Specialists (FMSs) to complete building maintenance projects and keep each facility in good working order and maintain the exterior of a facility in clean condition. Storm water awareness training is provided at each quarterly Building Monitor training session. The storm water portion of the training provides a general overview of the NBSD storm water program and focuses on housekeeping BMP implementation. A training roster is completed during each training session to document personnel in attendance. Digital copies of training rosters are maintained by the NBSD Environmental Department.

2.1.3 MCM 1.3: Education and Outreach Booths

NBSD Environmental Department personnel regularly participate in environmental outreach events by displaying and staffing the department's "Go Green" booth at events such as the Marine Corps Air Station Miramar Airshow, Operation Clean Sweep, Earth Day, Fleet Week, and Bike to Work Day. EMS program personnel within the Environmental Department are the lead coordinators for these events. They organize involvement with the event facilitators and ensure that 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, Water Program personnel 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: Development Partnerships

The NBSD SWMP aims to develop partnerships to leverage existing resources and share those resources to address common water quality issues. Contacts with neighbors and partners such as nearby shipyards and municipalities will be maintained/increased to find common areas where NBSD and their partners can work together to address water quality issues. NBSD Water Program staff routinely communicate with water program managers at other area Navy and Marine Corps Bases to discuss various water program-related topics including storm water programs and share ideas. NBSD staff have also met with the City of San Diego Think Blue campaign coordinators to develop outreach forums for use at NBSD, and have an open line of communication for coordination regarding future events. Think Blue is a campaign run by the City of San Diego that promotes public knowledge of storm water quality and storm drain pollution prevention by providing pollution prevention programs, outreach literature, program reports, and resources and links to the public.

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 drain marking/labeling is a highly visible source control measure that provides a brief message that the storm drain discharges to a waterway and prohibits dumping of improper materials. Storm drains are marked with placards to inform NBSD tenants, employees, service members, and patrons that the storm drain is connected to the bay and prohibit dumping. Over time, these markings wear away and become illegible. In an effort to maintain this crucial public awareness BMP, NBSD Environmental Department staff will periodically conduct surveys of all of NBSD storm drains and assess the need for service or maintenance. Pertinent findings will be provided to NBSD PWD. The storm drains will be inspected as part of the municipal facility inspection, and, if funding and manpower are available, the storm drains will be marked with placards.

2.1.6 MCM 1.6: Physical and Electronic Media Outreach

Information dissemination within the NBSD 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 municipal facilities (MCM 1.1) periodically.

In addition to this face-to-face outreach, the NBSD CNIC webpage and the NBSD Facebook page will be used to disseminate information 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 informative documents, such as the SWMP, fliers, SOPs, and other information, will be posted on these websites. Water Program personnel plan to work with the Public Affairs Officer (PAO) and Information Technology (IT) Department 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**
			15	**16**	**17**	**18**	**19**	**20**	**21**	
MCM 1.1: Perform municipal facility inspections. Complete the MFIF – Attachment 1 to include verification of storm water map (feedback corrections as needed). Record site visit into the MFMS – Attachment 5.	Perform a one-time municipal facility hotspot evaluation and thereafter, perform quarterly hotspot facility inspections and periodic municipal facility inspections at non-hotspot facilities.	(1) Complete a hotspot evaluation at municipal facilities (2) Accomplish periodic municipal and quarterly municipal hotspot facility inspections. (3) Complete MFIFs for each facility visit. (4) Record facility visits on the MFMS. (5) Annotate storm water map changes tracked on the MFIF. (6) Update municipal facility POCs for each facility.			x	x	x	x	x	(1) NBSD Env, and Facility POC (2 – 5) NBSD Env
	Update storm water maps annually.	(1) Provide map discrepancies for the annual map update. (2) Verify that maps are corrected.			x	x	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**
			15	**16**	**17**	**18**	**19**	**20**	**21**	
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 and 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. (2) Distribute storm water awareness fliers at training events.	x	x	x	x	x	x	x	(1 – 2) NBSD Env
	Encourage facility POCs to take the training provided in ECATTS storm water training modules.	(1) Determine the 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 tenants' storm water awareness and track training effectiveness with follow-on inspections.				x	x	x	x	(1) NBSD Env and Facility POCs

Minimum Control Measure #1: Public Education and Outreach										
Best Management Practices	**Task**	**Measurable Goals**	**BMP Implement Timeline (FY: Oct–Sep)**							**Staff Responsible**
			15	**16**	**17**	**18**	**19**	**20**	**21**	
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, and ensure participants and materials are ready.	(1) Appoint a staff member to coordinate events, ensure participation, and provide materials for each event.	x	x	x	x	x		x	(1) NBSD Env
	Track outreach participation and maintain internal booth attendance tally.	(1) Maintain participation in outreach events. (2) Maintain attendance tally for each event.			x	x	x		x	(1 – 2) NBSD Env
MCM 1.4: Communicate with partners/neighbors (i.e., other Metro bases, Bases within the southwest region, nearby ship yards, and the City of San Diego) 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. (2) Maintain partner/neighbor interaction. (3) Promote partner-developed programs.		x		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**
			15	**16**	**17**	**18**	**19**	**20**	**21**	
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 messages to display on storm drains. (2) Conduct surveys of storm drains. (3) Identify storm drains that need messages and markers. (4) Maintain maintenance requirements for storm drains.		x	x	x	x			(1) NBSD Env and PAO (2 – 3) NBSD Env (4) NBSD Env and PWD
	Request funding (via Navy Environmental Portal) for pollution prevention message and markers for storm drains.	(1) Request funding for storm drain message and markers. (2) With available funding, increase properly maintained and marked storm drains.			x	x	x		x	(1 – 2) NBSD Env and PWD

Minimum Control Measure #1: Public Education and Outreach									
Best Management Practices	**Task**	**Measurable Goals**	**BMP Implement Timeline (FY: Oct–Sep)**						**Staff Responsible**
			15	**16**	**17**	**18**	**19**	**20**	**21**	
MCM 1.6: Develop existing NBSD CNIC and Facebook webpages 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 information related to NBSD, including spill prevention/reporting, community involvement, outreach events, and process BMPs.	Incorporate storm water information on CNIC/ Facebook webpage. Program webpages to allow viewers to navigate through storm water materials. Monitor the number of times the website has been viewed.	(1) Develop content for websites and coordinate it with PAO/IT. (2) Establish visitor counters for website(s). (3) Review websites annually.		**x**	x	x	x		x	(1 – 3) NBSD Env, PAO, and IT

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2.2 MCM 2: PUBLIC INVOLVEMENT AND PARTICIPATION

Requirements

The Public Involvement and Participation MCM addresses efforts by NBSD to regularly encourage public participation to develop and implement the SWMP, establish a platform for the public and target audiences to provide input to develop and implement the SWMP, solicit public reporting of suspected illicit discharges via telephone and in writing, and implement procedures for the receipt and consideration of verbal and/or written public inquires, concerns, and any other information submitted by the public.

Background

MCM 2 uses three BMPs (identified as MCMs 2.1–2.3) 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 consists of the following BMPs:

- MCM 2.1: Pre-Rain Actions Involvement
- MCM 2.2: Promotion of Participation in Outreach Events
- MCM 2.3: Encouragement of Public Review of the NBSD SWMP

2.2.1 MCM 2.1: Pre-Rain Actions Involvement

Water Program staff have developed a list of facilities that would benefit from, and can take action on, pre-rain notifications. This task supports MCM 2 by increasing facility POC involvement and participation to take action to reduce exposure of materials during forecast rain events. Facility participation will be determined by interviewing the facility POC during the facility 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 will receive a pre-rain email when the National Oceanic and Atmospheric Association (NOAA) weather forecast shows the chance of precipitation to be at least 50 percent. Pre-rain emails will be sent no later than 72 hours before the predicted precipitation, whenever possible. When the pre-rain email is received, the tenant will take pre-rain actions and fill out the associated Pre-Rain Inspection Checklist for High Risk Industrial and Municipal Hotspot Facilities (Attachment 4).

The First Lieutenant's Division manages a program where sailors pick up trash and debris around NBSD on a regular basis to improve base appearance. The program has a direct storm water benefit and encourages the NBSD public at large to take pride in the areas they are responsible for and keep them clean.

2.2.2 MCM 2.2: Promotion of Participation in Outreach Events

Water Program staff will use communications avenues such as NBSD-sponsored websites and facility inspections to promote outreach events to encourage public involvement and participation. Use of the internet to advertise public involvement and participation events such as cleanups and SWMP development will be coordinated through the PAO and the IT Department.

2.2.3 MCM 2.3: Encouragement of Public Review of NBSD SWMP

Water Program personnel have worked with PAO and the IT Department to post the SWMP to the NBSD CNIC webpage. The site will enable the public to review its contents and provide feedback. Using

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**
			15	**16**	**17**	**18**	**19**	**20**	**21**	
MCM 2.1: Implement the industrial storm water program's Pre-Rain Inspection notifications, including sending an email to remind facility POCs to conduct "regular housekeeping" and other BMPs when NOAA forecasts a 50% chance or greater for precipitation and for hotspot facility POCs to conduct pre-rain inspections and complete the pre-rain checklist.	Train facility POCs on action to take for Pre-Rain procedures. Email tenants when NOAA forecasts a chance of precipitation 50% or greater.	(1) Train facility POCs on required pre-rain actions. (2) Maintain pre-rain email notifications that were sent to all identified municipal POCs for all NOAA forecasts of precipitation of 50% or greater. (3) Maintain completed pre-rain inspection checklists.		x	x	x	x	x	x	(1 – 2) NBSD Env and Facility POCs
MCM 2.2: Using established websites (i.e., MCM 1.6), participate, develop, and advertise on-base and neighborhood community cleanup 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/ location). (2) Promote events.			x	x			x	(1 – 2) NBSD Env and PAO

Minimum Control Measure #2: Public Involvement/Participation									
Best Management Practices	**Task**	**Measurable Goals**	**BMP Implement Timeline (FY: Oct–Sep)**						**Staff Responsible**
			15	**16**	**17**	**18**	**19**	**20**	**21**	
MCM 2.3: Using established websites (see MCM 1.6), post the SWMP online. Within the SWMP, provide a POC to provide a feedback mechanism for the public. Inform tenants during site inspections about the SWMP and its location.	Notify tenants/patrons via email or face-to-face interaction about SWMP updates and changes.	(1) Coordinate with PAO/IT to allow public comments on the SWMP on the internet.		x	x	x			x	(1) NBSD Env, PAO, and IT
	Encourage public involvement in cleanup areas by attending/ participating in public events such as the NBSD "Go Green" booth.	(1) Identify storm water issues that a group effort can address. (2) Develop partnerships. (3) Provide information during outreach events.				x			x	(1 – 3) NBSD Env

2.3 MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION

Requirements

The Illicit Discharge Detection and Elimination MCM:

- Addresses how NBSD eliminates illicit discharges into storm water drainage systems
- Provides a storm water conveyance system map showing locations of storm water system outfalls and the names/locations of all waters of the United States 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 the NPDES permit
- Informs target audiences of hazards generally associated with illegal discharges and improper disposal of waste
- Addresses the categories of non-storm water discharges or flows 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

Background

MCM 3 provides four BMPs (identified as MCMs 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 [municipal facility inspections] and MCM 1.2 [environmental and SWMP training]). The Illicit Discharge Detection and Elimination MCM consists of the following BMPs:

- 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

The Office of the Chief of Naval Operations (OPNAV) Environmental Readiness Program Manual M5090.1 provides NBSD the authority to prohibit unauthorized non-storm water discharges and other illicit discharges. The NBSD Environmental Department currently has an illicit discharge and detection hotline in place. Environmental fliers provide an Environmental Department contact number ((619)556-1537) to report discharges during normal facility operating hours and the contact number for the Command Duty Officer (CDO) ((619)247-8897/9247) to report discharges during non-working hours. This program further develops the existing platform to address other requirements in the NPDES permit and expand notification to target audiences by working with outreach groups.

NBSD maintains a written program to conduct an investigation if an illicit discharge is reported or suspected. Detailed investigation procedures are provided in Appendix L of the NBSD Industrial SWPPP. Once an illicit discharge is confirmed, the NBSD Environmental Department will work with the respective facility tenant(s) to eliminate the discharge or identify BMPs to prevent entry of pollutants in the storm drain system. Additionally, the SWMP program will include data on illicit discharge reporting as a measurable goal. NBSD internally tracks reported illicit discharges by way of a spill log.

Non-storm water discharge visual observations are conducted at a minimum of 80 percent of the accessible municipal outfalls during dry weather conditions semi-annually; signs of illicit connections or illicit discharges are one of the conditions observed. The NBSD Environmental Department also conducts dry weather sampling at three municipal outfalls semi-annually, when unauthorized/unknown non-storm water discharges are observed. Sections 2.6.6 (MCM 6.6), 3.1.3, and 3.1.4 provide additional details and procedures for outfall inspections and dry weather monitoring.

2.3.2 MCM 3.2: On-Base Oil Recycling Program

The NEX Autoport provides on-Base oil recycling for patrons and tenants. The SWMP program will verify the continued performance of this public oil recycling program and ensure that vehicle maintenance shops are using this service. Additionally, information on this service will be 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 the three sites within NBSD, and are provided in Figures 1 through 3. These maps will be updated periodically as needed. During the municipal facility inspections (MCM 1.1), the storm water conveyance systems will be compared with current maps to verify the accuracy of their descriptions and locations. Corrections to and feedback on the maps will be provided, 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. An increased focus on delivering 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**
			15	**16**	**17**	**18**	**19**	**20**	**21**	
MCM 3.1: Develop, provide, and promote an illicit discharge detection hotline.	Provide a telephone number for the public to call and ensure that the phone is operational and manned.	(1) Maintain the NBSD Environmental Illicit Discharge Detection and Elimination program and phone number. (2) Track illicit discharges reported on a Spill and Illicit Discharge Log. (3) Work with PAO to increase audience and awareness of the program.		x	x	x	x	x	x	(1 – 2) NBSD Env and Utilities (3) NBSD Env and PAO
MCM 3.2: Implement a public oil recycling and HW turn-in program.	Accept oil and HW from NBSD tenants and patrons.	(1) Verify and maintain the Autoport oil recycling service through FY 20. (2) Contact Autoport to determine quantities collected. (3) Inform tenants of the service during facility inspections.	x	x	x	x	x	x	x	(1 – 2) NBSD Env and NEX Autoport (3) NBSD Env
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 conditions. Request maintenance funds for storm sewers that are inoperable or need maintenance.	Inventory and create a Storm Sewer System Map of NBSD. Show locations of all known storm sewers and outfalls and the names and locations of all waters of the United States 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. (2) Schedule and track map changes and incorporate inspections into the overall effort.	x	x	x	x	x	x	x	(1 – 2) NBSD Env and PWD

Minimum Control Measure #3: Illicit Discharge Detection and Elimination									
Best Management Practices	**Task**	**Measurable Goals**	**BMP Implement Timeline (FY: Oct–Sep)**						**Staff Responsible**
			15	**16**	**17**	**18**	**19**	**20**	**21**	
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 of information regarding the hazards that are generally associated with illegal discharges and improper disposal of waste.	(1) Appoint staff to maintain storm water materials (e.g., brochures, fliers) and provide materials to personnel manning booths. (2) Present information at hosted booths during outreach events. (3) Track the number of people visiting booth from FY18 to FY21. (4) Provide pollution prevention/storm water awareness messages during pre-movie commercials for on-Base movies. (5) Track the number of movies shown during year.		x	x	x	x		x	(1 – 5) NBSD Env and Morale, Welfare, and Recreation (MWR)

2.4 MCM 4: CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Requirements

The Construction Site Storm Water Runoff Control MCM addresses how NBSD reduces pollutants in storm water runoff from construction activities. This MCM includes inspection oversight for construction projects with land disturbing activities both greater and less than 1 acre. This program includes development and implementation of mechanisms to require:

- Erosion and sediment controls, as well as enforcement mechanisms to ensure compliance
- Implementation of appropriate erosion and sediment control BMPs by construction site operators
- Control of wastes such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts on water quality
- Procedures for site plan reviews that incorporate consideration of potential water quality impacts
- Procedures for receipt and consideration of information submitted by the public
- Procedures for site inspection and enforcement of control measures
- Procedures for verifying that sites over 1 acre have coverage under the California statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities (the Construction General Permit [CGP]).

Background

MCM 4 uses two BMPs (identified as MCMs 4.1–4.2) to address the Permit requirements. The BMPs reflect NBSD's (and NAVFAC SW) intensive oversight of construction projects, including NEPA and an expanded version of a Site Inspection BMP (MCM 1.1). The Construction Site Storm Water Runoff Control MCM consists of the following BMPs:

- 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 federal, state, and local regulations for multiple requirements (structural, safety, environmental, etc.). This oversight is required for all project sites, regardless of whether they are less than or greater than 1 acre in size. Special requirements for projects on sites larger than 1 acre are addressed during the NEPA process by the NBSD Environmental Compliance office. For sites over 1 acre, the NBSD NEPA Planner will ensure CGP coverage for the project. Water Program staff reviews all CGP Permit Required Documents (PRD) for accuracy and unanimity with base storm water management policies. For project sites smaller than 1 acre, NBSD incorporates BMPs to reduce erosion and sediment runoff into project requirements. All final plans to execute a project include a 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 the requirements in the SOW. The PM and CM are NAVFAC SW employees responsible for ensuring that the Government receives full execution of elements prescribed in the SOW.

2.4.2 MCM 4.2: Construction Site Inspections

NBSD, through the NAVFAC SW CM, ensures that construction projects have appropriate CGP coverage if required. As part of the duties of construction project management, the CM must ensure compliance with environmental requirements. The NAVFAC SW CM provides this oversight weekly. For projects covered by the CGP, compliance with the approved, site-specific SWPPP is required. For projects that do not require CGP coverage, compliance with the NBSD BMPs is required. NBSD Water Program personnel will regularly conduct site inspections (MCM 1.1) to provide further verification and oversight of construction projects. Construction site inspections will be documented using the NBSD Construction Site Inspection Form (Attachment 11). Project sites under 1 acre are inspected for BMP implementation and effectiveness. CGP covered projects are inspected against the SWPPP submitted as part of the PRDs for accuracy and BMP effectiveness. Water Program personnel also review and verify contractor Storm water Multiple Application and Report Tracking System (SMARTS) submittals as needed.

Any public comments or concerns with regard to construction projects within NBSD can be addressed by calling the CDO at (619)247-8897/9247. The CDO will forward the information to the appropriate CM or Environmental Office personnel to be addressed accordingly. On a case-by-case basis, construction sites may also produce signage that provides contact information for public comments and concerns.

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**
			15	**16**	**17**	**18**	**19**	**20**	**21**	
MCM 4.1: Perform NEPA review of all construction projects.	All NEPA documents are signed by appropriate subject matter experts (SMEs) and leadership. Prior to construction, determine the size and impact of the 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 that CGP requirements and site-specific SWPPPs are assigned. **Projects < 1 Acre** (2) Verify that NBSD BMPs for Construction Activities Disturbing Less Than One Acre of Land are assigned.	x	x	x	x	x	x	x	(1 – 2) NBSD PWO, FMS, and Env

Minimum Control Measure #4: Construction Site Runoff Control									
Best Management Practices	**Task**	**Measurable Goals**	**BMP Implement Timeline (FY: Oct–Sep)**						**Staff Responsible**
			15	**16**	**17**	**18**	**19**	**20**	**21**
MCM 4.2: Monitor all construction sites to verify requirements are being implemented.	Perform routine monitoring for all construction activities.	(1) The NAVFAC CM conducts site visits at least once per week to ensure that SWPPP or NBSD policy is being implemented.	x	x	x	x	x	x	x	(1) CM
		(2) Conduct a routine site visit to ensure that SWPPP or NBSD policy is being implemented.			x	x	x	x	x	(2) NBSD Env
		(3) Run semi-annual Storm Water Multiple Application and Report Tracking System (SMARTS) queries for larger sites to verify CGP coverage.			x	x	x	x	x	(3) NBSD Env and CM

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

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 1 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, including 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
- Maintains and regularly updates an inventory of BMPs installed pursuant to the SWMP

The BMP inventory includes:

- The exact locations 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 to determine whether proper operation and maintenance occurred during the year
- Actions taken, or to be taken, to address deficiencies, if applicable

Background

MCM 5 incorporates three BMPs (identified as MCMs 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 acre) 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 storms up to the 95th percentile storm event. As part of the pre-construction document review process, Water Program personnel will ensure that LID features are incorporated into the design plan.

2.5.2 MCM 5.2: Construction

As part of the construction site inspections (MCM 4.2), Water Program personnel will ensure that designed LID features are incorporated into the site as prescribed. The MFMS (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 municipal facility inspections (MCM 1.1), Water Program personnel will identify/observe/document LID features for each site. For facilities already built, maintenance requirements will be determined by interviewing NBSD Facilities Engineering and Acquisition Division personnel as well as the Facilities Maintenance Specialist (FMS) and researching the types if LID features installed. For facilities being built, the LID feature will be identified/observed/documented during the next inspection following completion of construction.

A BMP inventory is included in Attachment 5, with information for each BMP's location, POC, inspection/maintenance frequency, and maintenance history for any LID, filter inserts, or inserts with maintenance required.

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**
			15	**16**	**17**	**17**	**19**	**20**	**21**	
MCM 5.1: Design and Planning: DoD Policy (Unified Facilities Code [UFC] 3-210-10) mandates that construction or building expansion projects or impervious areas 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 requirement is part of the NEPA process for all construction 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 the size of the construction activity. (2) For > 5,000 square feet, require LID to meet DoD policy. (3) Verify LID features in the design. (4) Determine maintenance costs. If applicable, request a recurring maintenance or service contract to fund future maintenance.	x	x	x	x	x	x	x	(1 – 4) NBSD Env, FEAD, Planners, appropriate PM and Contracting Officer (KO)
MCM 5.2: Construction: During routine site inspections, verify that LID is being built to design specifications.	Monitor construction sites.	(1) Perform routine site visits. (2) Verify that LID is built per design.		x	x	x	x	x	x	(1 – 2) NBSD Env, FEAD, and CM

Minimum Control Measure #5: Post Construction Runoff Control									
Best Management Practices	**Task**	**Measurable Goals**	**BMP Implement Timeline (FY: Oct–Sep)**						**Staff Responsible**
			15	**16**	**17**	**17**	**19**	**20**	**21**	
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 regularly and provide feedback for maintenance or incorporation of new LID.	(1) Record site visits to LID feature in MFMS. (2) Note maintenance requirements or LID needs. (3) Coordinate with FMS to generate work requests to fund maintenance.		x	x	x	x	x	x	(1 – 3) NBSD Env, and FMS

2.6 MCM 6: POLLUTION PREVENTION/GOOD HOUSEKEEPING

Requirements

The Pollution Prevention/Good Housekeeping MCM provides facility POCs and applicable target audiences with BMPs that are sufficient to minimize pollutant runoff from onsite 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, building maintenance, new construction and land disturbance, and storm water system maintenance.

Background

MCM 6 uses seven BMPs (identified as MCMs 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: Assessment of Exposed Materials and Proper Disposal
- MCM 6.4: Petroleum, Oils, and Lubricants (POL) Storage and Management (Aboveground Storage Tank [AST]/Underground Storage Tank [UST])
- MCM 6.5: Existing Programs
- 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 municipal facility inspection program (MCM 1.1), each facility will be assessed to determine the BMPs that are most applicable. The BMPs listed in Section 2 and Attachment 6 and others not yet identified will be captured for each facility. Additionally, during the facility inspection, appropriate environmental training requirements for the target audiences will be identified and administered.

2.6.2 MCM 6.2: Storm Drain Operability

NBSD Water Program staff will use the maintenance process via the NAVFAC SW FMS to address storm drain operability. Regular municipal 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 of Them

During the municipal facility inspections (MCM 1.1), the NBSD Water Program Inspector will identify exposed pollutant source materials at each facility. Onsite environmental and SWMP training (MCM 1.2)

and distribution of education materials will be provided and followed up on to ensure that exposed pollutant sources are properly mitigated or disposed of.

2.6.4 MCM 6.4: POL Storage and Management (AST/UST)

The NBSD Environmental Compliance Department provides oversight for all AST and 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 regularly to ensure that 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

The NPDES Permit requires an annual review of the NBSD RLD for each facility. Because of process changes within some facilities, RLDs may change from industrial to municipal or municipal to industrial. Municipal facilities that were previously industrial have older SWPPPs that often consist of extensive detail that can be used to develop and maintain municipal BMPs. Municipal facilities that generate HW typically pose a higher storm water risk than those that do not. These facilities are covered under site-specific Hazardous Materials Business Plans, and are inspected on a monthly basis by the Environmental Department. The inspections verify that the facility POCs are properly containing, labeling, and disposing of HM and HW, and are keeping them out of the trash and storm drain system. Material usage is compared with 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 the Environmental Department. 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 a minimum of 80% of accessible municipal outfalls be inspected semi-annually. If flows are identified, 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. DNs provide an internal tracking mechanism that enables environmental media programs to focus on repeat offenders and provide a track record of maintenance and corrective action. The SWMP will use DNs as necessary to ensure that tenants maintain BMPs prescribed.

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**
			15	**16**	**17**	**18**	**19**	**20**	**21**	
MCM 6.1: During facility inspections, develop and establish facility-specific BMPs for designated hotspot municipal facilities. General municipal BMPs will be applicable to non-hotspot facilities.	Facility-specific BMPs are determined for each municipal facility during facility inspection.	(1) Identify facility BMPs and train facility POC on BMPs. (2) Update BMPs during each facility inspection as needed.		x	x	x		x	x	(1 – 2) NBSD Env and Facility POCs
MCM 6.2: Maintain storm drain operability.	Visually inspect storm drains during facility inspections to ensure that they are operable (i.e., not full of sediment or other obstructions).	(1) Identify and track inoperable storm drains in MFMS. (2) Make notifications and track progress to return storm drains to operability in MFMS. (3) Encourage facilities to take ownership of storm drains on their site.					x	x	x	(1 – 3) NBSD Env, PWD, and Facility POCs
MCM 6.3: Assess the facility for exposed materials. Coordinate with the facility POC, Recycling, Defense Logistics Agency (DLA) Disposition Services, and HW Facility to remove exposed materials.	Conduct an 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 the status of exposed materials during inspections. (2) Instruct the facility POC regarding coordination for removal of exposed materials.		x	x	x				(1 – 2) NBSD Env, Facility POCs, DLA, Recycling, and HW Facility

Minimum Control Measure #6: Pollution Prevention/Good Housekeeping										
Best Management Practices	**Task**	**Measurable Goals**	**BMP Implement Timeline (FY: Oct–Sep)**							**Staff Responsible**
			15	**16**	**17**	**18**	**19**	**20**	**21**	
MCM 6.4: Store and manage liquid materials.	Inspect ASTs monthly to ensure employment of proper storage procedures (e.g., ensure that berm valves are closed for containment areas).	(1) Verify that inspections are occurring on a monthly basis.	x	x	x	x	x	x	x	(1) NBSD Env
	Municipal facilities that have HW permits are inspected monthly by the HW program. The HW inspection supports proper storm water protection procedures are employed.	(1) Verify that inspections are occurring on a monthly basis.	x	x	x	x	x	x	x	(1) NBSD Env
MCM 6.5: Incorporate pre-existing SWPPP BMPs for facilities that were previously industrial but are now designated as municipal hotspot facilities.	Determine all facilities that were previously assigned as industrial in the 2018 SWPPP, and are currently re-designated as municipal hotspot facilities.	(1) Use the 2018 SWPPP to identify municipal facilities and determine if they have been designated as hotspot facilities. (2) Update SWPPPs for municipal facilities and incorporate BMPs in the SWMP. (3) Develop BMPs for facilities that do not have an existing SWPPP.			x	x	x	x	x	(1 – 3) NBSD Env
MCM 6.6: Perform semi-annual dry weather monitoring.	As part of the SWMP Monitoring Plan, the NBSD Environmental Department monitors 80% or more of outfalls and traces dry weather flows.	(1) Conduct semi-annual outfall inspections. (2) Trace dry weather flows to their source and eliminate if possible. (3) Sample unknown/ unauthorized flows per the Monitoring Plan.			x	x	x	x	x	(1 – 3) NBSD Env

Minimum Control Measure #6: Pollution Prevention/Good Housekeeping									
Best Management Practices	**Task**	**Measurable Goals**	**BMP Implement Timeline (FY: Oct–Sep)**						**Staff Responsible**
			15	**16**	**17**	**18**	**19**	**20**	**21**	
MCM 6.7: Issue DNs as required. This enforcement measure can be taken for non-compliance with any and all MS4 requirements.	Perform inspections and issue DNs to be internally monitored as needed.	(1) Conduct inspections. (2) Issue DNs for facilities that are not taking corrective action. (3) Monitor results internally.	x	x	x	x	x	x		(1 – 3) NBSD Env

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Section 3 Observations, Monitoring, and Recordkeeping

3.1 MUNICIPAL STORM WATER OBSERVATIONS, MONITORING AND RECORDKEEPING

Per the Permit, the requirement to implement observations, monitoring, and official recordkeeping for municipal facilities throughout NBSD commenced on November 1, 2015. NBSD is composed of three separate complexes with municipal facilities covered by this SWMP. Mainside Complex is the primary and largest area, with piers and facilities to support naval ships. The Naval Medical Center San Diego is the largest and primary DoD medical facility in the San Diego metro area. 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, including both buildings and outfalls. The MFIFs (Attachment 1) will be used for buildings and the Non-Storm Water Discharge 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 that sites are assessed and noted as necessary. Building inspections and updates will be conducted throughout the year. The Outfall and Monitoring Location Maps (Figures 1 through 3) will be used in the inspection and update process. The accessible 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 second quarter of the calendar year and the Quarterly Industrial Facility Visual Inspections (QIFVI) performed during the fourth quarter of the calendar year. Coordinating these activities ensures that 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 the NBSD NPDES Permit Standard Provisions, samples and measurements taken for monitoring must be representative of the monitored activity. The prescribed storm water sampling locations in Table 3 meet these requirements and are representative of the monitored activity for these reasons:

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

- The Mainside Complex's impervious profile (87% is composed 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; however, its area, 79 acres, is significantly smaller.

- MGRF is largely non-representative among 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.

- The Mainside Complex shares some unique land characteristics with NMCSD and MGRF. The facility has medical facilities comparable to those located on NMCSD (within the Outfall 54 drainage area) as well as a small, approximately 10-acre, golf course within the Outfall 70 drainage area of NBSD Mainside Complex.

- 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 conducted at the outfall locations designated in Table 3 of the Monitoring Plan. The assigned locations are in accordance with Table E-1 of NBSD NPDES Permit and sampling is performed in accordance with Section IX.B of Attachment E of the NBSD NPDES Permit. Dry weather samples will be collected as far upstream as possible to get as close as possible to the discharge source. Dry weather monitoring locations are dependent on the locations of dry weather discharges, so sampling may occur at any of the three NBSD sites (Mainside, NMCSD, or MGRF).

3.1.3 Outfall Inspections

Outfall inspections will be performed during dry weather conditions (i.e., at least 72 hours after any rain event) to identify outfalls that are flowing or ponding. A minimum of 80 percent of the accessible municipal outfalls will be visually inspected two times per year (San Diego Regional MS4 NPDES Permit Provision 2.a(2)(a)(i)). Table 2 is used as a guide for conducting visual observations. The Navy is not a co-permittee under San Diego Regional MS4 NPDES Permit, Order No. R9-2013-0001, but will use its guidance to promote consistency with other regional small MS4 co-permittees. The Non-Storm Water Discharge Visual Observations Form (Attachment 3) will be used to track observations for each outfall visually observed.

Table 2. Field Screening Visual Observations for MS4 Outfall Discharge Monitoring Stations[1]

Field Observations

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

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

3.1.4 Dry Weather Sampling

In accordance with the NBSD NPDES Permit, Page E-34, a minimum of three monitoring locations will be sampled twice per year (see Table 6). Dry weather sampling will be conducted at the first three locations where discharges are observed with an unknown source during the semi-annual dry weather outfall inspections. Dry weather sampling must be conducted at least 72 hours after any rain event. Identified sources will be assessed as authorized or unauthorized. Unauthorized sources will be stopped and addressed as necessary. An attempt will be made so that the first round of dry weather sampling will coincide with the ACSCE during the January 1 to June 30 timeframe and the second set of dry weather sampling will be performed during the fourth quarter QIFVIs, conducted between July 1 and

December 31 to better coincide with the NBSD Industrial Storm Water Monitoring Program. This coordination is intended to maximize available resources. Dry weather samples will be collected at the farthest upstream source and be analyzed for indicator parameters to provide clues about the source or origin of the discharge in accordance with the Center for Watershed Protection's Illicit Discharge Detection and Elimination Guidance Manual (Center for Watershed Protection, 2004). The sampling will be conditional, it will only occur where the discharge source is not known. Table 3 summarizes the analytical parameters for dry weather flow sample constituent analysis.

Table 3. Dry Weather Sampling Constituents[1]

Parameter	Unit	Sample Type	Minimum Frequency	Required Analytical Test Method
Ammonia	mg/L	Grab	Twice Annually	40CFR136
Chlorine, Total Residual	mg/L	Grab	Twice Annually	40CFR136
Conductivity	µS/cm	Grab	Twice Annually	40CFR136
Detergents - Surfactants	mg/L	Grab	Twice Annually	40CFR136
Hardness, Total	mg/L as $CaCO_3$	Grab	Twice Annually	40CFR136
pH	pH Units	Grab	Twice Annually	40CFR136
Potassium, Total	mg/L	Grab	Twice Annually	40CFR136
Turbidity	NTU	Grab	Twice Annually	40CFR136

1. Dry weather sampling is dependent on observed water and could be conducted at any of the three sites (Mainside, NMCSD, or MGRF) within NBSD.

µS/cm = microSiemens per centimeter; CFR = Code of Federal Regulations; mg/L = milligrams per liter; NTU = nephelometric turbidity units; mL = milliliters; MPN = most probable number

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-I, X.A.3 of the Permit). Specifically, storm water from three selected locations (see Table 4) will be sampled during each semi-annual period (January through June, and July through December) in the event of a qualifying storm event (QSE). Wet weather flows will be tested for the analytical monitoring constituents summarized in Table 5, for all wet weather sampling locations. For each sample collected, the appropriate data will be filled out on the Storm Water Discharge Visual Observation Form (Attachment 2). Wet weather sampling analytical results will be compared with published MS4 storm water benchmarks to help evaluate the effectiveness of BMPs implemented within MS4 drainage areas and to determine compliance with applicable effluent limitations.

Table 4. Wet Weather Sampling Locations

Location	Description	Navy Identification 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 5. Wet Weather Sampling Constituents and Benchmarks

Parameter	Unit	Benchmark	Sample Type	Minimum Frequency	Required Analytical Test Method
Oil and Grease	mg/L	25[1]	Grab	One storm per semiannual period	40CFR136
Total Suspended Solids	mg/L	100[2]	Grab	One storm per semiannual period	40CFR136
Turbidity	NTU	126[3]	Grab	One storm per semiannual period	40CFR136
Nitrate + Nitrite as N	mg/L	10[1]	Grab	One storm per semiannual period	40CFR136
Chemical Oxygen Demand	mg/L	120[2]	Grab	One storm per semiannual period	40CFR136
Phosphorus, Total	mg/L	2[1]	Grab	One storm per semiannual period	40CFR136
Copper, Total	µg/L	188.95[4]/127[3]	Grab	One storm per semiannual period	40CFR136
Zinc, Total	µg/L	359.31[4]/976[3]	Grab	One storm per semiannual period	40CFR136
Lead, Total	µg/L	16[4]/250[3]	Grab	One storm per semiannual period	40CFR136
Cadmium, Total	µg/L	3[3]	Grab	One storm per semiannual period	40CFR136

Notes:
1. San Diego Regional Water Quality Control Plan for the San Diego Region (Basin Plan), 1994 (with amendments effective prior to May 17, 2016).
2. NBSD NPDES Permit Numeric Action Level.

Table 4. Wet Weather Sampling Constituents (continued)

3. Order No. R9-2013-0001, NPDES Permit for Discharges from MS4s within the San Diego Region, 2013.
4. Numeric effluent limitations from the NBSD NPDES Permit applicable to MS4 discharges to Chollas Creek.

CFR = Code of Federal Regulations; mg/L = milligrams per liter; NTU = nephelometric turbidity units

3.1.6 Sampling Frequency

Table 6 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 sampling events are not to occur any sooner than four weeks apart. Sampling will continue in accordance with the schedule presented in Table 65 after expiration of the NBSD NPDES Permit until a new permit is adopted.

Table 6. Sampling Schedule

Year	Wet and Dry Weather Sampling Schedule
2015	November 1 – December 31
2016 – present	First Set: January 1 – June 30
2016 – present	Second Set: July 1 – December 31

3.1.7 Annual Reporting

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

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Section 4 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 Requirements for the United States Department of the Navy, Naval Base San Diego Complex, San Diego County, December 13, 2017.

Center for Watershed Protection, Illicit Discharge Detection and Elimination – A Guidance Manual for Program Development and Technical Assessments, October 2004.

NAVFAC Southwest (SW), Naval Base San Diego Storm Water Program Best Management Practices and Pollution Prevention Practices Plan for Utility Vault and Manhole Dewatering, Utility Vault Plan, February 2018.

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 Construction and Land Disturbance Activities, July 17, 2012.

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FIGURES

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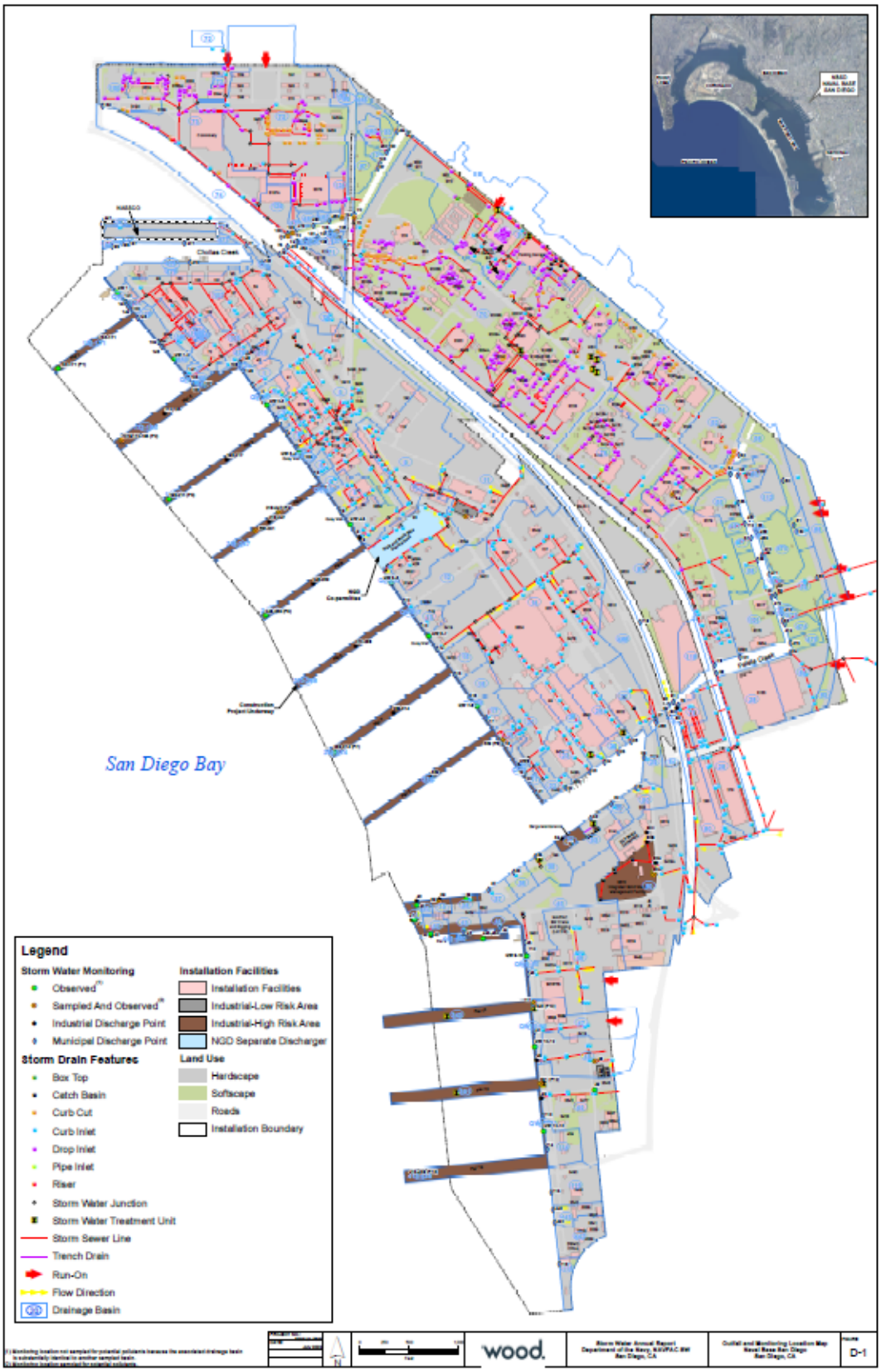

FIGURE 1. NAVAL BASE SAN DIEGO (NBSD)

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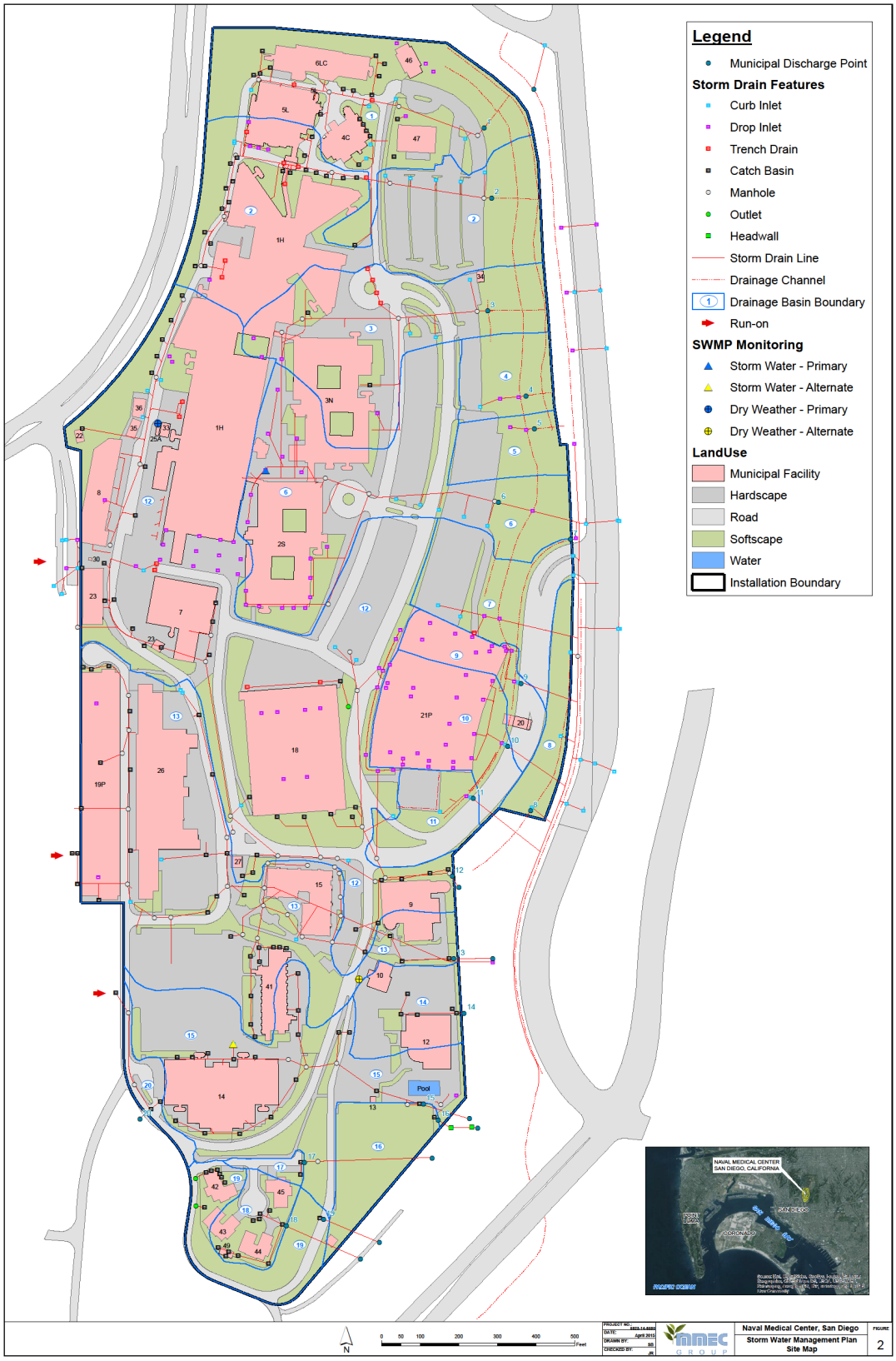

FIGURE 2. NAVAL MEDICAL CENTER SAN DIEGO (NMCSD)

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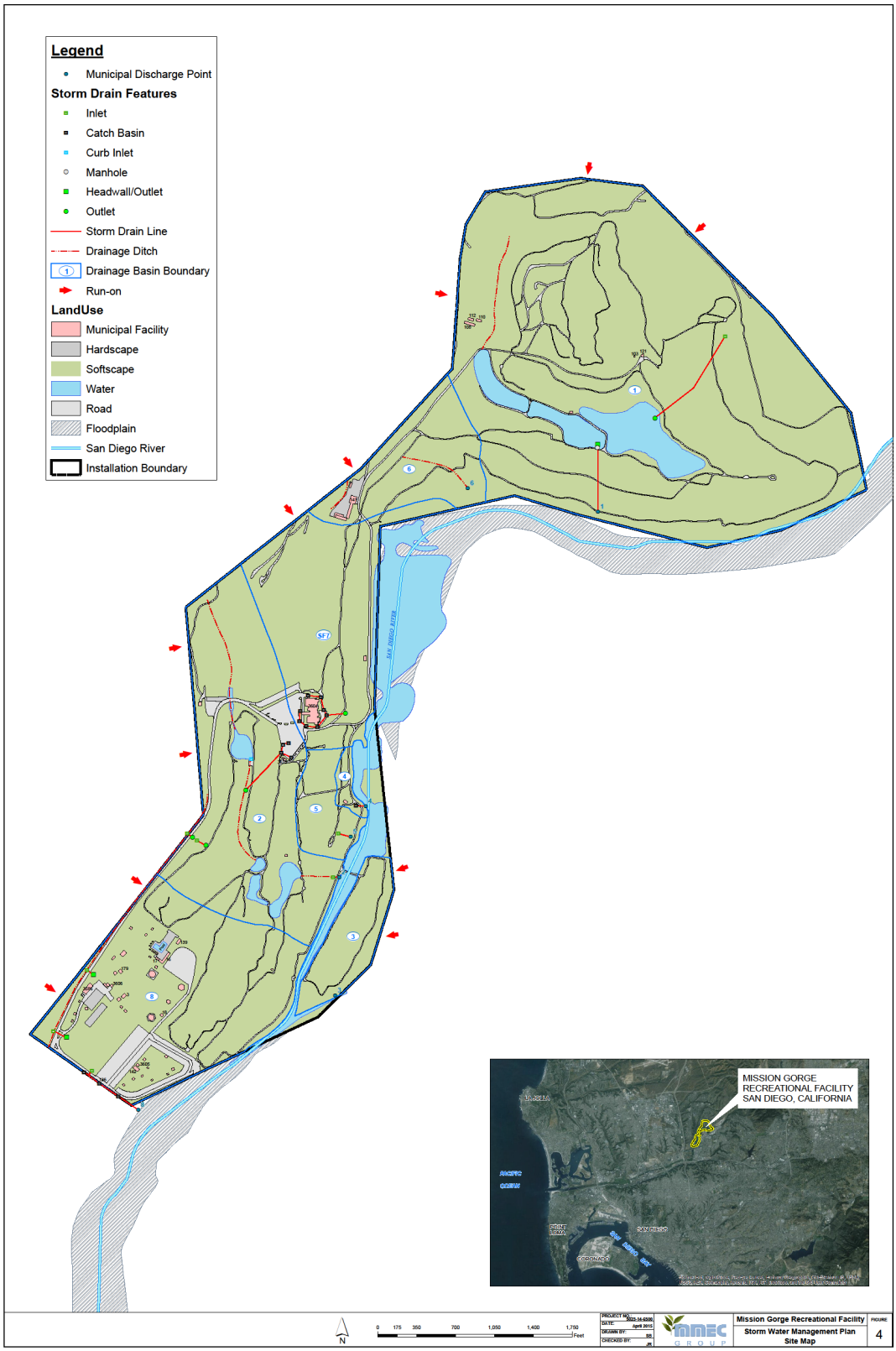

FIGURE 3: MISSION GORGE RECREATION FACILITY (MGRF)

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ATTACHMENT 1
MUNICIPAL FACILITY INSPECTION FORM (MFIF) and POC QUESTIONNAIRE

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NPDES PERMIT
 # CA0109169

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

CONTACT INFORMATION		
ACTIVITY	**BLDG#**	**FMS**
POC	**PHONE#**	**EMAIL**

	SITE PHYSICAL CHARACTERISTICS	Y	N	NA
1	Maintenance activities performed outdoors.	☐	☐	☐
2	Trash cans, recycling bins and dumpsters available onsite.	☐	☐	☐
3	Outdoor fueling processes.	☐	☐	☐
4	Vehicle storage area.	☐	☐	☐
5	Stores Hazardous materials/waste outdoors.	☐	☐	☐
6	UST(s)/AST(s) onsite.	☐	☐	☐
7	OWS (oily wastewater separator) onsite.	☐	☐	☐

	SITE POC INFORMATION	Y	N	NA
1	Have Waste Coordinators attended training within the last year?	☐	☐	☐
2	Have operations remained the same?	☐	☐	☐
3	Does POC have NBSD ENV's contact information?	☐	☐	☐

	SITE INSPECTION	Y	N	NA
1	Site is swept & cleaned on a regular basis (BMP 003).	☐	☐	☐
2	Storm drains/catch basins maintained clean. (BMP 110)(BMP 026).	☐	☐	☐
3	Equipment &/or stowed vehicles show no signs of leaks (BMP 033).	☐	☐	☐
4	Drip pans used under leaking equipment (BMP 044)?	☐	☐	☐
5	Spills are documented in weekly HW inspection form (BMP 118).	☐	☐	☐
6	POL materials stored in covered area (BMP 061B).	☐	☐	☐
7	Containment pallets are used to store 55 gal. POL materials or other liquids (BMP 055).	☐	☐	☐
8	AST containment outlet valve is closed (BMP 014).	☐	☐	☐
9	Recycling and municipal solid waste bins are closed (BMP 018).	☐	☐	☐
10	Environmental Deficiency Notice (DN) Issued.	☐	☐	☐

Inspected By: **Date:**

FORM W-MS4-1 REVISED 2021Mar15
NBSD ENVIRONMENTAL PROGRAM

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NBSD Municipal Facility Hotspot Assessment Form

Building ID(s):		**Tenant:**	
POC(s)/Title(s):		**POC Email/Phone:**	
Rotation Date: --	**Date:**	**Assessed By:**	**Map Grid:**

	Index*
A. VEHICLE OPERATIONS □ **N/A** (*Skip to part B*) — **Observed Pollution Source?**	
A1. Types of Vehicles (*check all that apply*): □ Cars □ Trucks □ Buses □ Military Vehicles □ Military Trailers □ Others: _____	
A2. Approximate number of vehicles: □ <10 □ 10 to 50 □ 50 to 100 □ >100	
A3: Activities: □ Maintenance □ Repair □ Recycling □ Fueling □ Washing □ Storage	○
A4. Are vehicles stored or repaired outside? □ Y □ N Are covers or BMPs designed to avoid spills and discharge to storm drain missing? □ Y □ N	○
A5. Is there evidence poor vehicle management or maintenance results in spills? □ Y □ N	○
A6. Are uncovered outdoor fueling areas present? □ Y □ N	○
A7. Do fueling areas drain to storm drains without an OWS? □ Y □ N	○
A8. Are vehicles/trailers washed outdoors? □ Y □ N Does the area where vehicles are washed discharge to a storm drain? □ Y □ N	○
B. OUTDOOR MATERIALS □ **N/A** (*Skip to part C*) — **Observed Pollution Source?**	
B1. Are loading/unloading operations present? □ Y □ N If yes, are they uncovered *and* draining towards a storm drain (without treatment)? □ Y □ N	○
B2. Are significant materials stored outside? □ Y □ N If yes, select the material type(s) below: □ Acids □ Fuel □ Motor Oil □ Pesticide □ Solvents □ Other Hazardous Liquid □ Metal Parts □ Tires □ Landscape Materials □ Other: _____	○
B3. Does the site have USTs/ASTs? □ ASTs:_____ □ USTs:_____	○
B4. Are liquid materials stored *without* adequate secondary containment? □ Y □ N	○
B5. Is the storage area directly or indirectly connected to a storm drain? □ Y □ N	○
B6. Is staining or discoloration around the area visible? □ Y □ N	○
B7. Does outdoor storage area lack a cover? □ Y □ N	○
B8. Are storage containers missing labels or in poor condition? □ Y □ N	○
C. WASTE MANAGEMENT □ **N/A** (*Skip to part D*) — **Observed Pollution Source?**	
C1. Type of waste (*check all that apply*): □ Trash □ Construction/ debris □ Hazardous □ Other:	○
C2. Waste container condition (*check all that apply*): □ No cover □ Damaged/Poor condition □ Leaking or evidence of leakage (stains on ground) □ Overflowing	○
C3. Is the waste container located within 50 feet of a storm drain inlet? □ Y □ N If yes, are runoff diversion methods (berms, curbs, enclosures) missing? □ Y □ N	○
D. PHYSICAL STRUCTURE — **Observed Pollution Source?**	
D1. Are there signs that lack of maintenance results in discharge to storm drains (staining/discoloration)? □ Y □ N	○
D2: Do downspouts discharge to impervious surface or connect directly to storm drains? □ Y/Unknown/Underground □ N	○
D3. Are the parking surfaces stained, dirty, discolored, or damaged? □ Y □ N	○
D4. Is there evidence of poor cleaning practices from construction activities (stains leading to a storm drain)? □ Y □ N	○

NBSD Municipal Facility Hotspot Assessment Form

E. TURF/LANDSCAPING AREAS □ **N/A** (*Skip to part F*)	**Observed Pollution Source?**	▭
E1. Is turf/landscape maintained (use of pesticides, chemicals evident)?	□ Y □ N	○
E2. Is there evidence of over-irrigation or "non-target" irrigation?	□ Y □ N	○
E3. Do landscaped areas drain directly to storm drains?	□ Y □ N	○
E4. Do landscape plants accumulate organic matter (leaves, grass clippings) on adjacent impervious surface?	□ Y □ N	○
F. STORMWATER INFRASTRUCTURE □ **N/A** (*Skip to part G*)	**Observed Pollution Source?**	▭
F1. Number of Catch Basins (est.):		
F2. Does the storm water map appear to need revision/updating?	□ Y □ N	○
F3. Are stormwater treatment structures absent?	□ Y □ N	○
F4. Do the majority of storm water collection/conveyance structures lack regular maintenance? □ Y □ N Rate the condition of gutter/swales within the facility boundary as follows: **Sediment** □ Low □ Medium □ High **Organic material** □ Low □ Medium □ High **Litter** □ Low □ Medium □ High		○

G. INITIAL HOTSPOT STATUS – INDEX RESULTS

Total Score: ○ _____ ▭ _____

□ Low Risk (fewer than 14 circles and no boxes checked) □ High Risk (14 or more circles/1 or more boxes checked)

Follow-up Actions:

□ Maintenance required (list where in notes section)
□ Include in education effort (list what and why in notes section)
□ Follow-up corrective action (list in notes section)
□ Complete POC questionnaire addendum
□ Re-inspection of suspected hotspot facility after POC corrective actions

Notes:

*Index: ○ denotes potential pollution source; ▭ denotes confirmed polluter (evidence was observed)

MUNICIPAL FACILITY INSPECTION POC QUESTIONNAIRE ADDENDUM
STORM WATER MANAGEMENT PLAN – MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

Building ID(s):	**POC Interviewed:**

POC QUESTIONARE: Does/is Command/Tenant…

1. Have knowledge of storm water fundamentals (e.g. all storm drains go to bay), BMPs (process & structural)? ◻ Y ◻ N ◻ N/A

2. Conduct or attend Environmental Training?
   ◻ Y ◻ N/No need ◻ Want additional training/Information ◻ Some/Minimal

3. Have an Environmental Binder on site? ◻ Y ◻ N ◻ N/A

4. Aware of Environmental Inspections (Air, HW, Tanks, IWW, SWPPP)? ◻ Y ◻ N ◻ N/A

5. Conduct regular cleanup for facility/site? If yes, how often? ◻ Y ◻ N ◻ N/A;
   ◻ Trash: _____ ◻ Sediment/Sweeping: _____
   ◻ Catch Basins: _____ ◻ LID/Filters: _____

6. Take any actions prior to rain events? If so, what? ◻ Y ◻ N ◻ N/A

7. Use DRMO/Recycling/Clean Harbors/other for disposal of items? ◻ Y ◻ N ◻ N/A

8. Use HAZMAT? ◻ Y ◻ N ◻ N/A

MUNICIPAL FACILITY INSPECTION POC QUESTIONNAIRE ADDENDUM
STORM WATER MANAGEMENT PLAN – MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

9. Know of upcoming construction for the site? Where? When? Project lead? Outside or inside?
□ Y □ N

10. Interested in follow-up info? □ Y □ N □ N/A
□ DRMO/ Recycling □ Clean Harbors/Haz. Waste □ Environmental Fliers □ Other:_____

Site BMPs (check all that apply)

MS4 - MUNICIPAL BEST MANAGEMENT PRACTICES – Everyone including Administrative Staff should perform.

□ 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 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 113	Conduct Personnel Training Regarding the SWPPP/SWMP
□ BMP 115	Store Containers Inside Secondary Containment
□ BMP 116	Control Dust and Particulates
□ BMP 117	Do Not Pour or Deposit Waste into Storm Drains

MS4 - MUNICIPAL BMPs – Maintenance Staff Performs, anyone can help and support.

□ BMP 023	Place Portable Rubber Mats over Storm Drain Inlets
□ BMP 026	Routinely Clean Catch Basins
□ BMP 027	Stencil Signs on Storm Drain Inlets (Ask NBC EV or wait for announcement on Stenciling Event)
□ 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 118	Routinely Report Any Observed Non-Storm Water Discharges

Comments:

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-SW-9
2021Mar08

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:

Inspector Signature and Title: _____

FORM W-SW-9
NBSD ENVIRONMENTAL PROGRAM
REVISED 2021Mar08

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ATTACHMENT 5
MUNICIPAL FACILITY MASTER SPREADSHEET (MFMS)

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The Municipal Facility Master Spreadsheet (MFMS) is maintained digitally separate from the SWMP.

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ATTACHMENT 6
MS4 BEST MANAGEMENT PRACTICES (BMPs)

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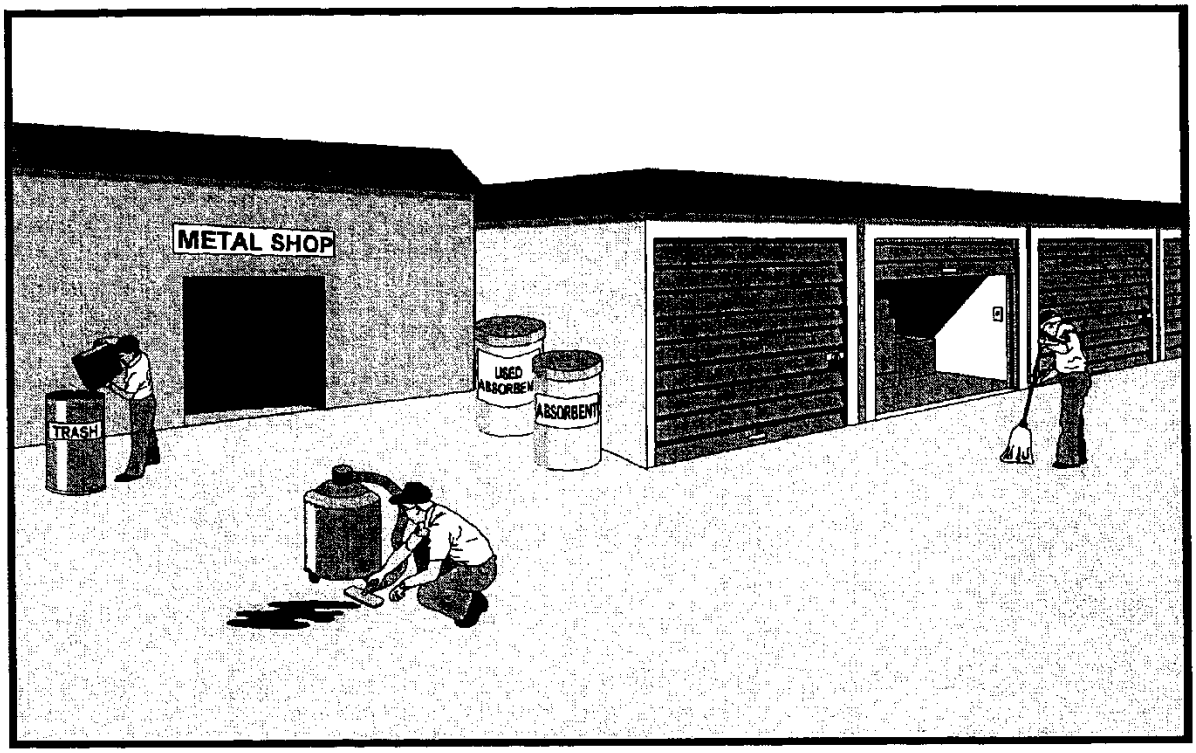
BMP 003	Perform Regular Cleaning
BMP 007	Place Trash Receptacles at Appropriate Locations
BMP 009	Train Employees to Properly Dispose of Wastes
BMP 015	Recycle
BMP 023	Place Portable Rubber Mats over Storm Drain Inlets
BMP 026	Routinely Clean Catch Basins
BMP 027	Stencil Signs on Storm Drain Inlets
BMP 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

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

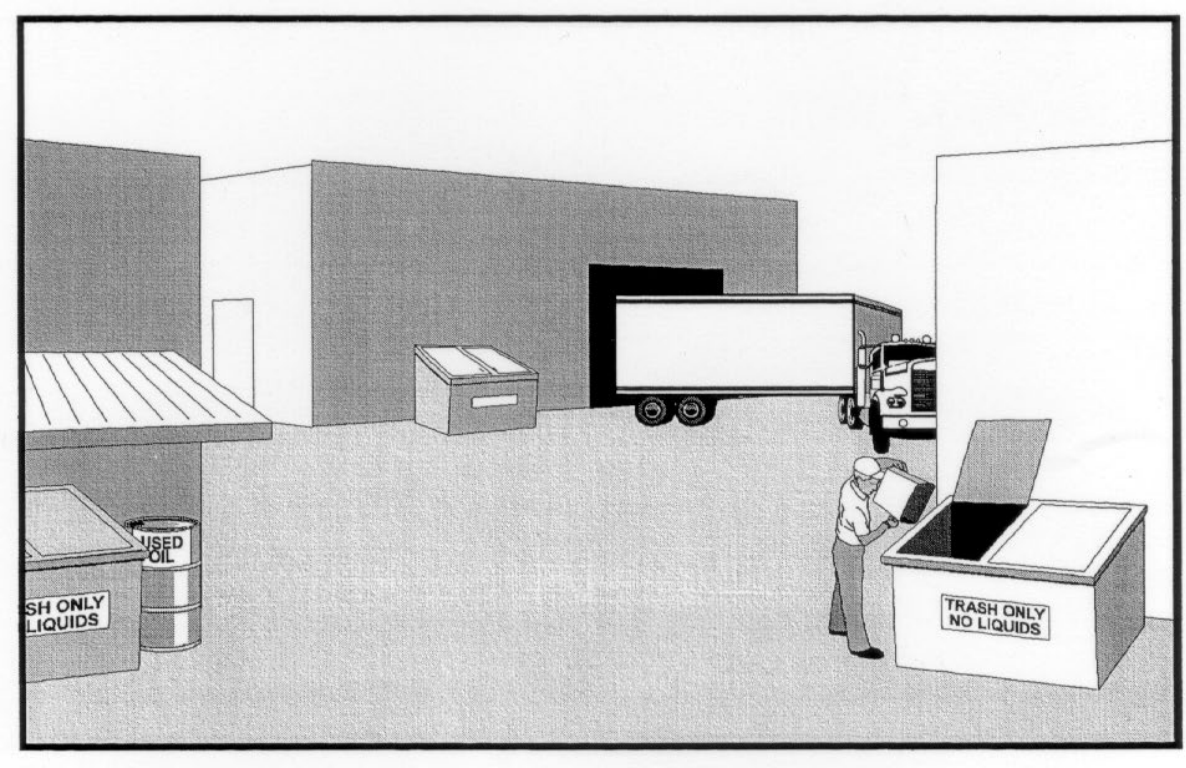
CRITERIA	RATING H=High M=Medium L=Low
Probability of exposure of significant materials to storm water	
Quantity of significant materials potentially exposed	
Toxicity of significant materials potentially exposed	
Frequency of use of significant materials potentially exposed	
Evidence of exposure (e.g., 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.

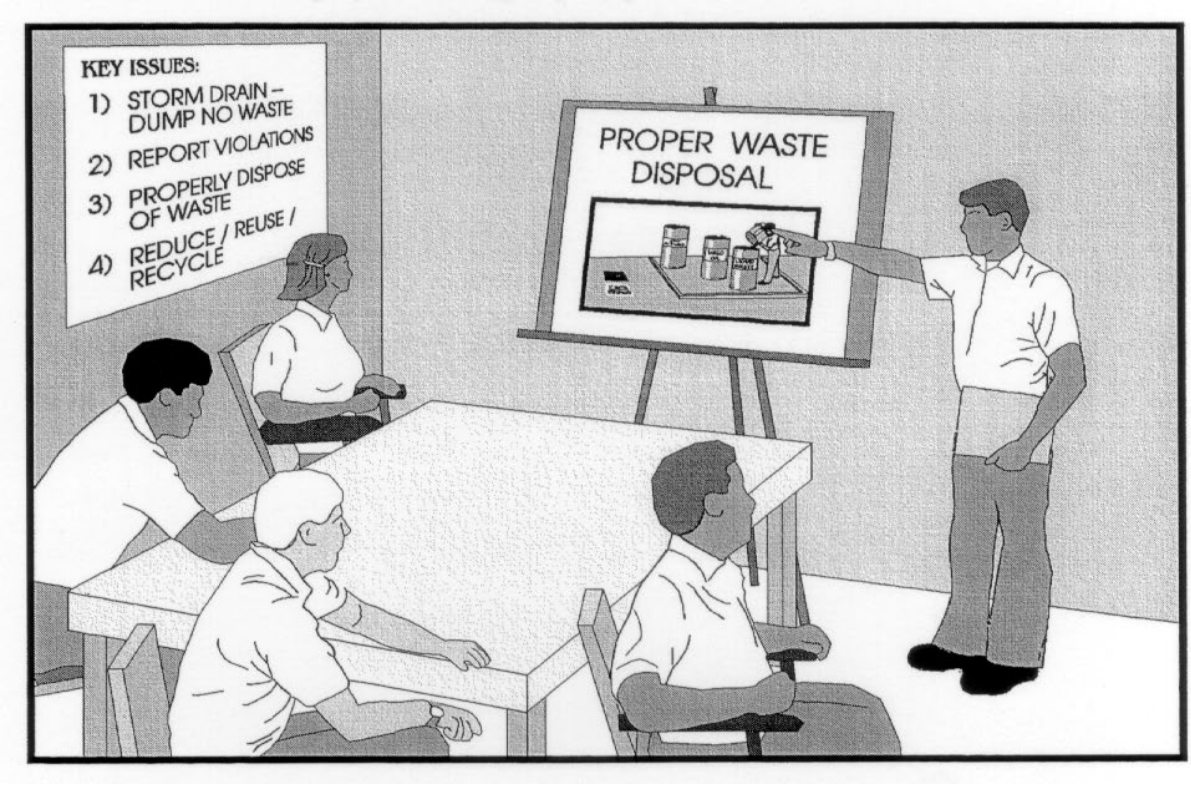
Applications. Placement of trash receptacles at appropriate locations will always be practiced.

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	

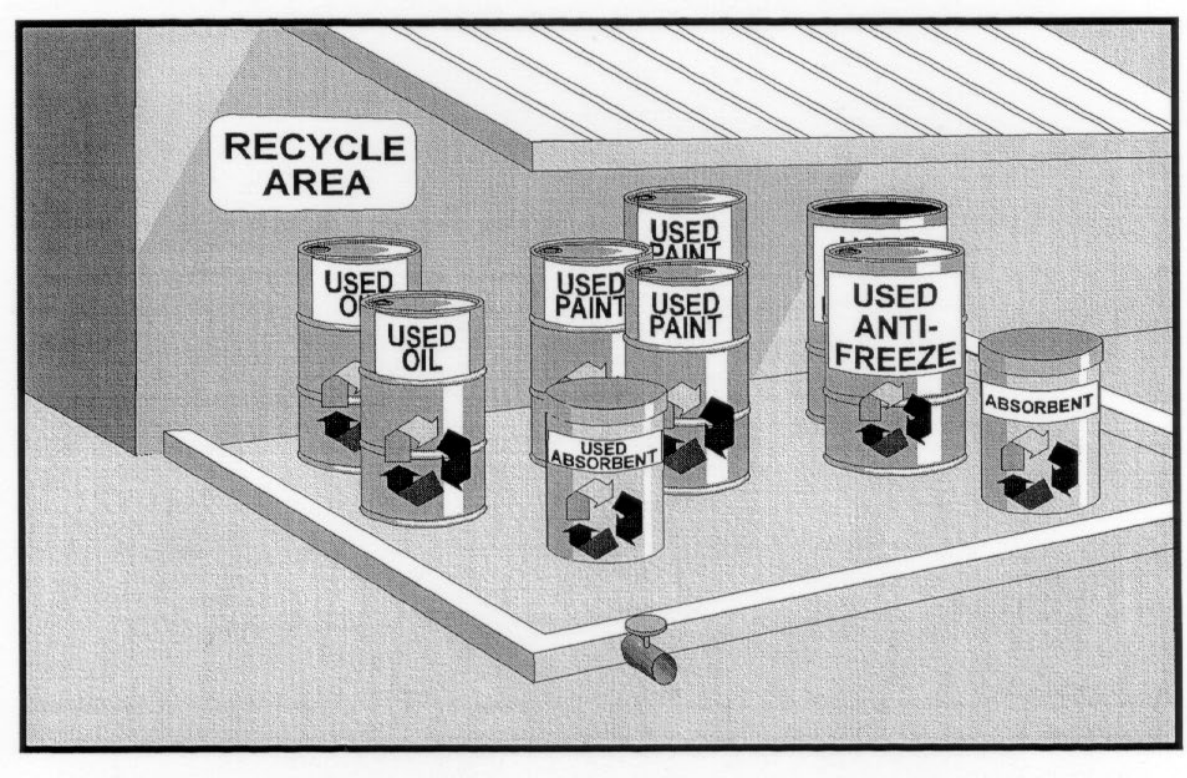
Training. Training will include the following:

- 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

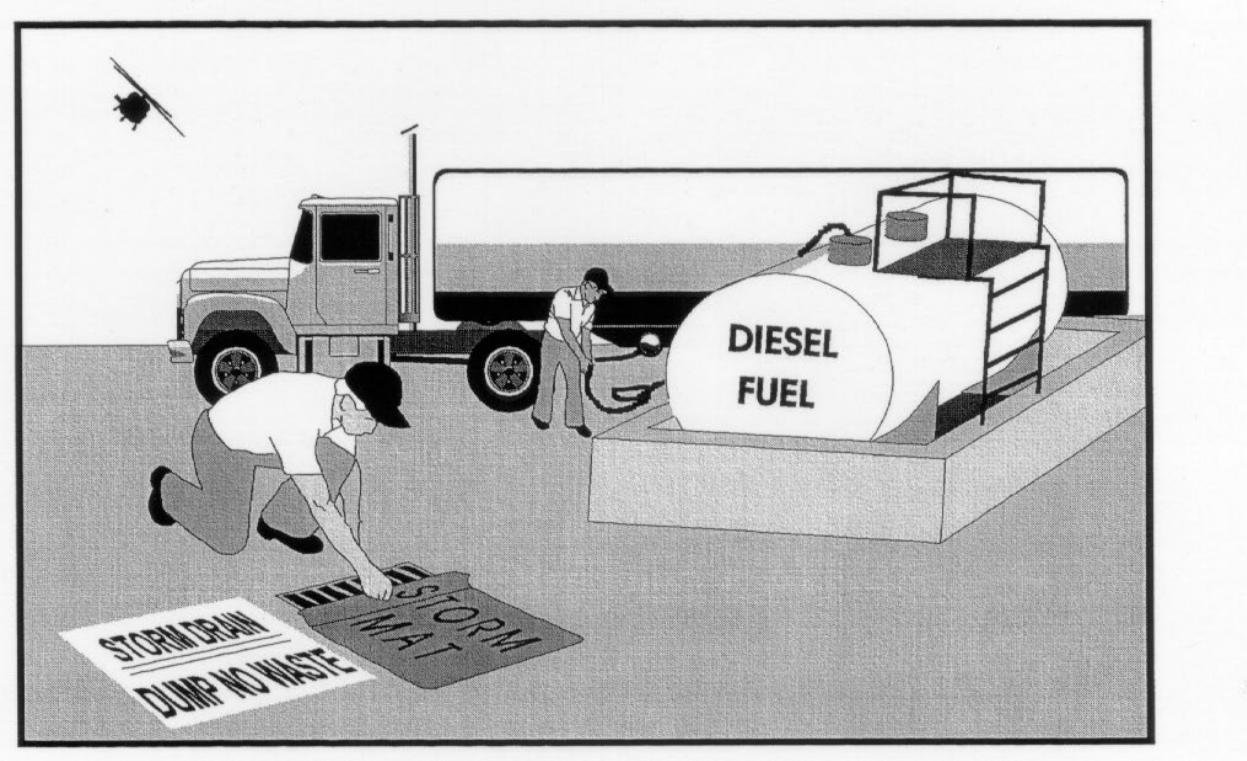
CRITERIA	RATING H=High M=Medium L=Low
Probability of exposure of recyclable significant materials to storm water	
Quantity of recyclable significant materials potentially exposed	
Toxicity of recyclable significant materials potentially exposed	
Length of time that used, potentially recyclable significant	
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.

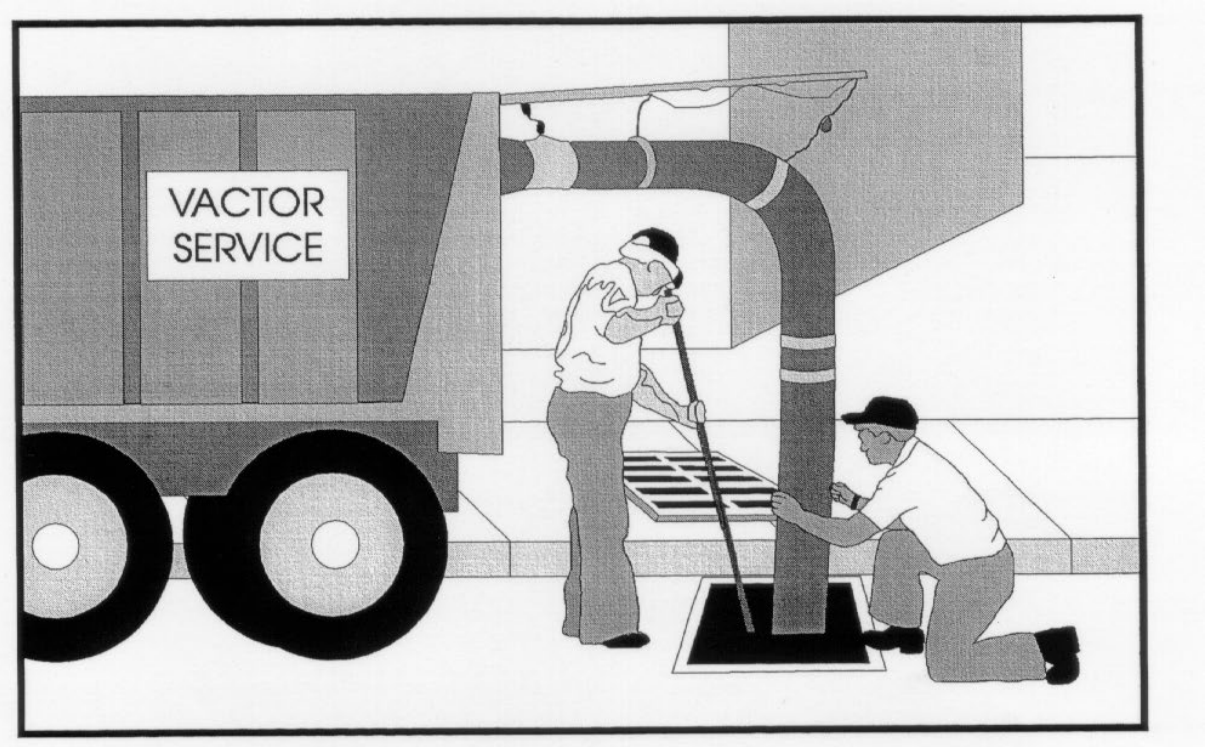
Applications. Portable rubber mats will be placed over the storm drain for the duration of any operation which is likely to discharge pollutants into the storm drain.

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

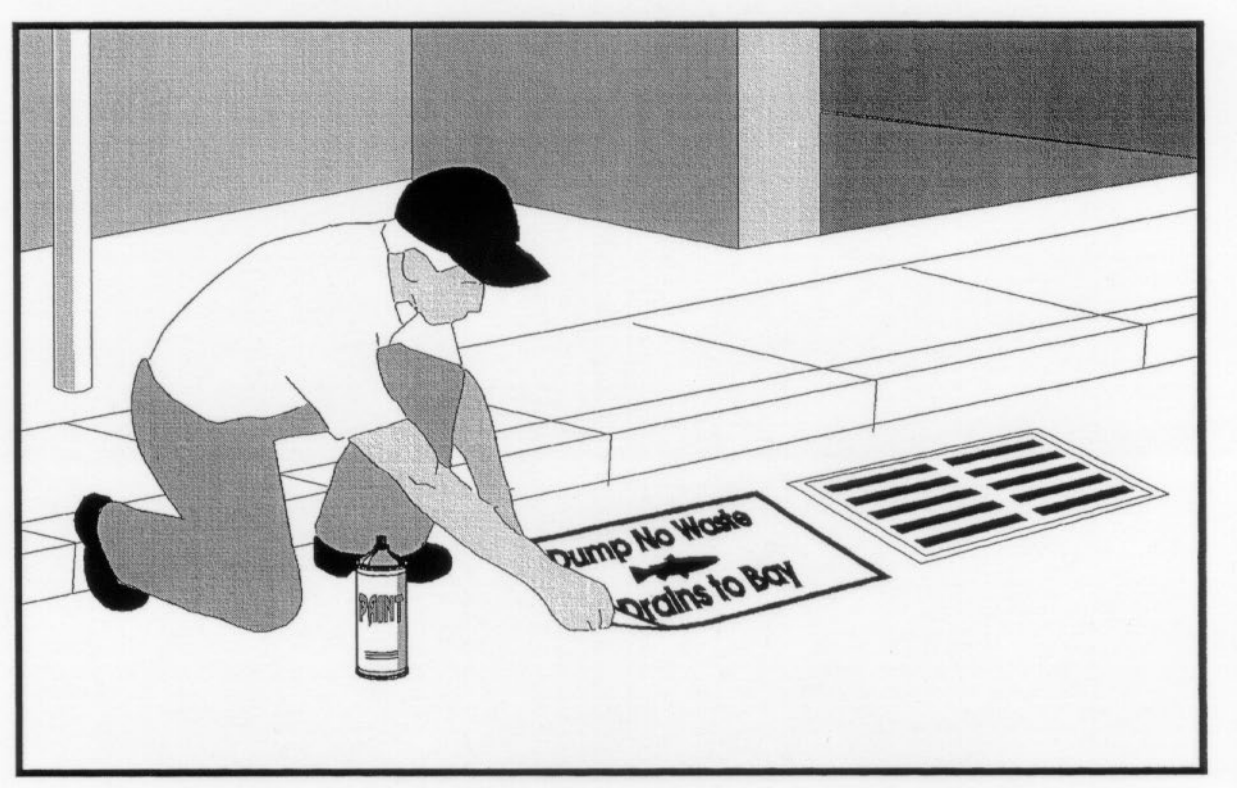
CRITERIA	RATING H=High M=Medium L=Low
Probability of exposure of significant materials to storm water in area draining to catch basin	
Quantity of significant materials potentially exposed in area draining to catch basin	
Frequency of use of significant materials potentially exposed in area draining 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.

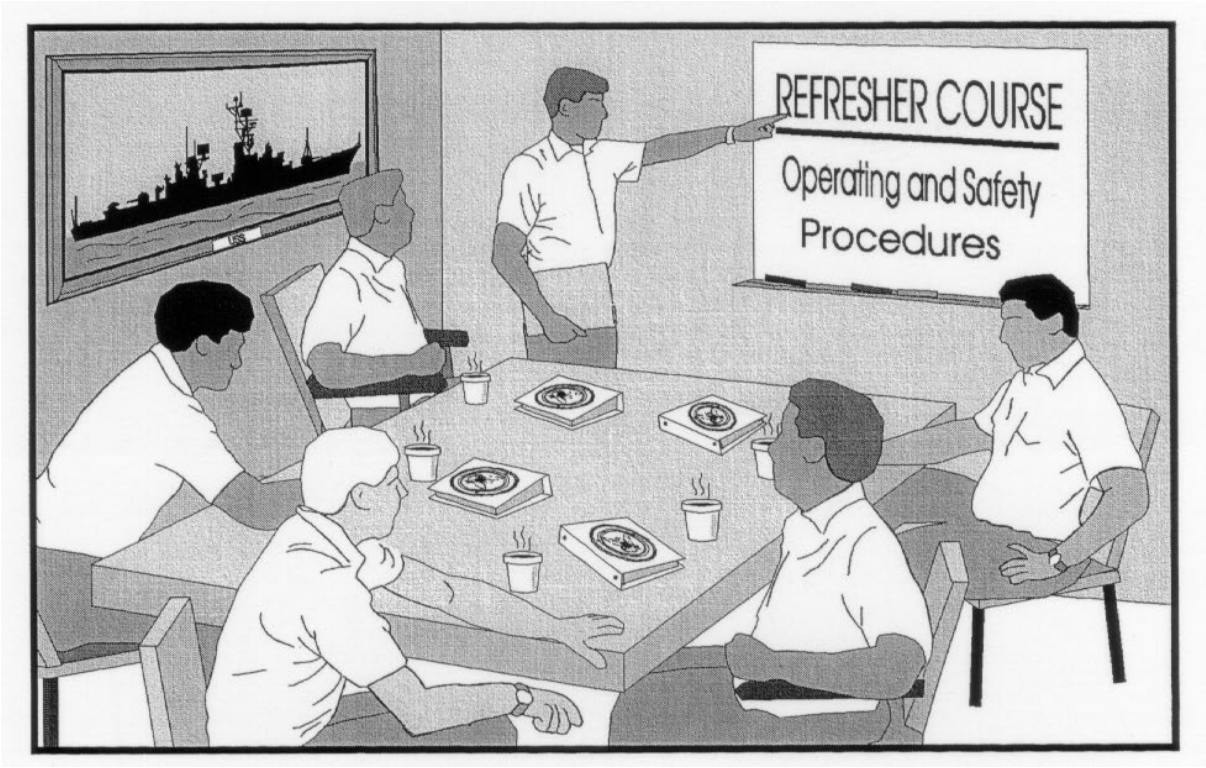
Applications. All storm drain inlets will be properly labeled.

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

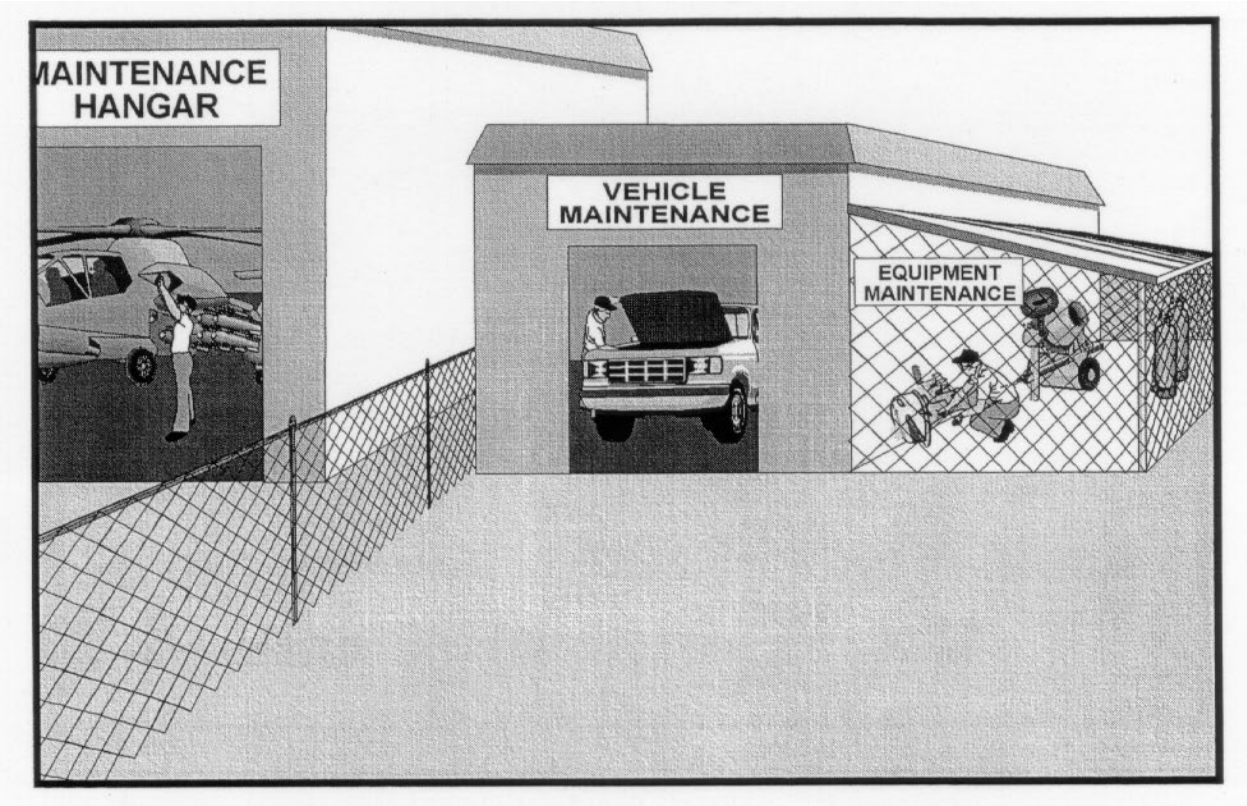
CRITERIA	RATING H=High M=Medium L=Low
Probability of exposure of significant materials to storm water	
Old age or poor condition of equipment and vehicles	
Evidence of exposure (e.g., stains on pavement)	
Proximity of source area to outfall or receiving water	
Sensitivity of receiving water to potentially 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).

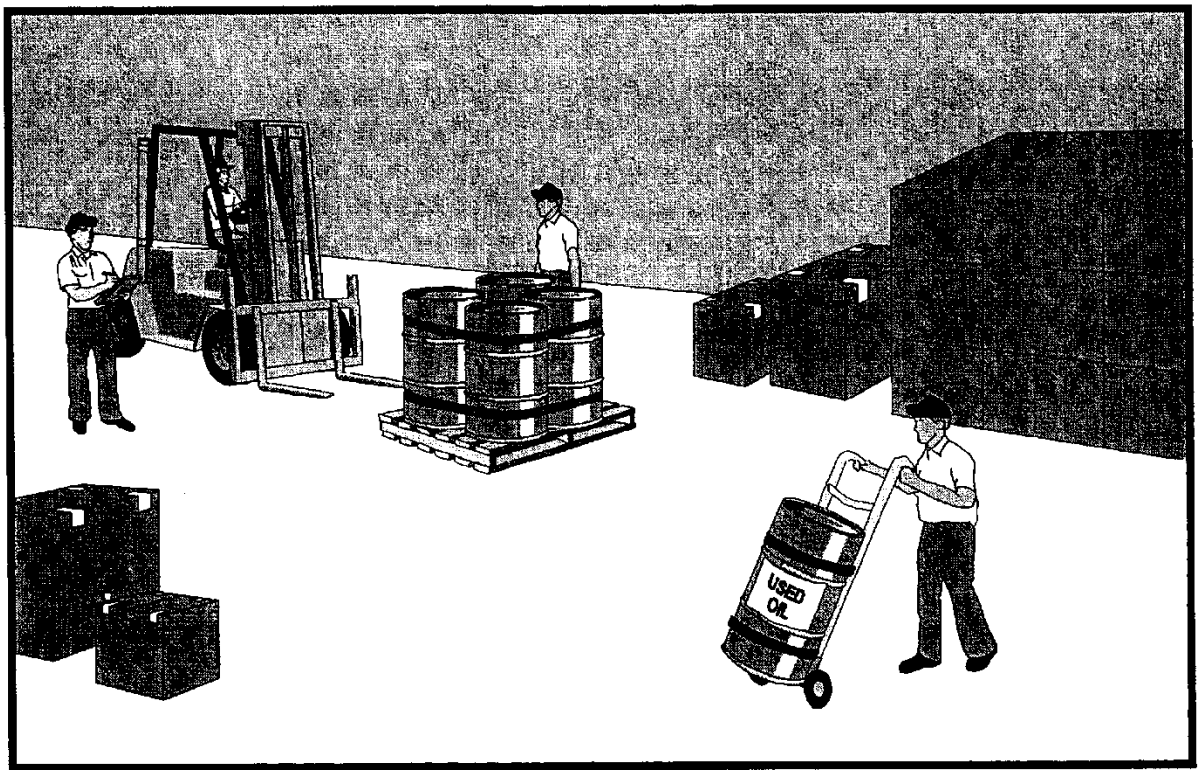
Applications. All maintenance will be conducted within a building or covered area, if possible. If not possible, the maintenance will be done on an impervious surface.

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.

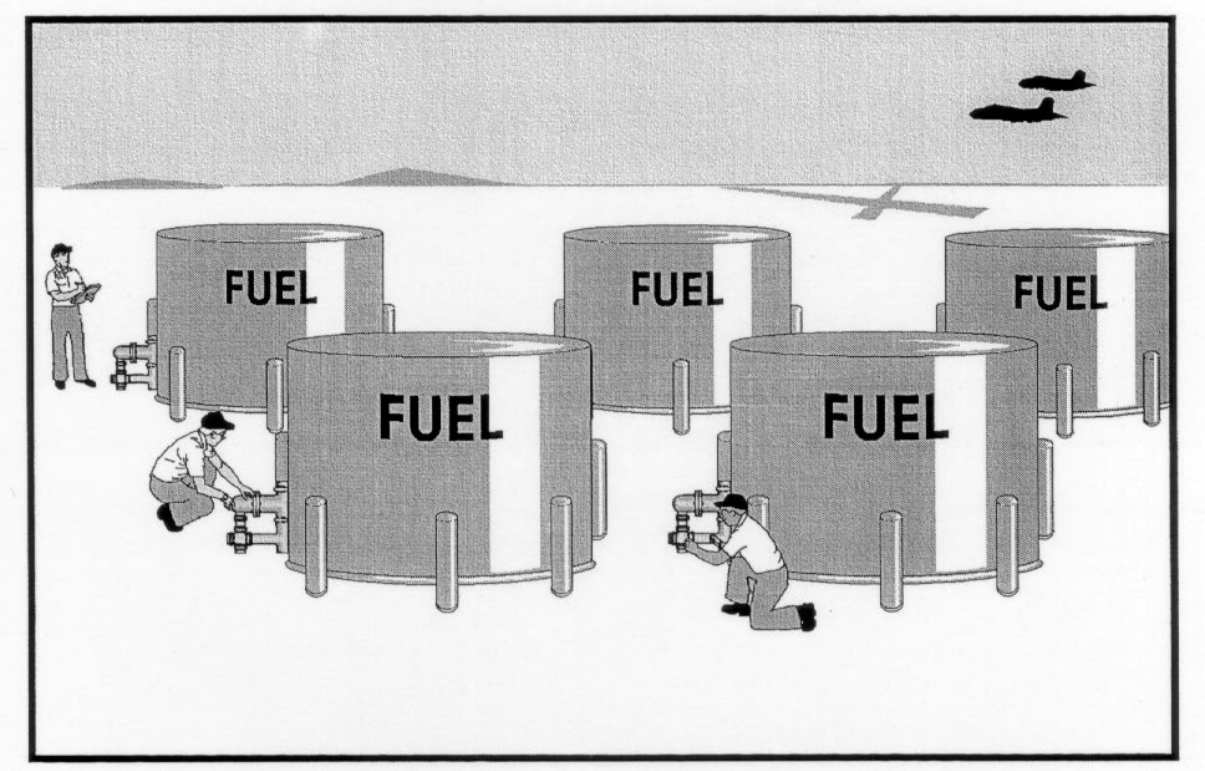
Applications. Significant materials and wastes will be transported according to federal, state, and local regulations at all times

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

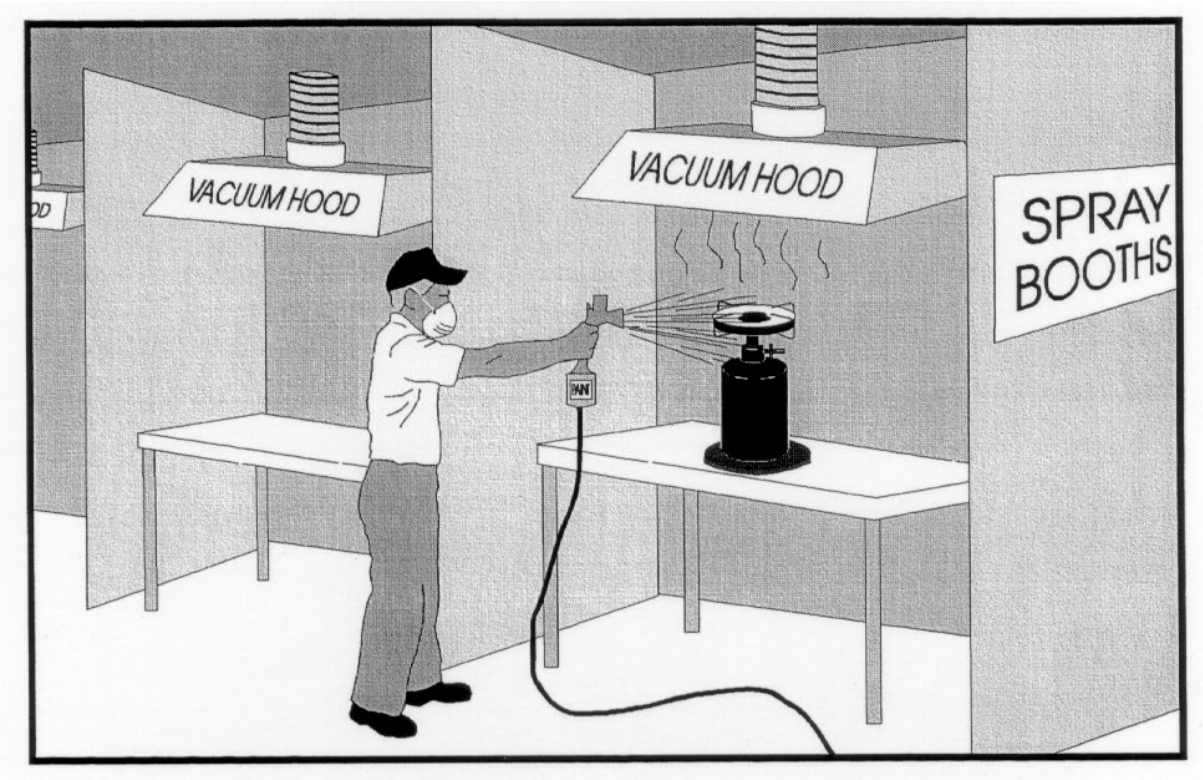
CRITERIA	RATING H=High M=Medium L=Low
Probability of exposure of significant materials to storm water	
Quantity of significant materials potentially exposed	
Toxicity of significant materials potentially exposed	
Frequency of use of tanks, piping, and valves	
Intensity of use of tanks, piping, and valves	
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.

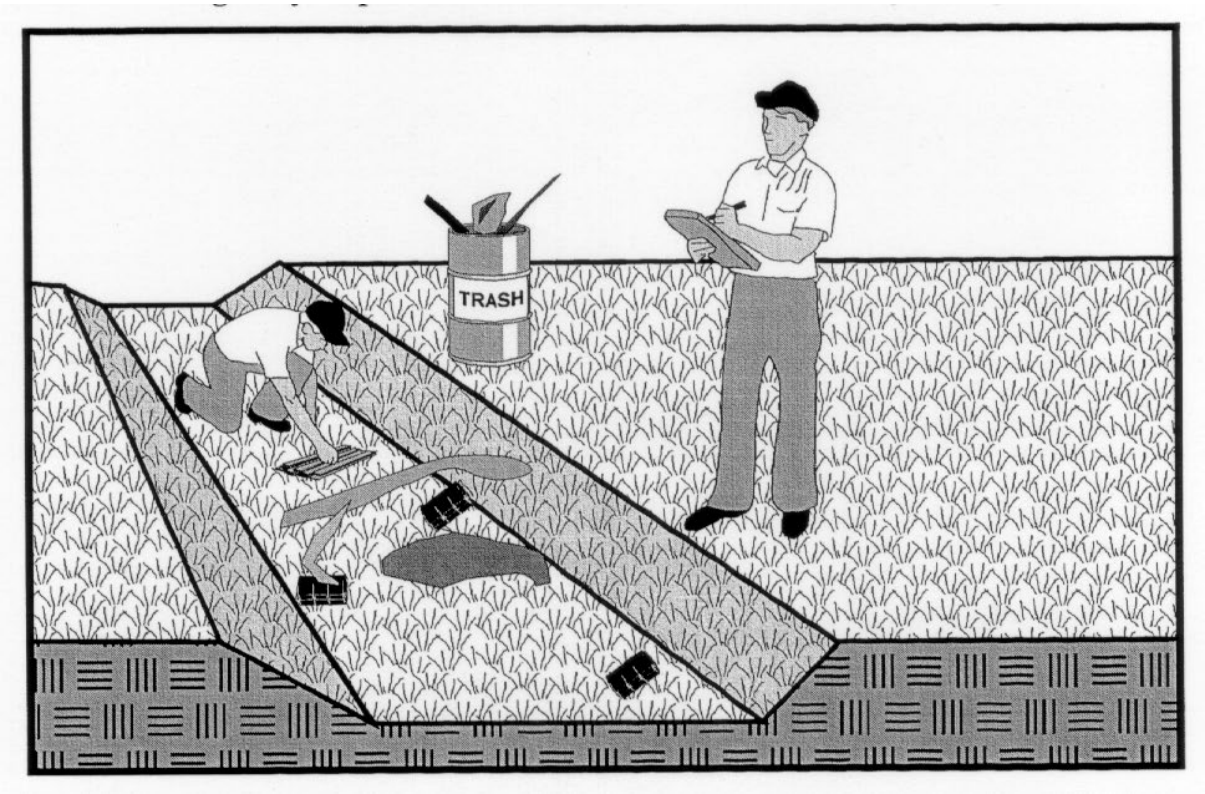
Applications. This BMP will be used whenever cleaning the sewer line.

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

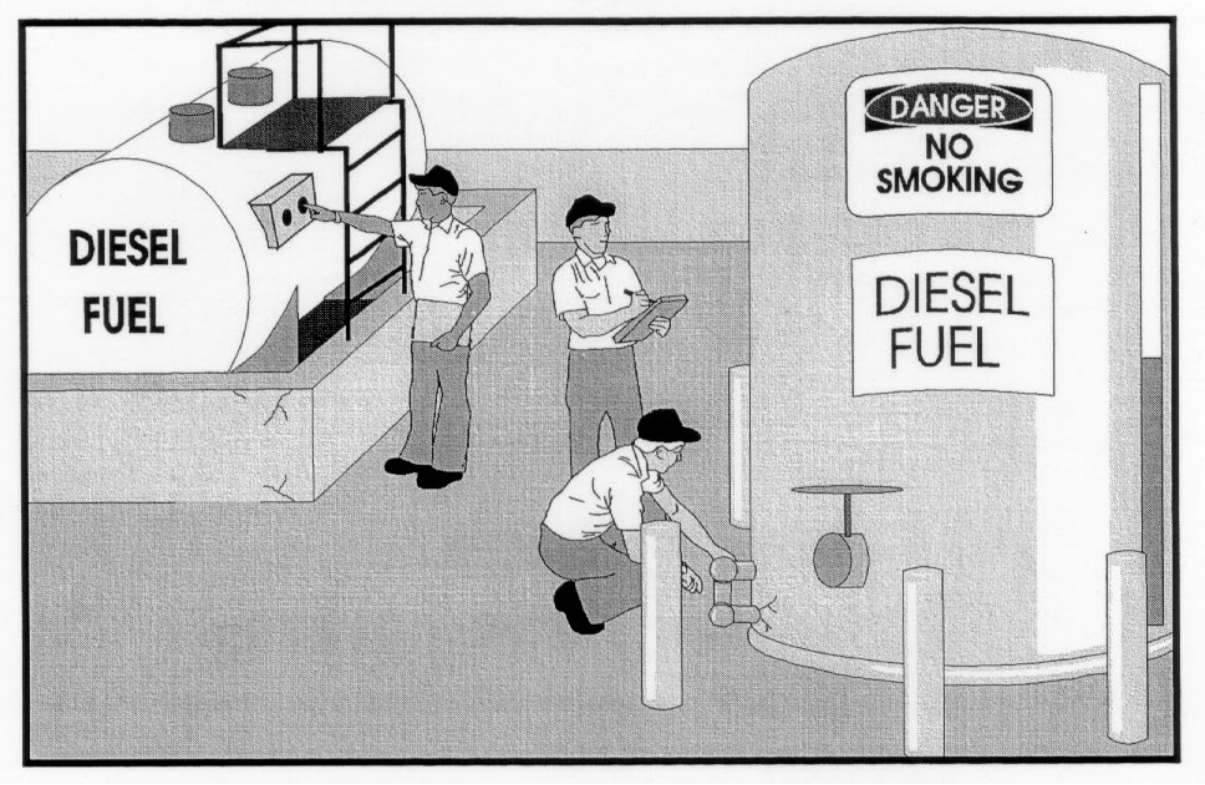
CRITERIA	**RATING** H=High M=Medium L=Low
Probability of exposure of significant materials to storm water in area draining to storm water conveyance system	
Quantity of significant materials potentially exposed in area draining to storm water conveyance system	
Toxicity of significant materials potentially 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.

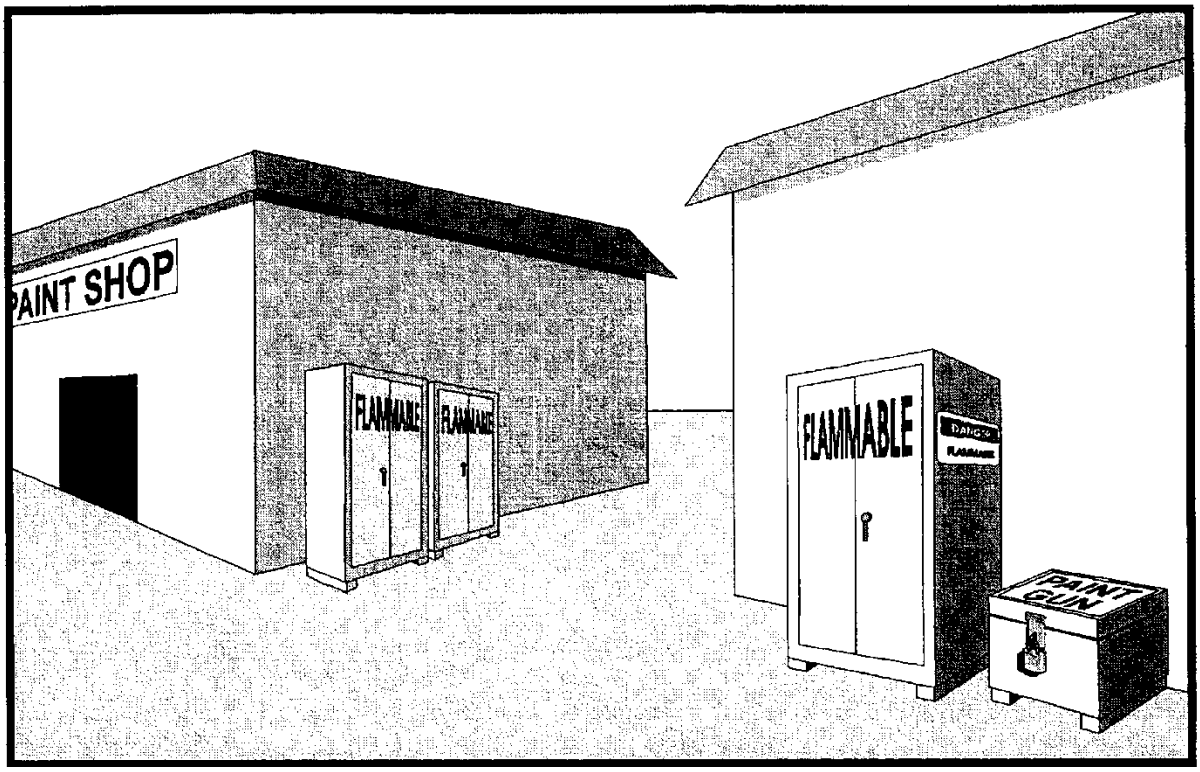
Training. Training will address each component of the SWPPP, including how and why tasks are to be implemented. Topics will include:

- 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.

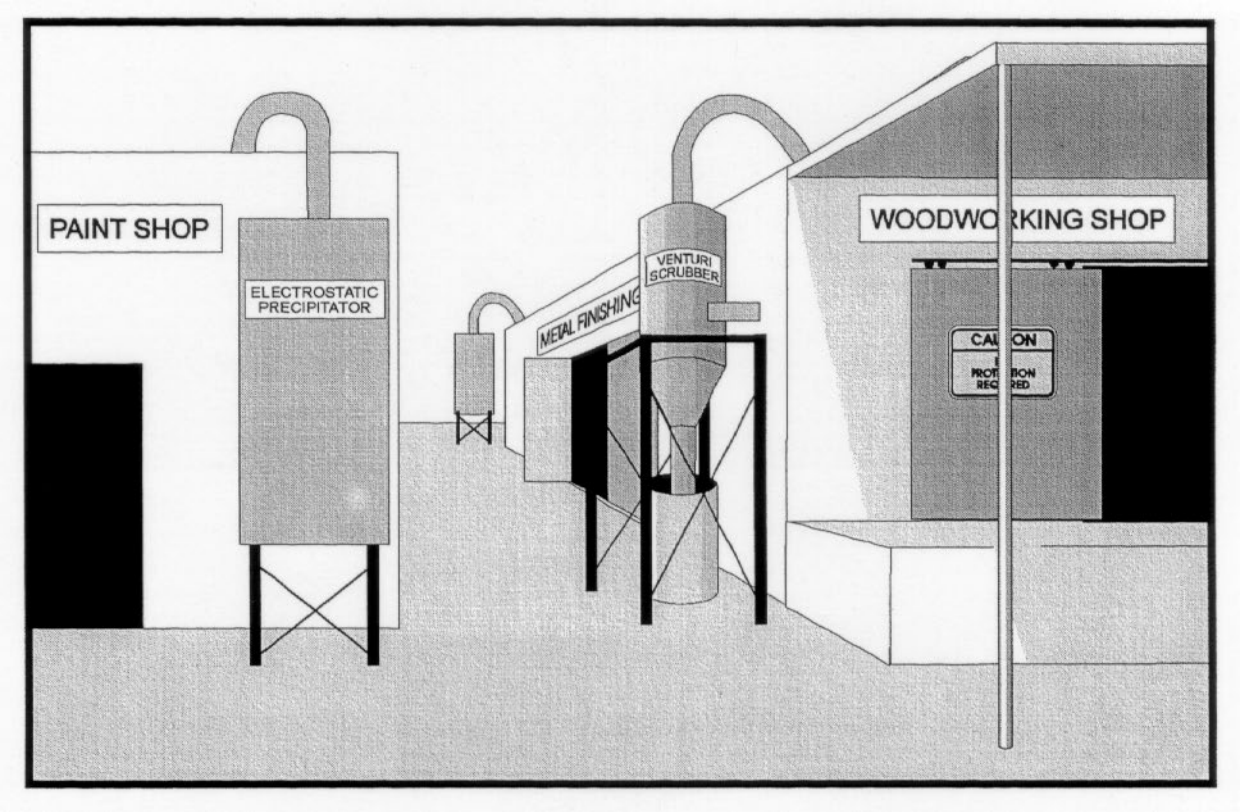
A manifest list of the materials stored inside the locker should be posted on or inside the locker.

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.

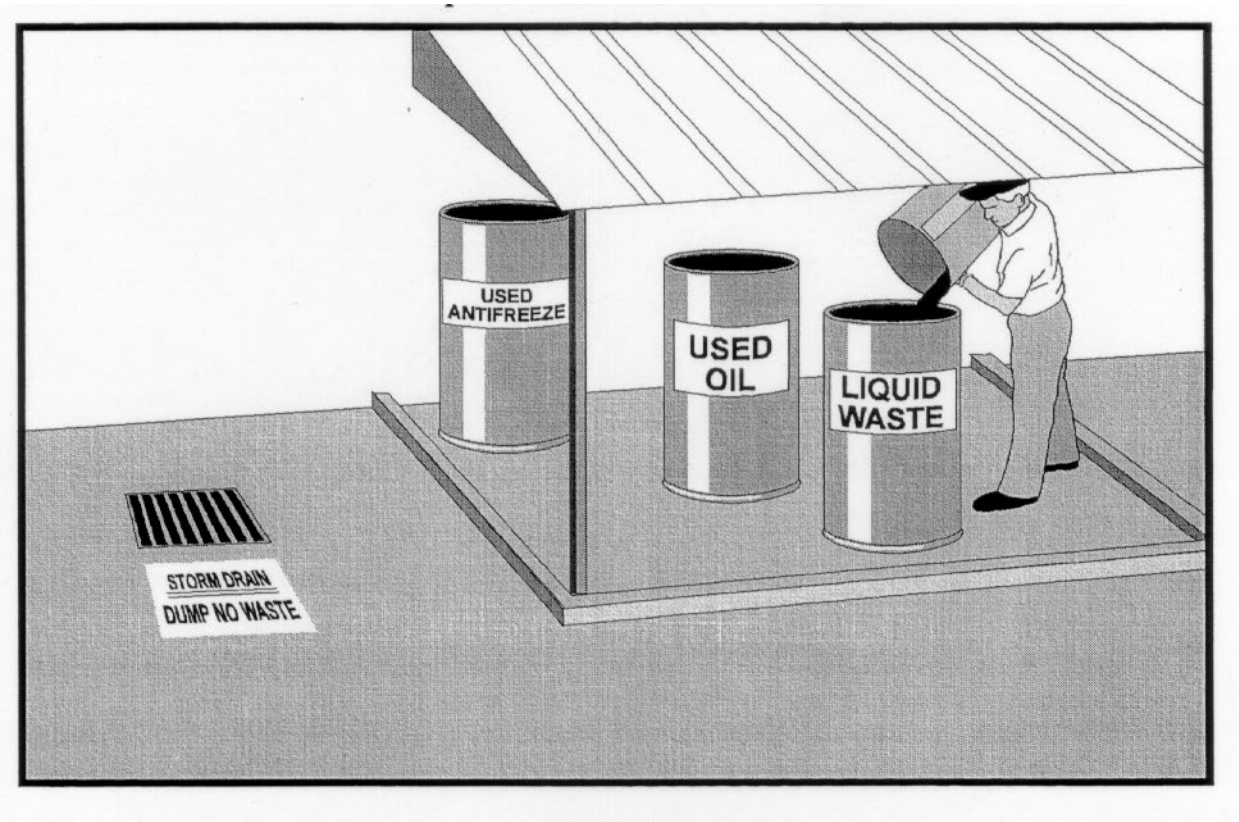
Applications. All industrial processes which generate dust and particulates will be fitted with dust control devices.

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**."**

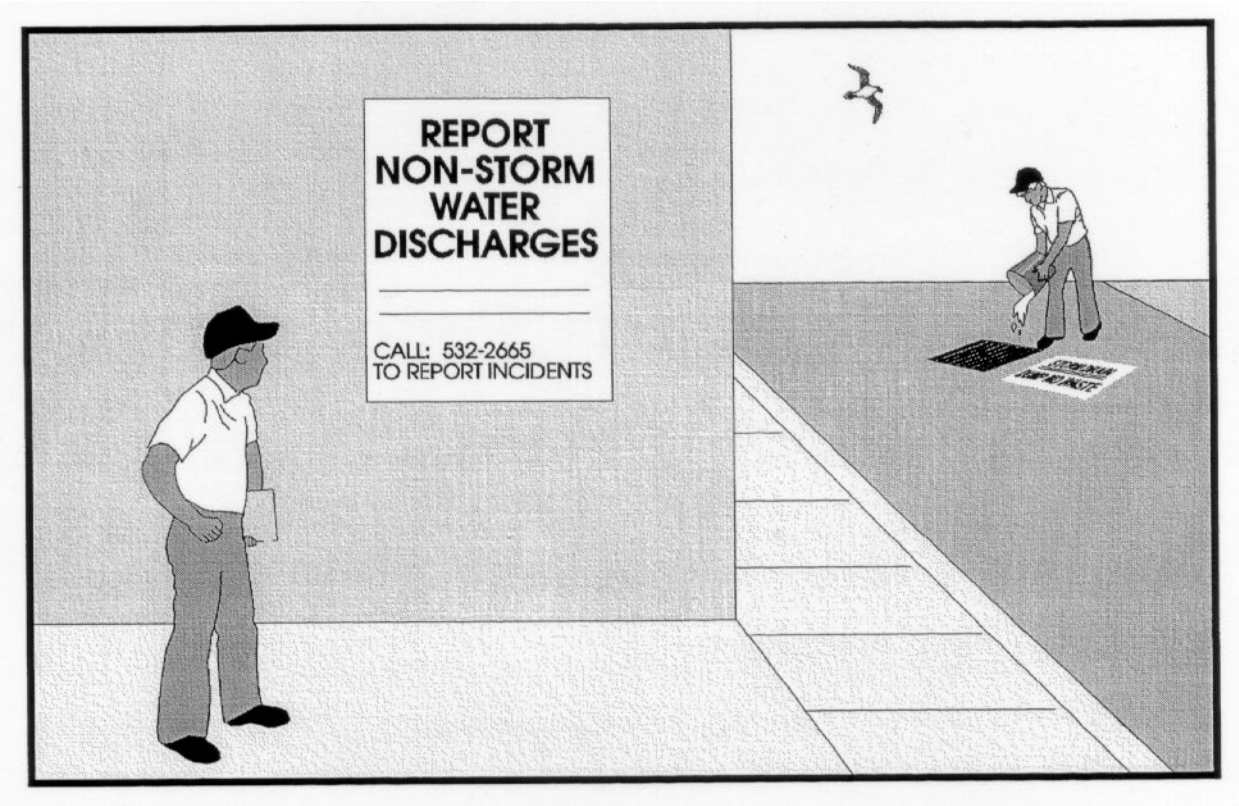
Applications. Wastes will always be properly disposed.

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 STORM WATER SOLUTIONS

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MS4 STORM WATER 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

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ATTACHMENT 8
ACTION MATRIX

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The Action Matrix is maintained digitally separate from the SWMP.

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ATTACHMENT 9
NBSD MUNICIPAL FACILITY HOTSPOT ASSESSMENT FORM

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ATTACHMENT 10
HOTSPOT FACILITY INSPECTION FORM

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ATTACHMENT 11
CONSTRUCTION SITE INSPECTION FORM

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ATTACHMENT 12
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 Department 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 Department 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.		
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 SDRWQCB.		

SWMP REVISIONS/SUMMARY OF CHANGES (continued)

Revision	Revised By	Date
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.		
Portions of the SWMP main body text were updated for clarity.	Tyler Brookshire Justin Rhoads Tom Stockton	January 2020
Section 1.5 was reorganized to a more structured layout of the departments, including a hierarchy or the departments.		
Section 2.1.1 was updated to reflect NBSD planning to perform a risk assessment of municipal facilities.		
Columns for 2019 and 2020 were added to all Measurable Goals tables.		
Field forms for the planned risk assessments were added to Attachment 1.		
Portions of the SWMP main body text were updated for clarity.	Tom Stockton Justin Rhoads	July 2021
Acronyms and Abbreviations were updated.		
Section 1.2 was revised to remove Broadway Complex from this SWMP, because it does not have a system of conveyances consistent with the meaning in the Phase II storm water regulations.		
Updated MCM 1.1 to include a description of the Hotspot assessments completed in 2020 and hotspot monitoring program going forward.		
Updates to MCM 4.1 and 4.2 to include more detail about construction site monitoring.		
Updated and added inspection forms in the Attachments to include new or revised forms.		
Acronyms and Abbreviations were updated.	Charles Ginsberg Tyler Brookshire	September 2022
Added MS4 SWPPPs at the end of MCM 1.1.		
Updated MCM 1.1 to include MS4 SWPPPs.		
Updated table numbers to reflect addition of a new table in MCM 1.1.		

NBSD ENVIRONMENTAL
STORM WATER PROGRAM
SEPTEMBER 2022