



**FINAL**

# **STORMWATER MANAGEMENT PROGRAM**

Naval Air Station Corpus Christi, Texas



August 2024

Contract Number: N69450-20-D-0031

Task Order: N6945024F0166

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*Final*

# **STORMWATER MANAGEMENT PROGRAM**

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## **NAVAL AIR STATION CORPUS CHRISTI, TEXAS**

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**Prepared For:**

**NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND  
SOUTHEAST DIVISION  
JACKSONVILLE, FL 32212**

**Engineer-in-Charge: Steve McMahon, PE**

**Contract: N69450-20-D-0031  
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**August 2024**

### **AH Environmental Consultants, Inc.**

11837 Rock Landing Drive, Suite 300  
Newport News, Virginia 23606  
Phone: (757) 873-4959



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**ACRONYMS AND ABBREVIATIONS**

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%	percent
AH	AH Environmental Consultants, Inc.
AOR	area of responsibility
BASH	bird-aircraft strike hazard
BMP	best management practice
CCAD	Corpus Christi Army Depot
CDO	command duty officer
CGP	Stormwater General Permit for Construction Activities
CWA	Clean Water Act
DoD	Department of Defense
E&SC	erosion and sediment control
ECATTS	Environmental Compliance Assessment, Training, and Tracking System
EISA	Energy Independence and Security Act
EMS	Environmental Management System
EPA	Environmental Protection Agency
EPP	environmental protection plan
EV	Environmental Division
FEAD	Facilities, Engineering, and Acquisition Division
FMD	Facilities Management Division
FOG	fats, oils, and grease
FRP	Facility Response Plan
GIS	geographic information system
GRC	GeoReadiness Center
HWMP	Hazardous Waste Management Plan
IDDE	illicit discharge detection and elimination
INST	Instruction



IR	Integrated Report
LID	low impact development
MCM	minimum control measure
MEP	maximum extent practicable
MS4	municipal separate storm sewer system
MSGP	Multi-Sector General Permit
MWR	Morale, Welfare, and Recreation
NASCC	Naval Air Station Corpus Christi
NAVFAC	Naval Facilities Engineering Systems Command
NEPA	National Environmental Policy Act
No.	number
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
O&M	operation and maintenance
OPNAV	Chief of Naval Operations
OSSF	onsite sewage facility
O/WS	oil/water separator
P2	pollution prevention
PAO	Public Affairs Officer
PAR	performance assessment representative
PER	project environmental review
POA&M	plan of action and milestones
POL	petroleum, oil, and lubricant
PWD	Public Works Department
Ref	reference
RV	recreational vehicle
SCADA	supervisory control and data acquisition
SCM	stormwater control measure
SOP	standard operating procedure
SPCC	Spill Prevention, Control, and Countermeasure
SWMP	Stormwater Management Program
SWP3	Stormwater Pollution Prevention Plan



**STORMWATER MANAGEMENT PROGRAM**  
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**ACRONYMS AND ABBREVIATIONS**

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TCEQ	Texas Commission on Environmental Quality
TMDL	Total Maximum Daily Load
TPDES	Texas Pollutant Discharge Elimination System
UFC	Unified Facilities Criteria
US	United States
USACE	United States Army Corps of Engineers
WWTP	wastewater treatment plant



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## RECORD OF REVISIONS AND AMENDMENTS

All revisions and amendments to the Naval Air Station Corpus Christi (NASCC) Stormwater Management Plan (SWMP) are, and will continue to be, summarized in the following table.

**Table 1      Record of Revisions and Amendments**

Date	Description of Revision/Amendment
24 January 2019	SWMP developed to comply with MS4 General Permit issued 24 January 2019.
19 March 2020	Undocumented updates to the SWMP by NASCC Public Works Department (PWD) Environmental Division (EV).
21 May 2021	Undocumented updates to the SWMP by NASCC PWD EV.
17 August 2024	<p>AH Environmental Consultants, Inc. (AH) updates the SWMP to comply with the proposed MS4 General Permit that is scheduled to be issued in August 2024. Major revisions include the following:</p> <ul style="list-style-type: none"><li>- Laguna Madre was removed from the list of NASCC receiving waters based on current TCEQ surface water mapping (refer to Section 2).</li><li>- MCM 1, updated three existing BMPs; added two BMPs including one to comply with TMDL requirements (residential education).</li><li>- MCM 2, updated "clean up" BMP; removed one BMP (foreign object and debris walks); added three including one to comply with TMDL requirements (pet waste stations).</li><li>- MCM 3, updated four existing BMPs including one to comply with TMDL requirements (sanitary sewer system review); removed one BMP (notifications to other MS4s); added two BMPs (staff training, reporting mechanism).</li><li>- MCM 4, combined two existing BMPs and updated the others; added one BMP (staff training).</li><li>- MCM 5, updated two existing BMPs.</li><li>- MCM 6, combined two existing BMPs and updated three others; added four BMPs.</li><li>- Added Program Administration section (Section 9).</li></ul>



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NAVAL AIR STATION CORPUS CHRISTI, TX**

**RECORD OF REVISIONS AND AMENDMENTS**

Date	Description of Revision/Amendment



## **EXECUTIVE SUMMARY**

The State of Texas oversees and inspects facilities that fall under the National Pollutant Discharge Elimination System (NPDES) through the 2020 “Memorandum of Understanding Between the Texas Commission on Environmental Quality and the United States Environmental Protection Agency Region 6 Concerning the National Pollutant Discharge Elimination System.” The Naval Air Station Corpus Christi (NASCC) falls under the Texas Pollutant Discharge Elimination System (TPDES) Municipal Separate Storm Sewer System (MS4) General Permit Number (No.) TXR040000. NASCC is classified as a Level 2b MS4 system under Permit Authorization No. TXR040329.

The Texas General Permit is reissued every five (5) years. The current Texas General Permit requires a Stormwater Management Program (SWMP) that addresses Total Maximum Daily Load (TMDL) requirements for receiving waters and lists best management practices (BMPs) for the six (6) Minimum Control Measures (MCM), which aim to reduce pollutant discharge into surface water bodies. The 2024 General Permit has prescribed BMPs for each MCM. For some MCMs, the permittee may select a certain number of BMPs to implement; for the remaining MCMs, the permittee must implement all listed BMPs. Each BMP is broken down into a description of the activity to be implemented, identification of which department(s) are responsible for implementing the BMP, a process description, schedules required for the BMP, and record and reporting requirements. The BMPs listed in Sections 3 through 8 were selected based on the classification of NASCC (Level 2b), similarity to existing programs, ease of implementation, and best chances of creating meaningful pollution reduction.

The SWMP objective is to decrease the potential for pollutants entering the water bodies around NASCC. The purpose of the program is to educate and involve the NASCC public; train staff across various departments to recognize and prevent pollution; and put practices in place that will continue this process past the permit expiration date.



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**EXECUTIVE SUMMARY**

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## **1. GENERAL INFORMATION**

AH Environmental Consultants Inc. (AH) developed this Stormwater Management Program (SWMP) for Naval Air Station Corpus Christi (NASCC). This project was completed under Naval Facilities Engineering Systems Command (NAVFAC) Contract N69450-20-D-0031, Delivery Order N6945024F0166.

### **1.1 BACKGROUND**

Chief of Naval Operations (OPNAV) Instruction (INST) 5090.1E Environmental Readiness Program requires United States (US) Navy installations to comply with all applicable federal, state, and local environmental laws and regulations.

The Texas Commission on Environmental Quality (TCEQ), under the provisions of section 402 of the Clean Water Act and Chapter 26 of the Texas Water Code, requires operators of small municipal separate storm sewer systems (MS4s) to obtain coverage under the State of Texas Pollutant Discharge Elimination System (TPDES) General Permit Number (No.) TXR040000; hereafter referred to as the MS4 General Permit. The MS4 General Permit requires implementation and documentation of a SWMP that addresses applicable requirements of the permit. This SWMP describes how NASCC operates its MS4 program to reduce pollutant discharge into surrounding surface waters under Permit Authorization No. TXR040329.

The current MS4 General Permit, which includes military installations in its definition of regulated small MS4s, was issued 24 January 2019 and was set to expire on 24 January 2024; however, TCEQ administratively extended MS4 General Permit coverage beyond this expiration date until a new permit is issued. The proposed new MS4 General Permit is expected to be issued in August 2024 and is largely similar to the existing permit with some important modifications. This SWMP was updated to support compliance with the proposed MS4 General Permit for the next five-year permit cycle. Appendix A includes a blank Notice of Intent (NOI) to obtain coverage under the new permit



that should be completed and maintained with this SWMP after TCEQ issues the permit. Refer to TCEQ's website for copies of the existing and proposed MS4 General Permits, as well as other useful forms and guidance documents:

[https://www.tceq.texas.gov/permitting/stormwater/ms4/WQ\\_ms4\\_small\\_TXRO4.html](https://www.tceq.texas.gov/permitting/stormwater/ms4/WQ_ms4_small_TXRO4.html)

<https://www.tceq.texas.gov/downloads/assistance/water/stormwater/ms4>

Appendix B includes a memorandum that summarizes the results of a SWMP data gathering site visit that AH conducted in May 2024. The memorandum also identifies necessary updates to the SWMP to ensure compliance with the proposed permit. Additional updates were identified after submittal of this memorandum. The Record of Revisions and Amendments on page ix of this document captures all major changes to this SWMP.

NASCC is an approximately 2,600-acre military installation located within the City of Corpus Christi, Nueces County. This SWMP covers the entire installation area within the fence line. The NASCC MS4 is classified as a Level 2b MS4 system under this permitting program. NASCC is solely responsible for the implementation of its SWMP and has not established MS4 partnering with the local MS4 operator outside of the community.

NASCC also includes stormwater runoff from industrial operations permitted under the TPDES Multi-Sector General Permit No. TXR050000 (MSGP) and a wastewater treatment plant covered under an individual TPDES wastewater permit (WQ0002317000). There are no onsite sewage facilities (OSSFs) (i.e., septic systems) at NASCC.

## **1.2 RECEIVING WATERBODIES**

*Reference (Ref): MS4 General Permit, Part IV, Section C.2.f.*

NASCC's MS4 discharges to the following two Texas surface waters:

- Corpus Christi Bay to the north and east
- Oso Bay to the west



Both waterbodies include impaired segments that are listed as impacted by human development for at least one parameter. Section 2 details the requirements associated with each of the water bodies.

Overall installation site drainage is described in the NASCC Stormwater Pollution Prevention Plan (SWP3), which is maintained by the Public Works Department (PWD), Environmental Division (EV) Water Program Manager.

### **1.3 OVERVIEW OF MS4 GENERAL PERMIT REQUIREMENTS**

The MS4 General Permit authorizes stormwater discharges and allowable non-stormwater discharges to waters of the state or to neighboring MS4s. Authorization is contingent upon compliance with the permit terms. This SWMP, designed to reduce the discharge of pollutants from NASCC MS4 to the maximum extent practicable (MEP), addresses the following key permit requirements:

- Compliance with waste load allocations prescribed by established Total Maximum Daily Loads (TMDLs)
- Implementation of best management practices (BMPs) associated with the following six minimum control measures (MCMs):
  - MCM 1: Public Education and Outreach
  - MCM 2: Public Involvement / Participation
  - MCM 3: Illicit Discharge Detection and Elimination (IDDE)
  - MCM 4: Construction Site Stormwater Runoff Control
  - MCM 5: Post-Construction Stormwater Management
  - MCM 6: Pollution Prevention / Good Housekeeping
- Annual review and update (if necessary) of the SWMP
- Monitoring, reporting, and recordkeeping including development of an Annual Report for submittal to TCEQ.

A NOI to obtain coverage under the renewed permit must be submitted to TCEQ through the NeT-MS4 online e-permitting system. This SWMP must be posted to the permittee's website no later than 30 days after submittal of the NOI. The Annual Report is also submitted electronically no later than 31 March each year and is posted to the installation's Environmental Support website.



New SWMP elements identified in this SWMP that were not included in the previous version must be completely implemented within five years of the effective date of the MS4 General Permit.

#### **1.4 SUPPORTING / COMPLIMENTARY ENVIRONMENTAL PROGRAMS**

NASCC implements the following environmental programs related to and in support of the goals of this SWMP:

- SWP3
- Spill Prevention, Control, and Countermeasure (SPCC) Plan
- Pollution Prevention (P2) Management
- Hazardous Waste Management Plan (HWMP)
- Facility Response Plan (FRP)

These programs are referenced in this SWMP, where applicable, to support compliance with the MS4 General Permit.

##### **1.4.1 Stormwater Pollution Prevention Plan**

NASCC includes numerous industrial activities; runoff from those activities is permitted under MSGP (TXR050000), which requires development and maintenance of a SWP3. The NASCC SWPPP (AH, 2021) includes the following key components that support the objectives of the SWMP:

- Summary of potential pollutant sources
- Identification of a Stormwater Pollution Prevention Team
- BMPs for prevention or reduction of stormwater pollution
- Periodic site inspections
- Discharge monitoring program for industrial pollutants that includes both visual and analytical monitoring

##### **1.4.2 Spill Prevention Control and Countermeasure Plan**

The NASCC SPCC Plan (Jacobs CH2M, 2021) addresses oil stored in aboveground and underground storage tanks. The purpose of this plan is to establish procedures, methods, equipment, and other requirements to prevent the discharge of oil from non-



transportation-related facilities into or upon the navigable waters of the US or adjoining shorelines. The SPCC Plan addresses:

- Existing facilities that possess the potential for oil spill to navigable waters or adjoining shorelines
- Existing containment and diversionary structures constructed to control spill occurrences
- An evaluation of the existing facilities' compliance with SPCC and Navy guidelines
- Recommendations for operational changes and facility modifications to minimize the probability of a spill reaching navigable waters
- Responsibilities for recordkeeping, inspections, personnel training, security, notifications, and plan review and amendment

#### **1.4.3 Hazardous Waste Management Plan**

The NASCC HWMP (Bluestone CH2M, 2021) is designed to provide guidance for hazardous waste generation and storage. It includes procedures for hazardous waste collection, containerization, labeling, marking, recordkeeping, temporary storage, disposal, and training.

#### **1.4.4 Pollution Prevention Plan**

The NASCC P2 Management Plan (NAVFAC, 2023) identifies activities and processes that generate or potentially generate pollutants, including hazardous and non-hazardous solid wastes. The plan identifies methods and mechanisms to achieve full and sustained compliance with Department of Defense (DoD) and Navy policies and federal, state, and local laws and regulations. NASCC supports source reduction as the preferred alternative for preventing the release of pollutants to the environment. Source reduction is most desirable as it reduces both the volume and toxicity of pollution. If source reduction is not feasible, then the following methodologies are considered in descending order: recycling, treatment, and disposal.

#### **1.4.5 Facility Response Plan and Red Plan**

The NASCC FRP (Jacobs CH2M, 2024) provides “a contingency plan that describes the processes, procedures, and responsibilities for response to, and cleanup of,



discharges of petroleum, oil, and lubricants (POLs) into or upon the land and navigable waters of the United States.” The FRP includes a Red Plan, a quick reference guide to initial spill response, and an Emergency Response Action Plan that provides more detailed response information (e.g., location and type of spill response equipment and materials).

## **1.5 PLAN ORGANIZATION**

Following this introductory section, the SWMP presents information in the following sections:

- **Section 2** addresses requirements related to the TMDLs for Oso Bay and Corpus Christi Bay.
- **Sections 3 through 8** describe the six MCMs and related BMPs.
- **Section 9** covers administrative items such as SWMP update and review; reporting and recordkeeping; enforcement; and continuing permit coverage procedures.

The following appendices provide supplemental information:

- **Appendix A** includes a completed MS4 General Permit NOI Form for continued coverage under the permit for the next five-year term.
- **Appendix B** includes a memorandum summarizing the SWMP Update site visit.
- **Appendices C through H** include supporting documentation for MCMs 1 through 6, respectively.
- **Appendix I** provides an MCM and BMP summary spreadsheet for quick reference.



## **2. IMPAIRED WATERS AND TMDL REQUIREMENTS**

*Ref: General Permit, Part III. Impaired Water Bodies and Total Maximum Daily Load (TMDL) Requirements*

The MS4 General Permit includes specific requirements for MS4s that discharge to impaired waters. If an MS4 discharges to waters with a US Environmental Protection Agency (EPA)-approved or established TMDL, the permittee must include BMPs in its SWMP that target the identified pollutant(s) of concern including any additional or modified controls identified in the TMDL.

NASCC checks the following sources annually to assess the impairment status of its waters in conjunction with the development of its Annual Report:

- EPA Clean Water Act (CWA) § 303(d) List
- Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303 (d).

If a water body has been added to this list, NASCC must amend its SWMP within two years to address the requirements of Part III of the MS4 General Permit and any associated TMDLs, as necessary.

### **2.1 IMPAIRED WATERBODIES AND TMDLS**

The latest Texas Integrated Report (IR) of Surface Water Quality is the draft 2024 report. The categories from the report are listed below:

- 4a – All TMDLs have been completed and approved by EPA.
- 5a - TMDLs are underway, scheduled, or will be scheduled for one or more parameters.
- 5b - A review of the standards for one or more parameters will be conducted before a management strategy is selected, including the possible revision of the water quality standards.
- 5c - Additional data or information will be collected and/or evaluated for one or more parameters before a management strategy is selected.



- 5r- A watershed protection plan is under development or accepted by the EPA for this parameter.

AH reviewed the latest TCEQ-maintained surface water quality segments mapping (geographic information system [GIS]-based; available online<sup>1</sup>) to determine which waterbody segments are NASCC receiving waters and the status of those segments. Table 2-1 identifies which NASCC receiving waters are designated under the impaired categories:

**Table 2-2 Water Quality Impaired Water Bodies**

Water Body	Category	Impairment	TMDL
Corpus Christi Bay Segment 2481OW_01 <sup>1</sup>	5c	Bacteria Oyster Waters	None
Corpus Christi Bay Segment 2481CB_03	4a	Bacteria Recreational Beaches	Established
Corpus Christi Bay Segment 2481CB_04	4a	Bacteria Recreational Beaches	Established
Oso Bay Segment 2485OW_01	5a	Bacteria Oyster Waters	Underway
Oso Bay Segment 2485_03	4a	Bacteria Recreational Use	Established

Notes:

- 1) Segment 2481OW\_01 was not included on the 2022 Texas IR of Surface Water Quality but is included in the draft 2024 report. All other identified segments are included in the 2022 and draft 2024 IRs.

Prior versions of the NASCC SWMP have also included Laguna Madre Segment 2491; however, AH's review of the most up-to-date surface water quality segment mapping indicates that the delineation between Laguna Madre and Corpus Christi Bay is Texas State Highway 358 (John F. Kennedy Memorial Causeway). The body of water bordering NASCC to the east is therefore considered to be Corpus Christi Bay, not Laguna Madre. Refer to Figure 2-1 for a map (generated by the TCEQ segments viewer) indicating the location of NASCC relative to its receiving waters.

<sup>1</sup> <https://www.tceq.texas.gov/gis/segments-viewer>



7/17/2024, 10:14:17 AM

Reservoir Segments

1:70,000  
0 0.5 1 2 mi  
0 0.75 1.5 3 km

Texas Parks & Wildlife, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS, TCEQ

**Figure 2-1 Map of NASCC and Receiving Waters**



NASCC's receiving waters are subject to the following TMDLs developed by TCEQ:

- Total Maximum Daily Load for Bacteria in Oso Bay, Segment 2485, Approved 6 June 2008.
- Two Total Maximum Daily Loads for Indicator Bacteria at Corpus Christi Bay Beaches, Cole Park and Ropes Park, Segment 2481CB, Approved 31 January 2022.

The applicable Oso Bay and Corpus Christi Bay TMDLs do not identify any analytical monitoring requirements for NASCC but do establish pollutant load allocations that NASCC have set as its benchmarks for bacteria for each waterbody. TCEQ's website stated that the Implementation Plans for the Oso Bay and Corpus Christi Bay TMDLs were still under development at the time this document was published.

The MS4 General Permit requires NASCC to assess progress toward achieving the TMDL benchmarks. NASCC meets this requirement by evaluating the success of the BMPs implemented to help reduce bacterial contamination of stormwater. The results of these evaluations are included in the Annual Report.

## **2.2 TARGETED CONTROLS AND MEASURABLE GOALS DUE TO TMDLS**

In addition to NASCC's IDDE program (MCM 4), which includes elimination of bacteria sources, NASCC implements the following public education and outreach BMPs from MCM 1 that address the TMDL pollutant of concern:

- PE-2: Social Media Post, Social Media Campaign
- PE-3: Stormwater Inlet Marking
- PE-4: Stormwater Fact Sheets

To fully comply with the TMDL BMP requirements (MS4 General Permit, Part III, Section A.5.), NASCC implements the following BMPs specifically to address bacteria, which supplement the standard BMPs required by the six MCMs:

- PI-4: Animal Bacteria Source Reduction
- IDDE-6: Sanitary Sewer System Review and Inspections

Throughout the installation's developed area, the most significant potential for bacterial contamination of the receiving waters is a breakdown of the sanitary sewer collection and conveyance system. There are approximately 18 sanitary sewer lift stations at



NASCC. Lift stations include high-level audible and visual alarms to alert PWD personnel prior to potential overflow events; however, the stations do not include telemetry for a remote notification system. The NASCC IDDE program is addressed in Section 5 of this document. BMP IDDE-6: Sanitary Sewer System Review and Inspections includes daily sanitary sewer lift stations checks and acknowledges a proposed project (under preliminary development) to integrate the lift stations into a supervisory control and data acquisition (SCADA) system.

### **2.2.1 Oso Bay (Bacteria)**

The segments of Oso Bay that receive runoff from NASCC include 2485OW\_01 (Category 5a) and 2485\_03 (Category 4a – TMDL established<sup>2</sup>). Approximately 25 percent of NASCC's 44 outfalls discharge to Oso Bay.

NASCC discharges to Oso Bay include one industrial stormwater outfall (023) that receives runoff from four aircraft hangar facilities and a large portion of the airfield. The industrial outfall is covered by the installation's TPDES MSGP. Water quality assessment of the discharge from this outfall is conducted via MSGP-required visual and sampling monitoring but does not include bacteriological monitoring.

NASCC is not a significant contributor to the bacteria TMDL for Oso Bay. NASCC does not hold a discharge permit in the Oso Bay watershed. The area that flows to Oso Bay is primarily undeveloped, vegetated land associated with the installation flight line. NASCC has identified the following potential bacteriological sources in the areas draining to Oso Bay, as well as measures to reduce bacterial pollutant loading:

- Sanitary Sewer – there is minimal sanitary sewer system infrastructure in the area. There are four aircraft hangars approximately one mile east of the Oso Bay shoreline (on the opposite side of the flight line from Oso Bay). The utility sewer connections from these hangars flow away from the flight line and bay. On the east side of these hangars, there is one sanitary sewer lift station.
- OSSFs – there are no septic systems at NASCC.
- Illicit Discharges and Dumping – access to the flight line and surrounding facilities is highly restricted minimizing any potential for illegal discharge of wastewater.

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<sup>2</sup> Texas Commission on Environmental Quality, One Total Maximum Daily Load for Bacteria in Oso Bay, Segment 2485, Approved 6 June 2008.



- Animal Sources – there are no organized animal sources (e.g., livestock grazing, dog park) within the installation area that drains to Oso Bay. Due to the airfield activity, there is a Bird Aircraft Strike Hazard (BASH) prevention program in place. This program is designed to minimize and eliminate bird interference with airfield activity through habitat modifications and bird harassment.
- Residential Education – there are no residential areas in the installation drainage areas contributing to Oso Bay. Access to the flight line and surrounding facilities is highly restricted.

### **2.2.2 Corpus Christi Bay (Bacteria)**

The segments of Corpus Christi Bay that receive runoff from NASCC include 2481OW\_01 (Category 5c), 2481CB\_03 (Category 4a – TMDL established<sup>3</sup>), and 2481CB\_04 (Category 4a – TMDL established). Corpus Christi Bay is the primary receiving water for NASCC; approximately 75 percent of NASCC's outfalls discharge to the bay.

Six MSGP-regulated industrial outfalls discharge from NASCC to Corpus Christi Bay. The primary industrial tenant operating in the contributing drainage areas is the Corpus Christi Army Depot (CCAD). The industrial outfall is covered by the installation's TPDES MSGP. Water quality assessment of the discharge from this outfall is conducted via MSGP-required visual and sampling monitoring but does not include bacteriological monitoring.

The most obvious potential source of bacteria that could affect Corpus Christi Bay is the NASCC wastewater treatment plant (WWTP) that is permitted under TPDES Individual Permit No. WQ0002317000. The plant discharges treated wastewater directly to the bay and sends monthly discharge reports to TCEQ. Stormwater that falls around the plant area is directed into the treatment works and thus is treated prior to discharge. This facility is covered by its own TPDES permit and has water quality monitoring in place; therefore, no additional BMPs for the pollutant of concern are established for this area under the MS4 permit.

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<sup>3</sup> Texas Commission on Environmental Quality, Two Total Maximum Daily Loads for Indicator Bacteria at Corpus Christi Bay Beaches, Cole Park and Ropes Park, Segment 2481CB, Approved 31 January 2022.



In addition to the industrial areas and the WWTP, the area draining to Corpus Christi Bay also comprises administrative, commercial, residential, recreational (e.g., campgrounds, golf course), and public works areas.

NASCC is not a significant contributor to the bacteria TMDL for Corpus Christi Bay. NASCC has identified the following potential bacteriological sources in the areas draining to the bay, as well as measures to reduce bacterial pollutant loading:

- Sanitary Sewer – there are 17 wastewater lift stations, three sewage holding tanks (pump and haul), and over 200 miles of subsurface sanitary sewer piping in the portion of NASCC that drains to Corpus Christi Bay. Sanitary sewer overflows and leaks from aging sanitary sewer piping are potential sources of bacteria that could enter the MS4. BMP IDDE-6: Sanitary Sewer System Review and Inspections is implemented to minimize the risk of stormwater contamination from these potential sources.
- OSSFs – there are no septic systems at NASCC. The sewage holding tanks noted above do not include septic leach fields.
- Illicit Discharges and Dumping – NASCC includes two recreational vehicle (RV) campgrounds located on the shores of Corpus Christi Bay. Illegal dumping of domestic wastewater from RVs is a potential source of bacterial contamination that could affect the bay. Wastewater hookups are provided at all RV.
- Animal Sources – there are two residential neighborhoods at NASCC that contribute stormwater runoff to the bay, one of which includes a dog park. PI-4: Animal Bacteria Source Reduction and one of the PE-4: Stormwater Fact Sheets are implemented to minimize the risk of stormwater contamination from pet waste. Due to the airfield activity, there is a BASH prevention program in place. This program is designed to minimize and eliminate bird interference with airfield activity through habitat modifications and bird harassment.
- Residential Education – refer to Animal Sources above for information relevant to this item.



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### 3. MCM 1: PUBLIC EDUCATION AND OUTREACH

*Ref: MS4 General Permit, Part IV, Section D.1.*

Education and outreach initiatives help the public at NASCC better understand why a stormwater program is necessary and how their actions impact stormwater quality. The following objectives of this MCM will be met by implementing the BMPs described in this section:

- Raise public awareness that polluted runoff and prohibited non-stormwater discharges are significant sources of water quality issues.
- Motivate the public to engage in activities that reduce polluted stormwater runoff and promote water quality.

The TCEQ defines the target audience for public education and outreach as “military personnel (and dependents) and employees (including contractors).” Each BMP listed herein shall be focused on that target audience.

TCEQ also notes that the permittee shall target specific pollutants in their education programs. The pollutant and/or source must be appropriate for the target audience. NASCC may use the pollutants and sources listed in the MS4 General Permit and/or others, as appropriate. The Annual Report shall indicate how each BMP relates to the target pollutant and target audience.

The MS4 General Permit requires that regulated entities implement a public education and outreach program that includes the following components:

- Target stormwater issues and corresponding audiences
- BMPs aimed at meeting program objectives
- Measurable goals by which to evaluate effectiveness of BMPs
- Schedule of BMP implementation for the five-year permit cycle
- Designation of persons/entities responsible for implementation of BMPs

Environmental and stormwater-specific training is required for NASCC PWD and contractor personnel. Employee and contractor training is addressed in Section 8 of this plan (MCM 6: Pollution Prevention / Good Housekeeping for Municipal Operations).



### **3.1 TARGETED AUDIENCES AND ISSUES**

NASCC targets the following audiences with its public education and outreach campaign:

- Facility managers
- Tenant commands
- Installation housing residents
- Installation housing management
- Morale, Welfare, and Recreation (MWR)
- Facility services contractors
- PWD personnel

Table 3, Part IV, Section D.1.(2) of the MS4 General Permit provides a list of stormwater pollutants and sources. The following pollutants and sources are applicable at NASCC:

- Grass clippings and leaf litter
- Fertilizer and pesticides
- Litter, trash containment, balloon releases
- Dumping of solid waste
- Illegal disposal of hazardous waste
- Accidental wastewater discharges
- Pet waste
- Swimming pool discharges
- POLs from vehicles and equipment
- Sediment from construction activities
- Unauthorized discharge of restaurant waste
- Vehicle washing and other wash water/grey water

### **3.2 INSTALLATION DIGITAL INFORMATION PLATFORMS**

NASCC utilizes its Environmental Support website, social media (Facebook and Instagram), and periodic “all-hands environmental” emails to disseminate stormwater-related information to its population. These platforms have an estimated total circulation of approximately 8,000 people. Generally, PWD EV coordinates with the Public Affairs Officer (PAO) to disseminate information on stormwater or other environmental issues.



PWD EV also coordinates with the Housing Service Center if the information to be shared is relevant to installation housing management or residents.

Each of the BMPs implemented under MCM 1 relies on one or more digital platforms for delivery of information. These platforms are also used in support of BMPs for other MCMs.

Facebook: <https://www.facebook.com/NASCorpusChristi>

Instagram: @nas\_corpus\_christi

### **3.3 BEST MANAGEMENT PRACTICES**

NASCC implements the following five (5) Public Education and Outreach BMPs from the prescribed list in Table 4, Part IV, Section D.1 of the MS4 General Permit. Four are required as a Level 2b system; a fifth BMP is required due to the bacteria TMDLs established for Oso Bay and Corpus Christi Bay.

- PE-1: NASCC Environmental Support Website
- PE-2: Social Media Post / Social Media Campaign
- PE-3: Stormwater Inlet Marking
- PE-4: Stormwater Fact Sheets
- PE-5: Permanent Stormwater Signage



**Table 3-1 PE-1: NASCC Environmental Support Website**

Requirement	Information
BMP Requirement	MS4 General Permit, Part IV, Section D.1.(a)(3)a. Maintain a webpage with current and accurate information and working links.
Responsibility	The PWD EV Water Program Manager coordinates with the PAO to maintain this website.
Target Audience	Residents, Employees, Contractors
Targeted Pollutant(s) / Source(s)	All target pollutants and sources.
Implementation	NASCC's Environmental Support website shall include the SWMP, the most recent Annual Report, and instructions on public reporting of illicit discharges. <a href="https://cnrse.cnrc.navy.mil/Installations/NAS-Corpus-Christi/Operations-and-Management/Environmental-Support/">https://cnrse.cnrc.navy.mil/Installations/NAS-Corpus-Christi/Operations-and-Management/Environmental-Support/</a>
Measurable Goal(s)	The SWMP and most recent Annual reports will be available to the public through the website throughout of the permit term.
Recordkeeping	Refer to Annual Reporting.
Annual Reporting	The Annual Report documents that the current version of the SWMP and most recent Annual Report were available on the website throughout the year.
Schedule	The SWMP is made available on the Environmental Support website no later than 30 days after the NOI approval date. The Annual Report is made available on the website no later than 30 April (i.e., 30 days after the report due date) of each year.



**Table 3-2 PE-2: Social Media Post / Social Media Campaign**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.1.(a)(3)b.(ii)</p> <p>Post a minimum of four times each year on a minimum of one social media platform.</p> <ul style="list-style-type: none"> <li>- The message shall address ways attendees can minimize or avoid adverse stormwater impacts or practices to improve the quality of stormwater runoff.</li> <li>- The messages shall be seasonally appropriate.</li> <li>- Must make a minimum of one post per quarter and each quarterly post must be visible by attendees for the full year, each year.</li> </ul>
Responsibility	The PWD EV Water Program Manager is responsible for the development of social media posts and shall coordinate with the PAO to publish the information.
Target Audience	Residents, Employees, Contractors, Visitors
Targeted Pollutant(s) / Source(s)	All target pollutants and sources. NASCC will develop posts using one or more target pollutants each year.
Implementation	<p>The Water Program Manager develops social media posts on a variety of seasonally appropriate stormwater topics aimed at increasing awareness of the importance of protecting stormwater quality. The following are examples of topics typically covered in this manner:</p> <ul style="list-style-type: none"> <li>- Proper disposal of solid waste and household hazardous waste</li> <li>- Stormwater-friendly landscaping and lawn maintenance, car washing, etc.</li> <li>- Illicit discharges and allowable non-stormwater discharges</li> <li>- Disposal of pet waste</li> </ul> <p>Quarterly posts will be placed on at least one of NASCC's social media pages (Facebook and Instagram).</p>
Measurable Goal(s)	Four (4) quarterly posts to social media each year.
Recordkeeping	The Water Program Manager captures a screen shot of the social media post that is saved electronically with other SWMP records on the PWD network server. Facebook posts are not deleted and may be viewed throughout the year.
Annual Reporting	The Annual Report will include the dates of posting and the target pollutant(s).
Schedule	One post will be made each quarter every year of the five-year MS4 General Permit term.



**Table 3-3 PE-3: Stormwater Inlet Marking**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.1.(a)(3)b.(ii)</p> <p>Placard, stencil, or paint a minimum of 10% of all known stormwater inlets in the MS4 area each year.</p> <p>Where all known stormwater inlets have been marked, inspect, and maintain the markers for a minimum of 15% of all known stormwater inlets in the MS4 area each year.</p>
Responsibility	The PWD EV Water Program Manager is responsible for marking the inlets.
Target Audience	Residents, Employees, Contractors, Visitors
Targeted Pollutant(s) / Source(s)	Litter, trash containment, landscaping residuals, vehicle washing, illegal disposal of POLs and household hazardous chemicals, pet waste
Implementation	<p>NASCC's MS4 includes over 1,100 stormwater inlets, most of which were marked during previous permit terms. NASCC marks all inlets with reasonable potential to be impacted by illegal dumping, prohibited discharges, and/or polluted stormwater. NASCC does not mark all inlets associated with the airfield or other limited access areas where human activity is negligible.</p> <p>Via inlet inspections, the Water Program Manager identifies inlets that need marking or re-marking due to degradation of the prior marker.</p>
Measurable Goal(s)	Mark all stormwater inlets with reasonable potential to be impacted by illegal dumping or prohibited discharges. Inspect 15% of all known stormwater inlets each year and replace degraded markers, as needed.
Recordkeeping	The Water Program Manager maintains electronic mapping of which inlets have been marked and a log of which inlets were visited and maintained each year.
Annual Reporting	The Annual Report shall include the number of inlets marked, inspected, and re-marked that year. The total number of inlets and percentage of inlets inspected / maintained will also be reported.
Schedule	Inspect 15% of marked inlets annually and re-mark, as needed.



**Table 3-4 PE-4: Stormwater Fact Sheets**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.1.(a)(3)b.(ii)</p> <p>Develop material topics that are group specific and address activities or pollutants of concern.</p> <p>The number of fact sheets, brochures, bill inserts, door hangers, or handouts distributed each year shall at a minimum be enough to reach at least 75% of the intended audience.</p>
Responsibility	The PWD EV Water Program Manager is responsible for the development, periodic update, and distribution of the fact sheets.
Target Audience	Residents, Employees, Contractors
Targeted Pollutant(s) / Source(s)	All target pollutants and sources. Fact sheets typically featuring multiple target pollutants are distributed each year.
Implementation	<p>PWD EV has developed a suite of stormwater-related fact sheets (trifold brochures and small posters) covering the following topics:</p> <ul style="list-style-type: none"> <li>- Facility Maintenance (e.g., illicit discharge awareness, grounds maintenance, exterior painting activities)</li> <li>- Household Stormwater Quality (e.g., lawncare, auto care, household hazardous waste, pet waste)*</li> <li>- Vehicle and Equipment Maintenance (e.g., washing, housekeeping, hazardous waste and material storage, cleaning of leaks and spills)</li> <li>- Stormwater Pollution Prevention for Industrial Activities</li> </ul> <p>Refer to Appendix C for copies of these materials. The Water Program Manager distributes these materials via “all-hands” environmental email that reaches all target audiences listed in Section 3.1 of this SWMP.</p>
Measurable Goal(s)	Distribute at least one fact sheet each year.
Recordkeeping	The Water Program Manager saves a copy of the email including the attached fact sheet electronically with other SWMP records on the PWD network server.
Annual Reporting	The Annual Report shall include the delivery date of the email and fact sheet, the approximate percentage of the target audience reached, and a summary of the information included in the distribution.
Schedule	At least one fact sheet will be distributed each year of the five-year MS4 General Permit term.

\*The Household Stormwater Quality fact sheet meets the requirements of the MS4 General Permit, Part III, Section A.5.(e). Residential Education related to impaired waters and TMDLs.



**Table 3-5 PE-5: Permanent Stormwater Signage**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.1.(a)(3)b.(ii)</p> <p>Place signage in a location where the message is relevant, and highly visible to the target audience.</p> <p>Signage will count as an annual BMP for the year it was put in place and for each subsequent year of this permit cycle as long as each of those years, the permittee inspects and maintains, as necessary, 100% of the signage once annually.</p>
Responsibility	PWD EV is responsible for the development, procurement, and installation of the signage.
Target Audience	Residents, Employees, Contractors, Visitors
Targeted Pollutant(s) / Source(s)	Litter, trash containment
Implementation	PWD EV has procured multiple kiosks to be installed at recreational beach areas at NASCC. The kiosks provide bags for beach visitors to collect litter and other trash. PWD EV will develop and procure signage that will be installed with each kiosk that provides relevant education stormwater information. The Water Program Manager will publicize the kiosks via social media in conjunction with PE-2.
Measurable Goal(s)	Installation of permanent stormwater signage.
Recordkeeping	The Water Program Manager will photograph the kiosks and save those photographs and other information (e.g., invoices) electronically with other SWMP records on the PWD network server.
Annual Reporting	The Annual Report shall include the kiosk and signage installation date(s) and include the text that is included on the signage.
Schedule	The kiosks and signage shall be installed by the end of the five-year MS4 General Permit term.



## 4. MCM 2: PUBLIC INVOLVEMENT / PARTICIPATION

*Ref: MS4 General Permit Part IV, Section D.2.*

The MS4 General Permit requires that regulated entities involve the public in the implementation of the SWMP. The public can be a valuable resource in the implementation of a stormwater program. Engaging the public in the program broadens support, helps identify potential obstacles to implementation, invites additional expertise, and provides a conduit to other complimentary programs. NASCC's public involvement and participation program includes the following components:

- Coordination of public involvement and participation opportunities
- Public notice of the MS4-related activities
- BMPs and measurable goals by which to evaluate those BMPs
- Schedule of BMP implementation for the five-year permit cycle
- Designation of persons responsible for implementation of BMPs

### 4.1 BEST MANAGEMENT PRACTICES

NASCC implements the following four (4) Public Involvement / Participation BMPs from the prescribed list in Table 5, Part IV, Section D.2 of the MS4 General Permit. Three are required as a Level 2b system; a fourth BMP is required due to the bacteria TMDLs established for Oso Bay and Corpus Christi Bay.

- PI-1: Watershed Clean Up Events
- PI-2: MS4 Area-Wide Stormwater Survey
- PI-3: Educational Display at Public Location
- PI-4: Animal Bacteria Source Reduction



**Table 4-1 PI-1: Watershed Clean Up Events**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.2.(a)(2)</p> <p>Host at a minimum, two events annually. To be considered an event, the land area cleaned must be a minimum of:</p> <ul style="list-style-type: none"> <li>- Two acres,</li> <li>- 400 yards of stream/streambank/riparian area, or</li> <li>- Two miles of roadside.</li> </ul> <p>These may be combined (such as one acre of land and 200 yards of stream).</p>
Responsibility	PWD EV will coordinate and help execute the clean-up events including maintaining a current list of contact information for participating groups.
Target Audience	Residents, Employees, Contractors
Targeted Pollutant(s) / Source(s)	Litter, trash containment, debris (including organic) that is blocking stormwater infrastructure
Implementation	<p>NASCC holds an annual, installation-wide Earth Day Clean Up event. Various departments and tenant commands are responsible for specified areas of responsibility (AORs). A map showing the AORs as well as other supporting documents (e.g., NASCC notice template, participant contact information) are included in Appendix D of this SWMP. Event reminders that emphasize the underlying goals of watershed protection are distributed via social media and “all-hands” emails.</p> <p>A second, targeted area cleanup is conducted in the fall in cooperation with NASCC Command Chaplain. The areas targeted by this clean up are those known to accumulate more litter.</p>
Measurable Goal(s)	Coordinate two clean up events of appropriate scope annually.
Recordkeeping	The Water Program Manager maintains event records (e.g., date, area/distance cleaned, number of participants, copies of associated advertisements for the events) electronically with other SWMP records on the PWD network server.
Annual Reporting	The Annual Report will include the dates, scope (area/distance cleaned), and number of participants at each event.
Schedule	One event will occur on/around Earth Day and the second targeted event will occur in the fall. Both events will be held each year of the five-year MS4 General Permit term.



**Table 4-2 PI-2: MS4 Area-Wide Stormwater Survey**

Requirement	Information
BMP Requirement	MS4 General Permit, Part IV, Section D.2.(a)(2) Provide a minimum of one public survey annually for input on the program implementation to be distributed to reach at least 75% of the intended audience.
Responsibility	The PWD EV Water Program Manager is responsible for assembling and distributing the surveys. They are also responsible for reading and compiling responses to the surveys.
Target Audience	Residents, Employees, Contractors
Targeted Pollutant(s) / Source(s)	All target pollutants and sources.
Implementation	PWD EV attaches the short survey to the all-hands email used to distribute the stormwater fact sheets (BMP PE-4) and/or to required stormwater training via the Environmental Compliance, Assessment, Training, and Tracking System (ECATTS) (BMP PPGH-2).
Measurable Goal(s)	Distribute the survey to a minimum of 75% of the intended audience.
Recordkeeping	The Water Program Manager maintains survey records (date of distribution, number of surveys delivered, number of survey responses received) electronically with other SWMP records on the PWD network server.
Annual Reporting	The Annual Report will include the date of distribution, number of surveys delivered, and number of surveys received.
Schedule	The survey will be distributed annually each year of the five-year MS4 General Permit term; the date of the delivery will vary, depending on the mode of distribution.



**Table 4-3 PI-3: Educational Display at Public Location**

Requirement	Information
BMP Requirement	MS4 General Permit, Part IV, Section D.2.(a)(2) Provide one booth or display at minimum annually. The booth or display must be staffed when the event is open to the public.
Responsibility	The PWD EV Water Program Manager will be responsible for preparing materials and staffing the display.
Target Audience	Residents, Employees
Targeted Pollutant(s) / Source(s)	All target pollutants and sources.
Implementation	The Water Program Manager will develop and staff an educational display at the NASCC Child Development Center. The display will be staffed during child drop off and pickup periods for one day. The display will have stormwater-related information on how to improve water quality like the information provided via fact sheets (BMP PE-4)
Measurable Goal(s)	Provide and staff educational display once annually.
Recordkeeping	The Water Program Manager maintains display event records (date, number of people reached, display materials) electronically with other SWMP records on the PWD network server.
Annual Reporting	The Annual Report will include the date of the event, number of people reached, and a summary of the information included on the educational display.
Schedule	The display will be presented and staffed one day each year of the five-year MS4 General Permit term.



**Table 4-4 PI-4: Animal Bacteria Source Reduction**

Requirement	Information
BMP Requirement	MS4 General Permit, Part III, Section A.5.(d) Provide and maintain at least one pet waste station in 100% of public parks or similar greenspaces in the MS4 each year.
Responsibility	PWD EV is responsible for maintaining the availability of the pet waste stations. Maintenance of the waste stations will be the responsibility of the facility services contractor.
Target Audience	Residents, Visitors
Targeted Pollutant(s) / Source(s)	Bacteria
Implementation	PWD EV installed and regularly services five (5) pet waste stations at the following locations at NASCC where pet activity occurs: <ul style="list-style-type: none"><li>- MWR dog park along Dimmit Drive between the residential area and the RV campground</li><li>- RV campground adjacent to the MWR dog park along Dimmit Drive</li><li>- RV campground adjacent to the MWR pool along Ocean Drive</li></ul>
Measurable Goal(s)	Periodically service and maintain all five pet waste stations throughout the permit term.
Recordkeeping	The Water Program Manager maintains any records related to the pet waste stations (e.g., complaints, work orders) electronically with other SWMP records on the PWD network server.
Annual Reporting	The Annual Report shall include the number and location of active pet waste stations at NASCC.
Schedule	The pet waste stations shall be available throughout each year of the five-year MS4 General Permit term.



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## **5. MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION**

*Ref: MS4 General Permit, Part IV, Section D.3.*

The MS4 General Permit states the permittees “shall develop, implement, and enforce a program to investigate, detect, and eliminate illicit discharges in the small MS4.”

An illicit discharge is any discharge to the MS4 or waters of the state that does not consist entirely of stormwater, with some exceptions. Exceptions include discharges specifically identified as allowable in the MS4 General Permit (when such non-stormwater discharges are not significant contributors of pollution) and discharges covered by other TPDES permits. Illicit discharges may result from direct cross-connections (e.g., sanitary sewer piped directly into the MS4) or from indirect sources. The following sources are common examples of indirect illicit discharges:

- Infiltration from broken sanitary sewer pipes or septic systems
- Accidental wastewater / POL spills
- Intentionally dumped or pumped wastewater / POLs
- Sediment-laden runoff from land disturbance / construction activities

The objective of NASCC’s IDDE program is to protect waterbodies from these discharges and the following harmful pollutants that they may contain: heavy metals, toxics, oil and grease, solvents, nutrients, sediment, viruses, and bacteria. The program includes the following components:

- Current and accurate MS4 mapping
- IDDE training for PWD staff involved in the program
- Mechanism for public reporting of illegal spillage, dumping, or otherwise illicit disposal of materials into the MS4 system
- Procedures for responding to, tracing, and removing illicit discharges
- Inspections in response to reported potential illicit discharges including follow-up inspections



- BMPs and measurable goals by which to evaluate those BMPs
- Schedule of BMP implementation for the five-year permit cycle
- Designation of persons responsible for implementation of BMPs

## **5.1 ALLOWABLE NON-STORMWATER DISCHARGES**

*Ref: MS4 General Permit, Part II, Section D.*

The MS4 General Permit allows the following non-stormwater discharges, unless such discharges are determined to be substantial contributors of pollutants to the MS4:

- Water line flushing (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated, and discharges are not expected to adversely affect aquatic life)
- Runoff or return flow from landscape irrigation
- Diverted stream flow
- Rising ground waters and springs
- Uncontaminated groundwater (including pumped groundwater)
- Foundation and footing drains
- Air conditioning condensation
- Water from crawl space pumps
- Individual residential vehicle washing
- Flows from wetlands and riparian habitats
- Street wash water excluding street sweeper wastewater
- Discharges from potable water sources that do not violate Texas Surface Water Quality Standards
- Dechlorinated swimming pool discharges that do not violate Texas Surface Water Quality Standards
- Discharges or flows from emergency fire-fighting activities (emergency fire-fighting activities do not include washing of trucks, runoff water from training activities, test water from fire suppression systems, and similar activities)
- Other allowable non-stormwater discharges listed in 40 CFR § 122.26(d)(2)(iv)(B)(1)
- Non-stormwater discharges that are specifically listed in the TPDES MSGP TXR050000 or the TPDES Stormwater General Permit for Construction Activities (CGP) No. TXR150000
- Discharges that are authorized by a TPDES or National Pollutant Discharge Elimination System (NPDES) permit or that are not required to be permitted



## **5.2 2022 ILLICIT DISCHARGE SURVEY**

An illicit discharge survey of the wastewater system at NASCC was completed in 2022. Approximately 80 individual dye tests were conducted in 43 buildings, including multiple and repeat tests, as appropriate, to determine the destination of wastewater from water-using fixtures. The effort identified one illicit discharge – a damaged sanitary sewer pipe was discovered to be leaking into a stormwater manhole. NASCC acted immediately to stop the discharge. Sanitary sewer flow was redirected away from the damaged pipe section into an adjacent sanitary sewer line, thus eliminating this discharge. The results of the survey are documented in the Illicit Discharge Survey of the Wastewater System (AH, 2022). This was the second such effort at NASCC; the previous illicit discharge survey was completed in 2011. The first survey focused primarily on CCAD facilities and aircraft hangars. The second survey included a wider range of facilities but rechecked many of the facilities included in the first survey.

## **5.3 BEST MANAGEMENT PRACTICES**

NASCC implements six (6) IDDE BMPs derived from the prescribed list in Table 6, Part IV, Section D.3 of the MS4 General Permit and one (1) additional BMP (IDDE-6) that is required due to the bacteria TMDLs established for Oso Bay and Corpus Christi Bay. NASCC is not subject to addition OSSF TMDL requirements (MS4 General Permit, Part III, Section A.5.(b)) because the installation does not include such facilities.

NASCC implements the following BMPs, which constitute its IDDE program:

- IDDE-1: Current MS4 Mapping
- IDDE-2: IDDE Training for PWD Personnel and Contractors
- IDDE-3: Potential Illicit Discharge Reporting Mechanism
- IDDE-4: Dry Weather Outfall Inspections
- IDDE-5: Source Investigation and Elimination
- IDDE-6: Sanitary Sewer System Review and Inspections

While there are no OSSFs (i.e., septic systems) at NASCC, there are three below grade sewage holding tanks. NASCC periodically pumps these holding tanks out and hauls the wastewater to its WWTP.



**Table 5-1 IDDE-1: Current MS4 Mapping**

Requirement	Information
BMP Requirement	MS4 General Permit, Part IV, Section D.3.(c)(1) Maintain a current and accurate MS4 map. Review and update, as necessary, at least one time annually to include features that have been added, removed, or changed.
Responsibility	PWD EV is responsible for identifying when the stormwater conveyance system has undergone expansion or modification requiring a MS4 mapping update and coordinating with appropriate installation and NAVFAC Southeast personnel to complete those updates. PWD EV shall ensure that up-to-date mapping is available to applicable PWD personnel.
Target Audience	N/A
Targeted Pollutant(s) / Source(s)	Illicit discharges resulting from illegal connections, dumping activities, or leaks/spills
Implementation	Mapping of NASCC's MS4 is maintained in a GIS geodatabase. The following stormwater features are examples of key data included in the geodatabase (key features are assigned unique feature identifiers): <ul style="list-style-type: none"> <li>- Drainage structures (e.g., catch basins, curb inlets, manholes)</li> <li>- Open drainage (e.g., vegetated swales, paved channels)</li> <li>- Piping/culverts</li> <li>- Storage/treatment devices (e.g., ponds, wetlands)</li> <li>- Drainage basins</li> <li>- Outfalls</li> <li>- Waters of the state</li> </ul> Upon recognizing that the MS4 mapping requires updating, PWD EV coordinates with the installation GIS technician and the NAVFAC Southeast GeoReadiness Center (GRC) to complete the updates.
Measurable Goal(s)	Maintain the stormwater geodatabase at or near 100% complete as soon as is feasible when physical changes are made to the MS4.
Recordkeeping	The stormwater geodatabase is maintained electronically on the NASCC PWD network server by the installation GIS technician. The data are also maintained by the NAVFAC Southeast GRC.
Annual Reporting	The Annual Report will include an estimate of the completeness of its MS4 mapping and summary of any updates completed and/or planned.
Schedule	The MS4 geodatabase is updated as soon as possible after completion of changes to the MS4 for the duration of the five-year MS4 General Permit cycle.



**Table 5-2 IDDE-2: IDDE Training for PWD Personnel and Contractors**

Requirement	Information
BMP Requirement	MS4 General Permit, Part IV, Section D.3.(c)(2) Conduct a minimum of one training annually for 100% of MS4 field staff that may come into contact with or otherwise observe an illicit discharge, illegal dumping, or illicit connection to the small MS4 as part of their normal job responsibility.
Responsibility	PWD EV is responsible for the development of illicit discharge related training material and ensuring that material is incorporated into ECATTS.
Target Audience	Employees, Contractors
Targeted Pollutant(s) / Source(s)	Illicit discharges resulting from illegal connections, dumping activities, or leaks/spills
Implementation	All NASCC personnel and contractors (including PWD personnel) are required to complete annual environmental and stormwater ECATTS training (refer to BMP PPGH-2), which will be updated to include information specific to IDDE. The PWD EV Water Program Manager will provide IDDE educational material to the installation ECATTS administrator for addition to existing ECATTS training.
Measurable Goal(s)	Make training available annually to all PWD staff.
Recordkeeping	The ECATTS training program tracks training completed by employees and contractors. The Water Program Manager may request such records at any time from the ECATTS administrator.
Annual Reporting	The Annual Report will include the percentage of PWD personnel that have completed the annual ECATTS training.
Schedule	All PWD personnel complete ECATTS training once each year of the five-year MS4 General Permit term.



**Table 5-3 IDDE-3: Potential Illicit Discharge Reporting Mechanism**

Requirement	Information
BMP Requirement	MS4 General Permit, Part IV, Section D.3.(c)(3) Maintain a minimum of one public reporting mechanism 100% of the time during the permit term. Publicize the reporting mechanism a minimum of two times annually in a method designed to reach at least 75% of the target audience. In addition, if the MS4 operator has a public website, the public reporting mechanism must be publicized on the public website 100% of the time during the permit term.
Responsibility	PWD EV is responsible for providing and publicizing how members of the NASCC public can report suspected illicit discharges.
Target Audience	Residents, Employees, Contractors
Targeted Pollutant(s) / Source(s)	Illicit discharges resulting from illegal connections, dumping activities, or leaks/spills
Implementation	The public are instructed to report suspected illicit discharges to the command duty officer (CDO) at 361-534-9093 and PWD EV Water Program Manager at 361-961-5363. ECATTS stormwater training (BMP PPGH-2) shall be updated to include IDDE information (BMP IDDE-2), including means for reporting illicit discharges. Instructions for reporting illicit discharges are included in the all-hands email used to distribute stormwater fact sheets (BMP PE-4) and included on the NASCC Environmental Support website. Appendix E includes the NASCC Spill Report Form, which is also used to document reported potential illicit discharges. PWD personnel and tenants whose jobs include working with hazardous materials and POLs are specifically trained to call 911 and the CDO to report illicit discharges, spills, and other releases. All NASCC public, through their association with the military, are aware of their responsibility to contact the installation CDO to report any questionable activity (e.g., illegal dumping).
Measurable Goal(s)	At least 75% of the target audience will receive information on how to report illicit discharges twice per year.
Recordkeeping	The ECATTS training program tracks training completed by employees and contractors and the Water Program Manager maintains copies of all-hands emails electronically with other SWMP records on the PWD network server. Completed NASCC Spill Report Forms are also maintained on the PWD network server.
Annual Reporting	The Annual Report will include an estimate of the percentage of target audience members reached based on ECATTS training records and/or distribution of the stormwater fact sheet via the all-hands email.
Schedule	All PWD personnel complete ECATTS training once each year of the five-year MS4 General Permit term. At least one all-hands email will include illicit discharge reporting information each year. The ECATTS stormwater training and the NASCC Environmental Support website will be updated to include illicit discharge reporting information in the first year of the five-year MS4 General Permit term.



**Table 5-4 IDDE-4: Dry Weather Outfall Inspections**

Requirement	Information
BMP Requirement	N/A
Responsibility	The PWD EV Water Program Manager is responsible for conducting outfall inspections
Target Audience	N/A
Targeted Pollutant(s) / Source(s)	Illicit discharges resulting from illegal connections, dumping activities, or leaks/spills
Implementation	<p>Appendix E includes a standard operating procedure (SOP) for conducting dry weather inspections. These procedures will be implemented for each NASCC stormwater outfall. Screening activities should occur at least 48 hours after a runoff-producing precipitation event. When a dry weather flow is encountered at one of the outfalls, and the source cannot be readily identified as an allowable non-stormwater discharge, the following information is collected:</p> <ul style="list-style-type: none"> <li>- Location of the observed flow (indicated on a map)</li> <li>- A sketch of the structure where the flow was observed that indicates the direction from which the flow is coming</li> <li>- Visual observations of a flow sample collected in a clear container (color, clarity, odor, floatables, suspended solids, and sheen)</li> <li>- Photographs of the dry weather flow (including of the flow sample)</li> <li>- Estimate of flowrate</li> </ul> <p>In addition to the Dry Weather Inspections SOP, Appendix E contains a Dry Weather Outfall Inspection Form and outfalls mapping to aid in data collection.</p>
Measurable Goal(s)	Dry weather inspections at 25% of the stormwater outfalls quarterly.
Recordkeeping	The Water Program Manager maintains dry weather investigation SOPs and results (Dry Weather Screening Forms) electronically with other SWMP records on the PWD network server.
Annual Reporting	The Annual Report will include the number of stormwater outfalls and associated drainage basins inspected (including the number of dry weather flows observed/recorded per outfall/drainage basin).
Schedule	Conduct dry weather inspections at 25% of the stormwater outfalls quarterly each year of the five-year MS4 General Permit term.



**Table 5-5 IDDE-5: Source Investigation and Elimination**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.3.(c)(4) through D.3.(c)(6)</p> <p>Review and update the procedures at least one time annually to address changes and make improvements to the established procedures where applicable.</p> <p>For 100% of illicit discharges or illegal dumping where a source has been determined, notify the responsible party of the problem within 24 hours. Require the responsible party to perform all necessary corrective actions to eliminate the illicit discharge.</p> <p>Respond to 100% of known illicit discharges and illegal dumping each year. Each year, respond to 100% of high priority discharges, within 24 hours. Notify TCEQ immediately of 100% of illicit flows believed to be an immediate threat to human health or the environment throughout the permit term.</p> <p>Review and update the investigation procedures at least once time annually to address changes and make improvements to the established procedures where applicable.</p> <p>Conduct inspections in response to 100% of complaints each year according to the established procedures. Conduct follow-up inspections in 100% of cases each year where necessary.</p>
Responsibility	The PWD EV Water Program Manager maintains and implements, or coordinates implementation of, a SOP developed to meet requirements of this BMP.
Target Audience	N/A
Targeted Pollutant(s) / Source(s)	Illicit discharges resulting from illegal connections, dumping activities, or leaks/spills
Implementation	Public reporting (BMP IDDE-3) and dry weather outfall inspections (BMP IDDE-4 may result in the identification of flows that cannot be readily attributed to known allowable non-stormwater discharges (suspected/potential illicit discharges). In these instances, PWD EV implements the investigation and elimination SOP included in Appendix E.
Measurable Goal(s)	Identify the source of all suspected / potential illicit discharges as soon as possible after discovery and develop a removal plan and schedule.
Recordkeeping	The Water Program Manager maintains illicit discharge investigation, removal plans and schedules, removal results, and follow up results (recorded on the Discharge Reporting Form) electronically with other SWMP records on the NASCC PWD network server.
Annual Reporting	The Annual Report will include the number of suspected/potential illicit discharges investigated, the number of illicit discharges confirmed, and the number of illicit discharges removed.
Schedule	Implement illicit discharge tracing and removal procedures as soon as possible upon discovery of a suspected/potential illicit discharge for the duration of the five-year MS4 General Permit cycle.



**Table 5-6 IDDE-6: Sanitary Sewer System Review and Inspections**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part III, Section A.5.(a)</p> <p>Conduct review of 100% of the sanitary sewer system to identify areas for improvement within the first two years of the permit term. Initiate all feasible improvement projects by the end of the permit term.</p> <p>Conduct weekly lift station inspections at 100% of the MS4 owned and operated lift stations each year.</p> <p>Investigate and address 100% of sanitary sewer overflow complaints identified through the public reporting mechanism implemented by the MS4 each year.</p> <p>Strengthen sanitary sewer use requirements to reduce blockage from fats, oils, and grease (FOG) by reviewing and updating ordinances or other regulatory mechanisms and inspection programs at least one time annually.</p>
Responsibility	<p>PWD is responsible for identifying sanitary sewer system improvements.</p> <p>PWD Utilities staff are responsible for sanitary sewer lift stations inspections.</p> <p>PWD EV and Utilities coordinate responses to all sanitary sewer overflows.</p>
Target Audience	N/A
Targeted Pollutant(s) / Source(s)	Bacteria
Implementation	<p>PWD has identified the lack of SCADA system as a potential area for improvement. The early stages of project development to install a SCADA system are underway.</p> <p>PWD Utilities staff conduct visual inspections multiple times each day of all NASCC sanitary sewer lift stations to check audible and visual alarms, and for FOG blockages. Maintenance tickets are submitted upon discovery of any issues and repairs are made as soon as possible to reduce the potential for sewer overflows. PWD EV and Utilities coordinate responses to all sanitary sewer overflows. Utilities maintains the ability and equipment required to quickly mitigate overflows while necessary repairs are made.</p>
Measurable Goal(s)	<p>All sanitary sewer lift stations are inspected annually.</p> <p>All overflow complaints are investigated and addressed annually.</p>
Recordkeeping	PWD Utilities and the Water Program Manager maintain records of sanitary sewer overflow complaints and responses (mitigation and repairs) electronically on the PWD network server.
Annual Reporting	The Annual Report will include the number of sanitary sewer overflow complaints received and responded to, as well as a summary of mitigation and repair actions.
Schedule	Any additional sanitary sewer system improvements will be identified within the first two years of the MS4 General Permit term. Lift stations are inspected multiple times daily each day of the permit term.



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## 6. MCM 4: CONSTRUCTION SITE STORMWATER RUNOFF POLLUTANT CONTROL

*Ref: MS4 General Permit, Part IV, Section D.4.*

Development and redevelopment projects at NASCC are conducted under the authority and supervision of NASCC. Such projects are executed through design and construction contracts with outside parties that are overseen by NASCC PWD with support from NAVFAC Southeast. Therefore, NASCC assumes the role of developer and regulator.

Construction activities are a major contributor of pollution to Texas waterbodies. The most significant pollutant of concern resulting from construction activities is sediment resulting from erosion of earth denuded during construction prior to site stabilization. Sediment can be prevented from leaving construction sites and entering waterways through proper implementation and maintenance of appropriate erosion and sediment control (E&SC).

The MS4 General Permit requires permittees to implement an enforceable program to control stormwater runoff from construction activities that disturb one or more acres of land, or that disturb less than one acre of land, but are part of a larger common plan of development that would disturb one or more acres. NASCC's program includes the following components:

- Mechanism that provides legal authority to require E&SC at applicable construction sites and enforce that requirement
- Requirement that operators of applicable construction sites obtain and comply with the TCEQ CGP
- Prohibition of common construction site illicit discharges
- Procedures for E&SC plan review and construction site inspections to ensure proper implementation of E&SC plans
- Training requirements for plan reviewers and inspectors



- Mechanism for public comment on installation construction activities<sup>4</sup>
- BMPs and measurable goals by which to evaluate those BMPs
- Schedule of BMP implementation for the five-year permit cycle
- Designation of persons responsible for implementation of BMPs

## **6.1 PROHIBITED CONSTRUCTION SITE DISCHARGES**

Part IV, Section D.4.(b)(2) of the MS4 General Permit prohibits the following discharges from construction activities:

- Wastewater from washout of concrete and wastewater from water well drilling operations, unless managed by an appropriate control
- Wastewater from washout and cleanout of stucco, paint, from release oils, and other construction materials
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance
- Soaps or solvents used in vehicle and equipment washing
- Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed by appropriate BMPs

## **6.2 BEST MANAGEMENT PRACTICES**

NASCC implements the following four (4) Construction Site Stormwater Control BMPs from the prescribed list in Table 9, Part IV, Section D.4 of the MS4 General Permit:

- CS-1: Construction Site Stormwater Regulatory Mechanism
- CS-2: Site Plan Reviews
- CS-3: Construction Site Inspections
- CS-4: Construction Stormwater Training for PWD Personnel

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<sup>4</sup> The mechanism by which the public may submit comments relative to installation construction activities is the same as is utilized for public reporting of illicit discharges, BMP IDDE-3; therefore, separate public reporting procedures are not included in this section of the SWMP for compliance with MS4 General Permit, Part IV, Section D.4.(b)(5).



**Table 6-1 CS-1: Construction Site Stormwater Regulatory Mechanism**

Requirement	Information
BMP Requirement	MS4 General Permit, Part IV, Section D.4.(b)(1) and D.4.(b)(2)  Review and update the ordinance or other regulatory mechanism at least one time annually during the permit term to address changes and make improvements to the ordinance where applicable.
Responsibility	The PWD EV and Facilities, Engineering, and Acquisition Division (FEAD) are responsible for implementation of regulatory mechanisms applied to NASCC construction activities as well as identifying updates to improve the regulatory process.
Target Audience	Employees, Contractors
Targeted Pollutant(s) / Source(s)	Sediment, construction wastewater (e.g., concrete washout water, equipment cleaning), POLs
Implementation	All proposed construction activities are required to complete the NASCC National Environmental Policy Act (NEPA) process prior to beginning construction. The NEPA process includes a project environmental review (PER) that identifies applicable requirements for each project including, but not limited to, the following MCM 4-related requirements: <ul style="list-style-type: none"> <li>- CGP TXR150000, for small and large construction activities</li> <li>- Environmental protection plan (EPP)</li> <li>- Construction site SWP3<sup>1</sup></li> </ul> <p>PWD FEAD and EV are responsible for verifying compliance with the requirements identified by the PER.</p> <p>Furthermore, NASCC requires adherence to standard construction specifications<sup>1</sup> that specifically address E&amp;SC and pollution prevention at all installation construction sites.</p>
Measurable Goal(s)	Annual review of NASCC's NEPA process.
Recordkeeping	The NEPA review process will be updated as necessary to include additional regulations or requirements.
Annual Reporting	The Annual Report will include confirmation of current and effective regulatory mechanism for controlling runoff from construction sites.
Schedule	Ordinance and regulatory mechanism reviews will take place annually and coincide with the plan procedures review.

**Notes:**

- 1) Construction Site SWP3 requirements and NASCC standard construction specifications prohibit the discharges identified in the MS4 General Permit, Part IV, Section D.4.(b)(2) and Section 6.1 of this SWMP.



**Table 6-2 CS-2: Site Plan Reviews**

Requirement	Information
BMP Requirement	MS4 General Permit, Part IV, Section D.4.(b)(3)  Review and update site plan review procedures at least one time annually to address changes and make improvements to the established procedures where applicable.
Responsibility	PWD FEAD and EV are responsible for providing compliance reviews of preconstruction stormwater documentation (typically prepared under design or construction contracts) prior to submittal to TCEQ. FEAD and EV are also responsible for identifying updates to improve the review procedures.
Target Audience	N/A
Targeted Pollutant(s) / Source(s)	Sediment, construction wastewater (e.g., concrete washout water, equipment cleaning), POLs
Implementation	<p>Prior to submittal to state and federal regulatory agencies, PWD FEAD forwards all construction plans to EV for review. Among other environmental concerns, EV reviews plans for required E&amp;SC elements. FEAD is responsible for overall plan approval. The following documents, which are typically prepared under design or construction contracts, are reviewed:</p> <ul style="list-style-type: none"> <li>- NOIs for coverage under the CGP</li> <li>- E&amp;SC plans and specifications, EPPs</li> <li>- Construction Site SWP3s</li> <li>- US Army Corps of Engineers (USACE) permit applications, when required</li> </ul> <p>Appendix F includes the Construction Site SW3 review checklist used by the Water Program Manager to aid in site plan reviews. This process applies only to construction activities that disturb one or more acres of land, or that disturb less than one acre of land but are part of a larger common plan of development that would disturb one or more acres. For smaller sites, the Water Program Manager requires a map of the site that locates potential pollutant sources, stormwater features, and E&amp;SC measures.</p>
Measurable Goal(s)	<p>All applicable construction plans undergo the PWD site plan review process.</p> <p>Site plan review SOP is reviewed and updated annually, as needed.</p>
Recordkeeping	PWD FEAD maintains a current and historical electronic inventory on the PWD network server of applicable military construction projects that includes records of project reviews (including NEPA PERs), copies of NOIs, plans and specifications (including E&SC), construction site SWP3s, USACE permitting documentation, and project termination/closeout documentation.
Annual Reporting	The Annual Report includes the total number of regulated construction site plans reviewed each year and confirms whether each project complied with the site plan review process.
Schedule	The site plan review process is implemented on an ongoing basis each year of the five-year MS4 General Permit term.



**Table 6-3 CS-3: Construction Site Inspections**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.4.(b)(4)</p> <p>Review and update inspection procedures at least once annually to address changes and make improvements to the established procedures where applicable.</p> <p>Conduct inspections at 80% of active construction sites annually according to the established procedures. Each year, follow-up inspection in 100% of cases where necessary.</p>
Responsibility	<p>The PWD EV Water Program Manager is responsible for ensuring that applicable construction activities comply with applicable state and local E&amp;SC and stormwater pollution prevention requirements via inspections. The Water Program Manager is also responsible for identifying updates to improve the review procedures.</p>
Target Audience	N/A
Targeted Pollutant(s) / Source(s)	Sediment, construction wastewater (e.g., concrete washout water, equipment cleaning), POLs
Implementation	<p>All active construction sites are formally inspected at least annually in accordance with the SOP included in Appendix F. The inspection ensures that E&amp;SC measures are implemented according to the approved plans and that measures are installed properly and in working condition. The results of this inspection are recorded on the construction site inspection checklist also provided in Appendix F. Any issues are immediately reported to PWD FEAD who have the contractual authority to require the contractor to correct noted deficiencies.</p>
Measurable Goal(s)	<p>All applicable, active construction sites are inspected annually.</p> <p>Site plan review SOP is reviewed and updated annually, as needed.</p>
Recordkeeping	<p>The Water Program manager maintains records of construction site inspections electronically with other SWMP records on the PWD network server. Records include the checklist and any documentation relative to issues and corrective actions.</p>
Annual Reporting	<p>The Annual Report includes the total number of regulated construction sites inspected each year and notes any major issues encountered and how those issues were addressed.</p>
Schedule	<p>Each active construction site shall be inspected at least once each year of the five-year MS4 General Permit term.</p>



**Table 6-4 CS-4: Construction Stormwater Training for PWD Personnel**

Requirement	Information
BMP Requirement	MS4 General Permit, Part IV, Section D.4.(b)(6) Conduct a minimum of one training annually for 100% of MS4 staff whose primary job duties are related to implementing the construction stormwater program.
Responsibility	The PWD EV Water Program Manager conducts E&SC training annually.
Target Audience	Employees
Targeted Pollutant(s) / Source(s)	Sediment, construction wastewater (e.g., concrete washout water, equipment cleaning), POLs
Implementation	PWD EV provides in-person E&SC-specific training annually to all PWD staff involved in maintaining compliance with this MCM including Seabee construction managers and environmental technicians. The training includes CGP requirements and instruction on reviewing site plans and conducting site inspections. Appendix F includes an educational poster developed to support construction site stormwater management training.
Measurable Goal(s)	Make E&SC training available annually to all staff involved in the construction stormwater program.
Recordkeeping	The Water Program Manager maintains an electronic record of training attendees with other SWMP records on the PWD network server.
Annual Reporting	The Annual Report will include the percentage of applicable personnel that completed the required E&SC training that year.
Schedule	All applicable personnel attend the E&SC training once each year of the five-year MS4 General Permit term.



## 7. MCM 5: POST-CONSTRUCTION STORMWATER MANAGEMENT

*Ref: MS4 General Permit, Part IV, Section D.5*

The overarching goal of permanent stormwater management is to minimize the impact of development on the local hydrology and ultimately the waters of the state. Development affects downstream runoff water quality by increasing the type and quantity of pollutants and increasing the volume and velocity of runoff.

Development projects generally result in increasing a site's impervious area through the construction of buildings, roadways, and parking areas. Also, as the site experiences a change in use, new pollutants are introduced (e.g., oil and grease in parking areas). As stormwater travels over impervious surfaces, it collects pollutants including, but not limited to, sediment, oil and grease, heavy metals, and nutrients (nitrogen and phosphorus). These pollutants can be transported downstream and deposited where they may have harmful effects on aquatic life or humans.

A further detrimental impact of increased site imperviousness through development is the increase in volume and velocity of stormwater. Development projects often reduce a site's natural ability to retain and infiltrate or evapotranspire precipitation. Post-construction conditions typically result in larger runoff volumes that concentrate faster than under predevelopment conditions. This can lead to downstream channel erosion, sedimentation, and flooding.

Many of these impacts can be effectively mitigated through implementation of this MCM that features riparian protection, low impact development (LID), and long-term maintenance of permanent stormwater control measures (SCMs) (e.g., infiltrations basins and bioretention systems).

The MS4 General Permit requires regulated entities to implement an enforceable program to address post-construction stormwater management for new development and



redevelopment projects that disturb one or more acres of land, or that disturb less than one acre of land but are part of a larger common plan of development that would disturb one or more acres. NASCC's program ensures that permanent SCMs are in place to prevent or minimize water quality impacts and must include the following components:

- Mechanism that provides legal authority to implement and enforce a program that addresses permanent stormwater pollutant management for new and redevelopment projects
- Development project plan review, approval, and enforcement
- Maintenance of permanent SCMs
- BMPs and measurable goals by which to evaluate those BMPs
- Schedule of BMP implementation for the five-year permit cycle
- Designation of persons responsible for implementation of BMPs

#### **7.1 ENERGY INDEPENDENCE AND SECURITY ACT SECTION 438**

NASCC must comply with the DoD Energy Independence and Security Act (EISA) Section 438, which states that, "any development or redevelopment project involving a federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow." Redevelopment projects with an existing footprint of 5,000 square feet or more that disturb less than 5,000 square feet of land area are not subject to Section 438 requirements.

Unified Facilities Criteria (UFC) 3-210-10 Low Impact Development provides technical criteria, requirements, and references for the planning and design of applicable DoD projects to comply with EISA Section 438 and the Deputy Under Secretary of Defense memorandum of 19 January 2010 that directs the use of LID techniques in implementing EISA Section 438.

Compliance with EISA Section 438, which is more restrictive than state and local stormwater regulations, constitutes compliance with MS4 General Permit, Part IV, Section D.5.(a) and Section D.5.(b)(1).



## **7.2 BEST MANAGEMENT PRACTICES**

NASCC implements the following two (2) Post-Construction Stormwater Management BMPs from the prescribed list in Table 11, Part IV, Section D.5 of the MS4 General Permit:

- PC-1: Post-Construction Stormwater Regulatory Mechanism
- PC-2: Long-Term Operation and Maintenance (O&M) of Structural Stormwater Controls



**Table 7-1 PC-1: Post-Construction Stormwater Regulatory Mechanism**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.5.(a) and D.5.(b)(1)</p> <p>Review and update the ordinance or other regulatory mechanism at least one time annually during the permit term to address changes and make improvements to the ordinance where applicable.</p> <p>Maintain records of 100% of enforcement actions taken each year. Make 100% of enforcement records available to TCEQ for review within 24 hours of request.</p>
Responsibility	PWD FEAD and NAVFAC Southeast are responsible for ensuring incorporation of EISA Section 438 stormwater requirements into federal projects over 5,000 square feet.
Target Audience	Employees, Contractors
Targeted Pollutant(s) / Source(s)	Sediment, POLs, metals, nutrients from post-development sites
Implementation	<p>PWD FEAD and NAVFAC Southeast require design and construction contractors to comply with EISA Section 438 and the technical criteria and requirements of UFC 3-210-10 Low Impact Development via standard installation specifications. The standards and requirements of EISA Section 438 and UFC 3-210-10 meet or exceed those of MCM 5 of the MS4 General Permit.</p> <p>PWD FEAD and NAVFAC Southeast review all applicable project submittals for compliance with these requirements and maintain the authority to approve or disapprove project advancement if requirements are not met.</p>
Measurable Goal(s)	The measurable goal for this BMP is to review all design submittals for construction projects at NASCC for compliance with EISA Section 438 and UFC 3-210-10.
Recordkeeping	<p>EISA Section 438 and the latest version of UFC 3-210-10 are available online.</p> <p>PWD FEAD maintains all records related to the implementation and enforcement of EISA Section 438 and related development requirements electronically with other SWMP records on the PWD network server.</p>
Annual Reporting	The Annual Report will include a list of active or recently completed construction projects subject to EISA Section 438 and UFC 3-210-10.
Schedule	The review and approval process conducted by PWD FEAD and NAVFAC Southeast for compliance with EISA Section 438 and UFC 3-210-10 is continuously implemented throughout the five-year MS4 General Permit term.



**Table 7-2 PC-2: Long-Term O&M of Structural Stormwater Controls**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.5.(b)(2)</p> <p>Maintain 100% of stormwater control measures each year where the MS4 is responsible for maintenance. Each year, require 100% of the owners and operators of any new development sites to develop and implement a maintenance plan addressing maintenance requirements for any structural control measures installed on site.</p> <p>Require the site owner or operators to maintain documentation onsite of 100% of maintenance performed and made available for review by the small MS4 operator or TCEQ within 24 hours of the request.</p>
Responsibility	<p>PWD is responsible for the O&amp;M of permanent SCMs at NASCC. PWD EV maintains a permanent SCM inventory and conducts annual inspections of the SCMs. PWD Facilities Management Division (FMD) is responsible for SCM maintenance and/or repairs.</p>
Target Audience	N/A
Targeted Pollutant(s) / Source(s)	Sediment, POLs, metals, nutrients from post-development sites
Implementation	<p>NASCC's permanent SCM O&amp;M program ensures long-term O&amp;M of the installation's permanent SCMs. The program includes an inventory and periodic inspections of all NASCC-owned SCMs (e.g., infiltration basins, bioretention systems). Appendix G to this SWMP contains the 2024 version of the permanent SCM inventory that includes the following elements:</p> <ul style="list-style-type: none"> <li>- SCM description</li> <li>- Latitude and longitude</li> <li>- Recommended maintenance and frequency</li> <li>- Map indicating SCM locations</li> </ul> <p>PWD EV conducts annual inspections of each permanent SCM. Inspections are documented on the Permanent SCM Inspection form included in Appendix G. Inspections are documented to include date, deficiencies, photographs, and corrective actions. Deficiencies are submitted to PWD FMD for correction either in-house or via contract.</p>
Measurable Goal(s)	Inspect each SCM annually and provide maintenance, as needed.
Recordkeeping	The PWD EV Water Program Manager maintains the SCM inventory and inspection / maintenance documentation electronically on the PWD network server.
Annual Reporting	The Annual Report shall include confirmation that annual inspections were conducted, and any required maintenance was completed or underway.
Schedule	Each permanent SCM is inspected at least once annually each year of the five-year MS4 General Permit term.



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## 8. MCM 6: POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

*Ref: MS4 General Permit, Part IV, Section D.6*

MCM 6 connects the existing requirements for industrial facilities (i.e., MSGP requirements) to similar municipal-type operations (e.g., fleet and facilities maintenance). This MCM specifically targets the operations of the NASCC PWD and installation facility services contractor. The goal of pollution prevention / good housekeeping is to reduce pollution from the following sources at NASCC:

- Facility maintenance shops and activities (including solid waste management)
- Fleet vehicle & equipment maintenance and storage
- Public works yards
- Fuel storage facilities
- Hazardous waste facilities
- Impervious surfaces (streets, parking lots, vehicle storage areas)
- Open spaces (athletic fields, golf course, parks)
- Recreational marina
- Poorly maintained stormwater controls

NASCC's pollution prevention / good housekeeping program includes the following components:

- Inventory and inspection of applicable facilities and SCMs
- Employee training on pollution prevention / good housekeeping
- Proper waste management
- Structural control maintenance
- BMPs and measurable goals by which to evaluate those BMPs
- Schedule of BMP implementation for the five-year permit cycle
- Designation of persons responsible for implementation of BMPs

### 8.1 MUNICIPAL-TYPE OPERATIONS INVENTORY

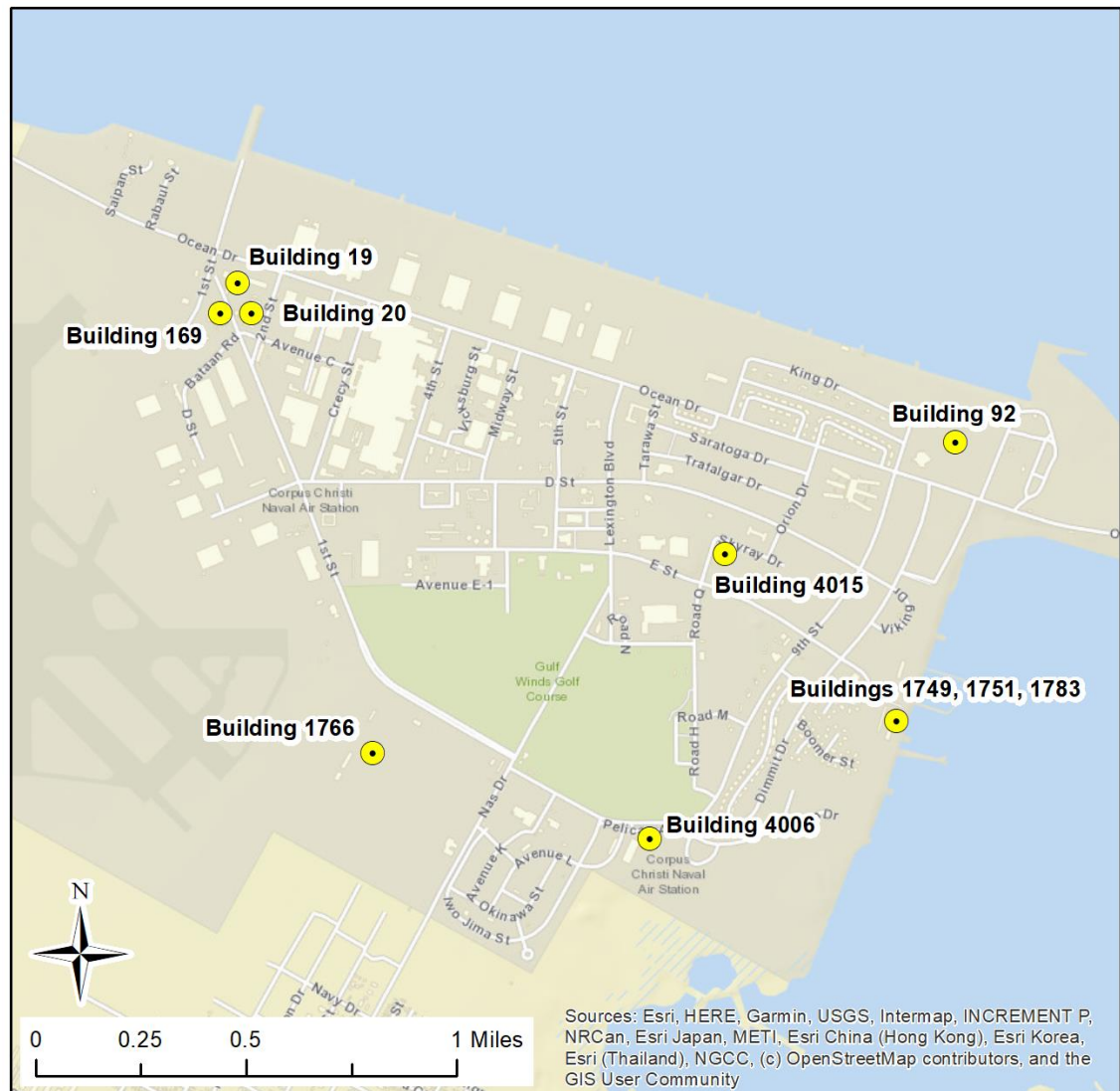
This MCM is targeted at municipal-type operations such as street/parking area maintenance, routine building maintenance, groundskeeping, routine vehicle and equipment



maintenance, outdoor storage, and solid waste management. While NASCC is not a municipality, PWD operations (and the operations of the facility services contractor) are subject to the BMPs included in this MCM. Table 8-1 constitutes NASCC's inventory of municipal-type operations that indicates the associated pollutants of concern. Figure 8-1 is a map indicating the locations of each of these operations.

**Table 8-1 Municipal-Type Operations Inventory**

Building No.	Facility Name / Description	Pollutants of Concern
19	Public Works Shops (A/C, Carpentry, Machining, Painting, Plumbing, Metalwork, )	Metals, POLs
20	Public Works Shops (Electrical, Transportation)	POLs, ethylene glycols
169	Public Works Vehicle Fueling Station	POLs
1766	Facility Services Contractor Yard	POLs (fuel station), wastewater (holding tank)
4006	MWR Golf Course Maintenance	Fertilizers, pesticides, POLs, grounds maintenance residuals, vehicle / equipment rinsate
4015	MWR Auto Hobby Shop	POLs, ethylene glycols
1749, 1751, 1783	MWR Marina	POLs, boat rinsate
92	MWR Pool	Corrosives



**Figure 8-1 Map of NASCC Municipal-Type Operations**

## **8.2 BEST MANAGEMENT PRACTICES**

NASCC implements the following eight (8) Pollution Prevention / Good Housekeeping BMPs to meet the requirements of Part IV, Section D.6 of the MS4 General Permit:

- PPGH-1: Municipal-Type Operations Inventory
- PPGH-2: Stormwater Pollution Prevention Training
- PPGH-3: Disposal of Waste Material



- PPGH-4: Contractor Requirements and Oversight
- PPGH-5: Assessment of Municipal-Type Operations
- PPGH-6: Pollution Prevention at Municipal-Type Operations
- PPGH-7: Municipal-Type Operations Inspections
- PPGH-8: Structural Control Maintenance

**Table 8-2 PPGH-1: Municipal-Type Operations Inventory**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.6.(b)(1) and D.6.(b)(5)b.</p> <p>Develop and maintain an annual inventory for 100% of the small MS4 owned and operated facilities and controls in the small MS4 area. Review and update the inventory at least one time annually to address changes or additions to the facilities and controls where applicable.</p> <p>Identify pollutants of concern that could be discharged from all the O&amp;M activities described in Part IV.D.6(b)(5)b and maintain a list of 100% of pollutants identified.</p> <p>Review and update the pollutants of concern list at least one time annually.</p>
Responsibility	The PWD EV Water Program Manager is responsible for maintaining the inventory.
Target Audience	Employees, Contractors
Targeted Pollutant(s) / Source(s)	Solid waste, landscaping residuals, illegal disposal of POLs, spills/leaks/drips from vehicle and equipment maintenance activities (e.g., repair, cleaning, fueling)
Implementation	<p>Refer to BMP PC-2 that includes an inventory of SCMs that are owned and maintained by NASCC as of the publication of this SWMP.</p> <p>Refer to Section 8.1 of this document for the inventory of NASCC facilities to which this MCM is applicable. Table 8-1 includes the pollutants of concern for each facility. The Water Program Manager verifies with FEAD and FMD that the inventory is current at least annually.</p>
Measurable Goal(s)	Inventory will be updated, as needed, every year.
Recordkeeping	The Water Program Manager will maintain the inventory of facilities electronically with other SWMP records on the PWD network server.
Annual Reporting	The Annual Report shall confirm that NASCC reviewed and updated the inventory, as needed.
Schedule	The inventory shall be reviewed and updated at least once each year of the five-year MS4 General Permit term.



**Table 8-3 PPGH-2: Stormwater Pollution Prevention Training**

Requirement	Information
BMP Requirement	MS4 General Permit, Part IV, Section D.6.(b)(2) Conduct a minimum of one training annually for 100% of the employees involved in implementing pollution prevention and good housekeeping practices.
Responsibility	The PWD EV Water Program Manager is responsible for the training content and maintaining documentation (or access to documentation) of employee training.
Target Audience	Employees, Contractors
Targeted Pollutant(s) / Source(s)	Solid waste, landscaping residuals, illegal disposal of POLs, spills/leaks/drips from vehicle and equipment maintenance activities (e.g., repair, cleaning, fueling)
Implementation	All NASCC PWD personnel and contractors are required to complete annual ECATTS training that covers stormwater pollution prevention at municipal-type operations. This competence-level training includes the following content: <ul style="list-style-type: none"> <li>– Summary of MS4 and MSGP</li> <li>– Prohibited and allowable non-stormwater discharges</li> <li>– Stormwater pollution prevention practices at industrial and municipal-type activities</li> <li>– Reporting of spill and other non-stormwater discharges</li> </ul> Refer to Appendix H for a copy of the training presentation included in ECATTS. Training is offered all year and can be completed online. The Water Program Manager includes reminders of this training requirement in various all-hands environmental emails distributed throughout the year.
Measurable Goal(s)	Make ECATTS training available throughout the year to all PWD personnel and facility services contractors.
Recordkeeping	The ECATTS training program tracks training completed by employees and contractors. The Water Program Manager may request such records at any time from the ECATTS administrator.
Annual Reporting	The Annual Report will include the percentage of PWD personnel and applicable contractors that have completed the annual ECATTS training.
Schedule	All PWD personnel and applicable contractors complete ECATTS training once each year of the five-year MS4 General Permit term.



**Table 8-4 PPGH-3: Disposal of Waste Material**

Requirement	Information
BMP Requirement	MS4 General Permit, Part IV, Section D.6.(b)(3) Ensure that 100% of waste from the MS4 is disposed of in accordance with 30 TAC Chapters 330 and 335.
Responsibility	PWD is responsible for providing municipal-like solid waste collection services at NASCC.
Target Audience	Residents, Employees, Contractors, Visitors
Targeted Pollutant(s) / Source(s)	Solid waste (litter elimination and trash containment)
Implementation	All solid waste is contracted for removal from NASCC in accordance with 30 TAC 330. The contract requires adherence to those requirements. Hazardous waste disposal is conducted in accordance with the NASCC HWMP, which complies with 30 TAC 335.
Measurable Goal(s)	All waste is disposed of in accordance with 30 TAC 330 and 335.
Recordkeeping	PWD maintains a copy of the contract covering solid waste collection as well as the results of periodic contractor performance assessments related to this contract. A copy of the HWMP and required documentation are also maintained. These records are maintained electronically on the PWD network server.
Annual Reporting	The Annual Report will include confirmation that NASCC complies with 30 TAC 330 and 335.
Schedule	Solid waste and hazardous waste management activities are ongoing each year of the five-year MS4 General Permit term.



**Table 8-5 PPGH-4: Contractor Requirements and Oversight**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.6.(b)(4)</p> <p>Each year, ensure 100% of contractor activities hired by the MS4 to perform maintenance activities of permittee-owned facilities is contractually required to comply with all stormwater control measures, good housekeeping practices, and facility specific stormwater management operating procedures.</p> <p>Provide oversight to 100% of contractor activities to ensure that contractors are using appropriate control measures and SOPs each year.</p> <p>Oversight procedures must be maintained onsite 100% of the time and made available for review by TCEQ within 24 hours of request.</p>
Responsibility	PWD FEAD contract managers oversee 100% of contractor activities.
Target Audience	Contractors
Targeted Pollutant(s) / Source(s)	Solid waste, landscaping residuals, illegal disposal of POLs, spills/leaks/drips from vehicle and equipment maintenance activities (e.g., repair, cleaning, fueling)
Implementation	NAVFAC contractor oversight processes are well-established, enterprise-wide processes. In general, all NAVFAC contracts (including those used by NASCC PWD for facilities maintenance) are assigned a performance assessment representative (PAR) whose job is to periodically verify contractual obligations. This typically involves both document review and onsite verification, as necessary.
Measurable Goal(s)	PWD contractor facilities maintenance activities adhere to all applicable stormwater pollution prevention requirements of the MS4 General Permit including, but not limited to training; maintenance of SCMs; records maintenance, and implementation of good housekeeping and activity-specific pollution prevention practices.
Recordkeeping	PWD maintains results of periodic contractor performance assessments electronically on the PWD network server.
Annual Reporting	The Annual Report will provide confirmation that NASCC complies with permit-required contractor oversight requirements.
Schedule	Contractor oversight activities are ongoing each year of the five-year MS4 General Permit term.



**Table 8-6 PPGH-5: Assessment of Municipal-Type Operations**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.6.(b)(5)a.</p> <p>Evaluate 100% of O&amp;M activities for their potential to discharge pollutants in stormwater annually including, but not limited to, the following:</p> <ul style="list-style-type: none"> <li>- Road and parking lot maintenance, including such areas as pothole repair, sealing, and re-paving</li> <li>- Bridge maintenance, including such areas as re-chipping, grinding, and saw cutting</li> <li>- Cold weather operations, including plowing, sanding, and application of deicing compounds and maintenance of snow disposal areas</li> <li>- Right of way maintenance, including mowing, herbicide and pesticide application, and planting vegetation</li> </ul>
Responsibility	PWD EV is responsible for reviewing all municipal-like O&M activities at NASCC to ensure minimization of stormwater pollution potential.
Target Audience	Employees, Contractors
Targeted Pollutant(s) / Source(s)	Solid waste, landscaping residuals, illegal disposal of POLs, spills/leaks/drips from vehicle and equipment maintenance activities (e.g., repair, cleaning, fueling)
Implementation	All municipal-like O&M activities are required to complete the NASCC NEPA process administered by PWD EV. The NEPA process includes a PER that identifies and applicable requirements for each O&M activity. The review covers the full range of potential environmental concerns including protection of stormwater quality through structural and procedural BMPs and E&SC.
Measurable Goal(s)	Evaluate all routine and emergent O&M activities annually for stormwater pollution potential.
Recordkeeping	PWD EV maintains NEPA records electronically on the PWD network server.
Annual Reporting	The Annual Report will include confirmation that PWD EV has assessed each applicable municipal-like O&M activity completed that year.
Schedule	Evaluations will occur prior to all emergent O&M activities and at least once annually for routine activities each year of the five-year MS4 General Permit term.



**Table 8-7 PPGH-6: Pollution Prevention at Municipal-Type Operations**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.6.(b)(5)c.</p> <p>Develop and implement a set of pollutant prevention measures that will reduce the discharge of pollutants in stormwater from permittee-owned operations.</p> <p>Implement the following pollution prevention measures:</p> <ul style="list-style-type: none"> <li>– Replace at least 50% of the MS4's materials and chemicals with more environmentally friendly materials or methods by the end of the permit term.</li> <li>– Place barriers around or conduct runoff away from 100% of deicing chemical storage areas to prevent discharge into surface water each year.</li> </ul>
Responsibility	<p>The PWD EV Water Program Manager is responsible for coordinating implementation of appropriate pollution prevention practices at all NASCC municipal-like operations.</p> <p>PWD EV is responsible for maintenance and implementation of the NASCC P2 Plan.</p>
Target Audience	Employees, Contractors
Targeted Pollutant(s) / Source(s)	Solid waste, landscaping residuals, illegal disposal of POLs, spills/leaks/drips from vehicle and equipment maintenance activities (e.g., repair, cleaning, fueling)
Implementation	<p>Refer to Appendix H for a pollution prevention SOP that is implemented at the PWD-operated facilities included in the inventory presented in Section 8.1 of this SWMP.</p> <p>PWD personnel and facility services contractors are trained in appropriate pollution prevention practices via BMP PPGH-2 and in accordance with other environmental programs (refer to Section 1.4 of this document), as applicable. These training programs were developed to ensure personnel understand what pollution prevention measures apply to various PWD and contractor operations and how those measures shall be implemented.</p> <p>The NASCC P2 Plan identifies activities and processes that generate or potentially generate pollutants, including hazardous and non-hazardous solid wastes. NASCC supports source reduction as the preferred alternative for preventing the release of pollutants to the environment and continually evaluates materials used for more environmentally friendly alternatives.</p>
Measurable Goal(s)	Reduce the discharge of pollutants from NASCC municipal-like operations to the MEP.
Recordkeeping	The Water Program Manager tracks the implementation of this BMP via the inspections conducted under BMP PPGH-7
Annual Reporting	Refer to Annual Reporting requirements of BMP PPGH-7.
Schedule	Implementation of the requirements of this BMP are continuous throughout each year of the five-year MS4 General Permit term.



**Table 8-8 PPGH-7: Municipal-Type Operation Inspections**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.6.(b)(5)c.</p> <p>At least one time annually, visually inspect 100% of pollution prevention measures implemented at permittee-owned facilities to ensure they are working properly.</p> <p>Develop and maintain written procedures that describe the frequency of inspections and how they will be conducted.</p> <p>Review and update the inspection procedures at least one time annually to address changes or additions to the pollution prevention measures.</p>
Responsibility	The PWD EV Water Program Manager conducts the annual inspections.
Target Audience	Employees, Contractors
Targeted Pollutant(s) / Source(s)	Solid waste, landscaping residuals, illegal disposal of POLs, spills/leaks/drips from vehicle and equipment maintenance activities (e.g., repair, cleaning, fueling)
Implementation	<p>The Water Programs Manager inspects each of the facilities identified in the inventory of municipal-like operations provided in Section 8.1 of this document. Inspections are documented on the PWD Maintenance Activities Pollution Prevention Inspection Form included in Appendix H. The inspection evaluates whether the pollution prevention measures associated with BMP PPGH-6 are properly implemented and effective, and focuses on common public works activities at NASCC such as waste collection and disposal, vehicle and equipment maintenance (e.g. repair, cleaning, fueling), painting, and grounds maintenance. Where deficiencies are noted on the inspection form, the inspector includes recommended corrective actions. When corrective actions are required, the Water Program Manager generates a work order to be completed by PWD FMD.</p>
Measurable Goal(s)	Inspect all municipal-type facilities included in the inventory (Section 8.1) at least annually.
Recordkeeping	The Water Program Manager maintains copies of completed inspection forms electronically with other SWMP records on the PWD network server.
Annual Reporting	The Annual Report includes the percentage of NASCC municipal-type operations inspected annually.
Schedule	Each facility identified in the inventory included in Section 8.1 of this document is inspected at least once per year each year of the five-year MS4 General Permit term.



**Table 8-9 PPGH-8: Structural Control Maintenance**

Requirement	Information
BMP Requirement	<p>MS4 General Permit, Part IV, Section D.6.(b)(6)</p> <p>At least once annually, perform maintenance of 100% of the structural controls that require maintenance. Maintenance must be consistent with the effectiveness of this BMP.</p> <p>The permittee shall develop and maintain written procedures that define the frequency of inspections and how they will be conducted. Review and update the maintenance procedures at least one time annually to address changes or additions to the pollution prevention measures.</p>
Responsibility	<p>PWD EV is responsible for the inspection of structural controls (i.e., oil/water separators [O/WSs]); maintenance indicated by the inspections is conducted by the facility services contractor. PWD is responsible for annual review of the effectiveness of the inspection and maintenance process.</p>
Target Audience	<p>Employees, Contractors</p>
Targeted Pollutant(s) / Source(s)	<p>POLs</p>
Implementation	<p>SCMs such as infiltration basins are covered under BMP PC-2. The only other prevalent form of structural control implemented at NASCC is O/WSs. All O/WSs at NASCC are inspected and pumped out (as necessary) on an annual basis. PWD EV maintains a complete inventory of O/WSs and provides inspections to identify issues with the devices (e.g., excess oil layer, excess settled sediment, inlet/outlet blockages). Work orders are generated to address identified deficiencies and maintenance is conducted by the PWD facility services contractor on an as-needed basis.</p> <p>Most O/WSs at NASCC are associated with industrial activities covered under the MSGP; however, this BMP applies to all O/WSs at NASCC.</p>
Measurable Goal(s)	<p>Inspect and maintain (as needed) annually all O/WSs. Inspection and maintenance process reviewed annually for effectiveness.</p>
Recordkeeping	<p>PWD EV maintains records of all O/WS inspection results and maintenance activities electronically on the PWD network server.</p>
Annual Reporting	<p>The Annual Report will include the percentage of O/WSs inspected, the percentage of O/WSs that required maintenance, and confirmation that required maintenance was performed.</p>
Schedule	<p>O/WS inspected at least once each year of the five-year MS4 General Permit term. Maintenance is conducted upon discovery of issues during the inspections.</p>



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## 9. PROGRAM ADMINISTRATION

The section describes how NASCC keeps its SWMP current and summarizes the annual reporting requirements of the MS4 General Permit.

### 9.1 PROGRAM ANNUAL REVIEW AND UPDATE

*Ref: MS4 General Permit, Part IV, Sections A and B*

Implementation of an effective SWMP is an ongoing, iterative process. This allows the program to adapt to emerging water quality challenges and evolve, as needed, if BMPs are not effective.

The MS4 General Permit requires NASCC to conduct an annual review of its SWMP. This annual review coincides with the preparation of the Annual Report that is submitted to TCEQ. The review is meant to evaluate the effectiveness of the BMPs included in this SWMP at meeting the stated measurable goals. Based on the annual review, NASCC determines whether update of its SWMP is necessary. Proposed updates are included in the Annual Report.

NASCC may update its SWMP as a result of its annual review or at any point during the permit cycle if it finds any aspects of its plan to be ineffective. However, elimination of an existing BMP is prohibited without prior written approval from TCEQ.

TCEQ may compel NASCC to update its SWMP, as needed, to satisfy MS4 General Permit requirements. In this case, NASCC has 90 days to update its SWMP.

### 9.2 CONTINUING COVERAGE UNDER MS4 GENERAL PERMIT

*Ref: MS4 General Permit, Part II, Section F*

NASCC's MS4 is currently covered by MS4 General Permit Authorization No. TXR040329. The permit was issued 24 January 2019 and expires 24 January 2024;



however, TCEQ administratively extended MS4 General Permit coverage beyond this expiration date until a new permit is issued. This SWMP was completed in anticipation of reissuance of and continued coverage under the MS4 General Permit for the next five-year permit term. Appendix A includes a blank version of the MS4 General Permit NOI.

To continue coverage, the NOI must be submitted electronically via the NeT-MS4 online e-permitting system available through the TCEQ website within 180 days of the effective date of the new permit. A copy of the submitted NOI form must be made readily available or be included in the SWMP. This SWMP must be posted to the NASCC Environmental Support website no later than 30 days after the installation provides its NOI.

### **9.3 ANNUAL REPORT**

*Ref: MS4 General Permit, Part V, Section B.2.*

PWD EV is responsible for completing the MS4 General Permit Annual Report and submitting it to TCEQ by 31 March of each year for the previous calendar year. PWD EV provides a copy of the Annual Report to the public via NASCC's Environmental Support website (refer to BMP PE-1). PWD EV provides public notice of the Annual Report via the social media platforms discussed in Section 3.2.

The following list summarizes MS4 General Permit-required components of the Annual Report that are applicable to NASCC's program:

- Assessment of BMP effectiveness and progress toward achieving the measurable goals for each of the MCMs
- Summary of results of various inspection activities (e.g., dry weather outfall inspection, construction site inspections, SCM inspections, municipal-type activity inspections.
- List of impaired waterbodies and the pollutant(s) causing the impairment, summary of BMPs implemented to address discharges to impaired waterbodies, and results of benchmark assessment activities
- Summary of planned stormwater activities for the next reporting year
- Proposed changes to the SWMP, including changes to any BMPs or any identified measurable goals



- Description and schedule for implementation of additional activities/BMP's that may be necessary, based on monitoring results, to ensure compliance with applicable TMDLs and implementation plans
- Number of construction activities including the total number of acres disturbed
- Certification by the NASCC Commanding Officer in accordance with 30 TAC 305.128

The Annual Report is made available on the NASCC Environmental Support website no later than 30 April (30 days after the report due date) of each year.

#### **9.4 ENFORCEMENT**

*Ref: MS4 General Permit, Part IV, Section C.6.*

The MS4 General Permit requires permittees to develop and implement an SOP to respond to instances of non-compliance with the MS4 General Permit and this SWMP. NASCC complies with this requirement through Environmental Management System (EMS) inspections and by providing documented notifications to offending entities.

Typically, when an issue is encountered, PWD EV will provide a verbal warning to the offending party either directly or through another PWD branch. In most cases, a verbal warning is sufficient to encourage compliance. When verbal warnings do not achieve compliance, written notifications (via email) are issued. If initial written notifications are unsuccessful at gaining compliance, additional notifications are issued with increasing degrees of visibility (i.e., notifications will be distributed higher up the applicable chain of command).

The most consequential enforcement action is issuance of a stop work order. PWD EV has the authority to issue an immediate stop work order for any activity on the installation, including construction activities.

As a military installation with tenant commands comprised of other federal entities, NASCC does not assess either civil or administrative penalties as a deterrent; however, PWD may require that offending entities pay for necessary clean-up measures resulting from failure to follow installation policies. An exception to this limitation can be made



when the offending party is a contractor (refer to Section 9.4.2 for more information on assessment of penalties against construction contractors).

#### **9.4.1 EMS Inspections**

PWD EV conducts environmental media inspections of each tenant command's facilities annually as part of its EMS program (internal audit). Inspections pertain to all environmental media including, but not limited to, stormwater, wastewater, drinking water, SPCC, solid waste, universal waste, hazardous waste, and air emissions. Tenant commands must develop a plan of action and milestones (POA&M) proposing corrective actions to address inspection findings. The EMS program and the results of EMS inspections are audited each year by the regional command, NAVFAC Southeast (external audit). Records from both the annual internal audit and external audit are maintained electronically on the Navy's EMS data repository, EMSweb.

#### **9.4.2 Construction-Specific Enforcement**

For construction projects, PWD EV enforces the requirements associated with MCM 4 (refer to Section 6.2). A stop work order may be issued to the construction contractor in response to violations of those requirements. Communication between PWD EV and the construction contractor shall go through PWD FEAD project manager; the PWD FEAD project manager holds the authority to direct contract work that may result in a cost change.



## 10. REFERENCES AND WORKS CONSULTED

AH Environmental Consultants, Inc. *Stormwater Pollution Prevention Plan, Naval Air Station Corpus Christi, Texas*. April 2022.

Bluestone CH2M. *Hazardous Waste Management Plan, Naval Air Station Corpus Christi, Texas*. December 2021.

Department of Defense. *Memorandum: DoD Implementation of Storm Water Requirements under Section 438 of the Energy Independence and Security Act*. 2010.

Department of Defense. *Unified Facilities Criteria 3-210-10 Low Impact Development*. Change 3, 1 March 2020.

Jacobs CH2M. *Spill Prevention, Control, and Countermeasure Plan, Naval Air Station Corpus Christi, Texas*. September 2021.

Naval Facilities Engineering Systems Command Southeast. *Stormwater Management Program, Naval Air Station Corpus Christi, Texas*. Revision, 21 May 2021.

Naval Facilities Engineering Systems Command Southeast. *Pollution Prevention Management Plan, Naval Air Station Corpus Christi, Texas*. 2024.

Texas Commission on Environmental Quality. *Total Maximum Daily Load for Bacteria in Oso Bay, Segment 2485*. Approved 6 June 2008.

Texas Commission on Environmental Quality. *Two Total Maximum Daily Loads for Indicator Bacteria at Corpus Christi Bay Beaches, Cole Park and Ropes Park, Segment 2481CB*. Approved 31 January 2022.



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# **APPENDIX A**

Notice of Intent to Obtain Coverage Under  
MS4 General Permit

(26 PAGES)



# Notice of Intent (NOI) for Small Municipal Separate Storm Sewer Systems (MS4) authorized under TPDES Phase II MS4 General Permit TXR040000

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## IMPORTANT:

Use the [INSTRUCTIONS](#) to fill out each question in this form.

Once approved, your permit authorization can be viewed at:

<http://www.tceq.texas.gov/goto/wq-dpa>

## APPLICATION FEE:

You must pay the **\$400** Application Fee to TCEQ for the application to be complete.

Payment and NOI must be mailed to separate addresses.

You can pay online at: <http://www.tceq.texas.gov/goto/epay>

Select Fee Type: GENERAL PERMIT MS4 PHASE II STORMWATER DISCHARGE NOI  
APPLICATION

## Provide your payment information below, for verification of payment:

Mailed      Check/Money Order Number:

Check/Money Order Amount:

Name Printed on Check:

EPAY      Voucher Number:

Is a copy of the Payment Voucher enclosed? ☐ Yes

**One (1) copy of the NOI, Stormwater Management Program (SWMP) cover sheet,  
and SWMP MUST be submitted with the original NOI, SWMP cover sheet, and  
SWMP.**

Is the copy attached? ☐ Yes

## REASON FOR APPLICATION:

Select the reason you are submitting this application:

☐ New authorization

☐ Renewal of authorization number: TXR04

**Note: An authorization cannot be renewed after July 23, 2019**

## **Section 1. OPERATOR (Applicant)**

- a) If the applicant is currently a customer with TCEQ, what is the Customer Number (CN) issued to this entity? CN
- b) What is the exact Legal Name of the entity (applicant) applying for this permit?
- c) Complete and attach a Core Data Form (TCEQ-10400) for this customer.

## **Section 2. ANNUAL BILLING CONTACT**

The operator is responsible for paying the annual water quality fee. The annual fee will be assessed to permits active on September 1 of each year. TCEQ will send a bill to the address provided in this section. The operator is responsible for terminating the permit when it is no longer needed.

Provide the name and contact information of the billing contact.

Prefix (Mr. or Ms.):

First and Last Name:

Title:

Organization Name:

Phone Number:

Fax Number:

Email:

Mailing Address:

City, State, and Zip Code:

## **Section 3. APPLICATION CONTACT**

This is the person TCEQ will contact if additional information is needed about this application.

Provide the name and contact information of the application contact.

Prefix (Mr. or Ms.):

First and Last Name:

Title:

Organization Name:

Phone Number:

Fax Number:

Email:

Mailing Address:

City, State, and Zip Code:

#### Section 4. REGULATED ENTITY (RE) INFORMATION FOR SITE

- a) If this is an existing permitted site, what is the Regulated Entity Number (RN) issued to this site? RN
- b) Name of site as known by the local community:
- c) Name of the urbanized area(s) the Phase II MS4 is located within:
- d) Provide a brief description of the regulated MS4 boundaries: *Example: Area within the City of XXXX limits that is located within the xxx urbanized area:*

#### Section 5. GENERAL CHARACTERISTICS

- a) Is this site located on Indian Country Lands?
- ☐ Yes, do not submit this form. You must obtain authorization through U.S. EPA Region 6.
- ☐ No, continue to item b
- b) Has TCEQ formally “designated” the small MS4 as needing coverage under this general permit?
- ☐ Yes. Attach a copy of the documentation sent to the MS4 by TCEQ.
- ☐ No
- c) Select the MS4 level, which is based on the population served within the urbanized area (UA) **based on the most recent Decennial Census at the time of issuance of the general permit.**
- ☐ **Level 1:** Traditional small MS4s with a population of less than 10,000.
- ☐ **Level 2:** Traditional small MS4s with a population of at least 10,000 but less than 40,000.
- Non-traditional MS4s: This level also includes all non-traditional small MS4s regardless of population unless the non-traditional MS4 can demonstrate that it meets the criteria for a waiver from permit coverage. *Examples of non- traditional small MS4s include counties, drainage districts, transportation entities, military bases, universities, colleges, correctional institutions, municipal utility districts, and other special districts.*
- ☐ **Level 3:** Traditional small MS4s with a population of at least 40,000 but less than 100,000.
- ☐ **Level 4:** Traditional small MS4s with a population of 100,000 or more.
- d) What is the estimated current population served by your MS4 (regulated area?)  
 People

e) Is the MS4 part of a coalition?

☐ Yes

☐ No

f) If yes, list the entity names of the coalition members responsible for implementation of the SWMP *and* their unique TXR04#### number.

- |    |                      |              |                      |
|----|----------------------|--------------|----------------------|
| 1. | <input type="text"/> | <u>TXR04</u> | <input type="text"/> |
| 2. | <input type="text"/> | <u>TXR04</u> | <input type="text"/> |
| 3. | <input type="text"/> | <u>TXR04</u> | <input type="text"/> |
| 4. | <input type="text"/> | <u>TXR04</u> | <input type="text"/> |
| 5. | <input type="text"/> | <u>TXR04</u> | <input type="text"/> |
| 6. | <input type="text"/> | <u>TXR04</u> | <input type="text"/> |

If needed, add a copy of this page to add more entities.

g) What is your annual reporting year?

☐ Calendar year

☐ Small MS4 General Permit year

☐ MS4 Fiscal year - What is the last month and day of the fiscal year?

h) Stormwater Management Program (SWMP)

1. I certify that the SWMP submitted with this NOI has been developed according to the provisions of the Small MS4 General Permit TXR040000. ☐ Yes

2. I certify that the SWMP Cover Sheet is completed and attached to the front of the SWMP. ☐ Yes

3. Have the program elements in the previous SWMP been re-assessed and modified and new program elements been developed and implemented, as necessary?

☐ Yes

☐ No. This facility did not have a previous authorization.

4. Is the optional 7<sup>th</sup> Minimum Control Measure (MCM) for Municipal Construction Activities selected and included with the attached SWMP?

☐ No. Continue to Question 5.

☐ Yes.

If yes, is MCM 7 limited to the regulated area within the urbanized area?

☐ Yes. Continue to Question 5.

☐ No

If No, then MCM 7 is included in the geographic area or boundary outside of the urbanized area. Note: In this case, you must incorporate the entire area (urbanized and non-urbanized areas) in the SWMP and implement all MCMs 1-

*7 in the urbanized and non-urbanized areas.*

5. Provide the name and contact information of the person responsible for implementing or coordinating implementation of the SWMP.

Prefix (Mr. or Ms.):

First and Last Name:

Title:

Organization Name:

Phone Number:

Fax Number:

Email:

Mailing Address:

City, State, and Zip Code:

i) Discharge Information

1. What is the name of the waterbody(ies) receiving stormwater discharges from the MS4?
2. What is the classified segment number(s) that the discharges will eventually reach?

Does the small MS4 discharge directly or indirectly into the classified segment(s)?

☐ Directly

☐ Indirectly

3. Are any of the waterbody(ies) receiving discharges from the small MS4 identified as impaired waters (Category 4 or 5) in the *Texas Integrated Report of Surface Water Quality*?

☐ Yes

What is the name of the impaired waterbody(ies) receiving the discharge from the small MS4?

What is/are the pollutants(s) of concern?

☐ No

4. Does the impaired water body(ies) have a TMDL (Category 4 waterbody)?

☐ Yes

What is/are the pollutants with a TMDL?

☐ No

5. Does your MS4 discharge into any other MS4 entity's jurisdiction prior to discharge into water in the state?

☐ Yes

What is the name of the MS4 operator?

☐ No

6. Edwards Aquifer Rule

Is the discharge or potential discharge within the Recharge Zone, Contributing Zone, within the Contributing Zone within the Transition Zone, or zero to ten (0 to 10) miles upstream of the Recharge Zone of the Edwards Aquifer?

☐ Yes - **NOTE: A copy of the agency approved Water Pollution Abatement Plan (WPAP) required by the Edwards Aquifer Rule (30 TAC Chapter 213) must be either included or referenced in the SWMP.**

☐ No

j) Public Participation Process

1. Provide the name and contact information of the person responsible for publishing notice of the executive director's preliminary determination on the MS4's NOI and SWMP?

Prefix (Mr. or Ms.):

First and Last Name:

Title:

Company:

Phone Number:

Fax Number:

Email:

Mailing Address:

Internal Routing (Mail Code, Etc.):

City, State, and Zip Code:

2. Provide the name and location of the public place where copies of the NOI, SWMP, Small MS4 General Permit TXR040000, and general permit fact sheet may be viewed and copied by the public?

Name of Public Place:

Address of Public Place:

County of Public Place:

3. Provide the address for the website where the MS4's SWMP and annual report will be posted.

☐ Do not have a website.

## Section 6. CERTIFICATION

I certify that I have obtained a copy and understand the terms and conditions of the Phase II (Small) MS4 General Permit TXR040000 issued January 24, 2019.

☐ Yes

I certify that the small MS4 qualifies for coverage under the Phase II (Small) MS4 General Permit TXR040000.

☐ Yes

I understand that a Notice of Termination (NOT) must be submitted when this authorization is no longer needed.

☐ Yes

I understand that authorizations active on September 1<sup>st</sup> of each year will be assessed an Annual Water Quality Fee.

☐ Yes

### Operator Certification

Operator Signatory Name: \_\_\_\_\_

Operator Signatory Title: \_\_\_\_\_

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that I am authorized under 30 Texas Administrative Code §305.44 to sign and submit this document, and can provide documentation in proof of such authorization upon request.

Signature (use blue ink): \_\_\_\_\_ Date: \_\_\_\_\_

# STORMWATER MANAGEMENT PROGRAM (SWMP) COVER SHEET

This cover sheet MUST be attached to the front of the SWMP.

## Operator

Operator name:

## Required Program Elements

The SWMP needs to include:

- BMPs and measurable goals that are clear, specific, and measurable,
- Annual Reporting Year selected, and
- Estimated population served by the MS4.

## Legal Authorities

Include in the SWMP the list of local legal authorities (i.e., ordinance, rule) that the MS4 has adopted to implement any of the MCMs. List all and what MCM they each cover.

## Minimum Control Measures

For each MCM, complete the table by entering the page number where the required element can be found in the SWMP

### MCM 1: Public Education, Outreach, and Involvement

Table 1: Required Elements for MCM 1

MCM 1 Required Elements	SWMP page number
SWMP includes a stormwater education and outreach program to educate public employees, business, and the general public about hazards associated with the illegal discharges and improper disposal of waste and about the impacts stormwater can have on water quality, and steps they can take to reduce pollutants in stormwater	
Clearly define the goals and objectives of the program based on high-priority community-wide issues	
Identify the target audiences	
Develop or use appropriate educational material	
Procedures to distribute educational material	
Make the educational material available to the target audience at least annually	

<b>MCM 1 Required Elements</b>	<b>SWMP page number</b>
Post the SWMP and annual reports on the MS4's website, if the MS4 has a website	
Include the MS4's website address where the SWMP and annual reports will be found, if the MS4 has a website	
SWMP includes a program that complies with state and local public notice requirements	
Include public input in the implementation of the program	
Include opportunities for citizen to participate in implementation of control measures	
Ensure the public can easily can find information about the SWMP.	
SWMP lists Best Management Practices (BMPs) used to fulfill this MCM. Examples of possible BMPs could be stream-clean-ups, storm drain stenciling, volunteer water quality monitoring, brochures, billboards, and websites.	
SWMP includes measurable goals that are clear, specific, and measurable, and the method of measurement, for addressing stormwater quality	
SWMP has been fully implemented, or includes a schedule of implementation not to exceed five (5) years from the general permit issuance date of January 24, 2019	

## **MCM 2: Illicit Discharge Detection and Elimination**

Table 2: Required Elements for MCM 2

<b>MCM 2 Required Elements</b>	<b>SWMP page number</b>
Description of the program that will be used to detect, investigate and eliminate illicit discharges. The program includes a plan to detect and address illicit discharges, including illegal dumping to the MS4 system.	
MS4 map: The map includes: <ul style="list-style-type: none"> <li>• Location of all small MS4 outfalls operated by the MS4 and that discharge into waters of the U.S.;</li> <li>• Location and name of all surface waters receiving discharge from the MS4s outfalls;</li> <li>• For Level 3 and 4 small MS4s: Location of MS4 owned or operated facilities and stormwater controls; and</li> <li>• For Level 4 small MS4s: Location of priority areas.</li> </ul>	
Methods for informing and training MS4 field staff	
Procedures for tracing the source of an illicit discharge	

<b>MCM 2 Required Elements</b>	<b>SWMP page number</b>
Procedures for removing the source of the illicit discharge	
Procedures to facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from the small MS4	
Procedures for responding to illicit discharges and spills	
Procedures for inspections in response to complaints	
<b>For Level 2, 3, and 4 small MS4:</b> Procedures to prevent and correct leaking on-site sewage disposal systems	
<b>For Level 3 and 4 small MS4s:</b> Procedures for follow-up investigation to verify that the illicit discharge has been eliminated	
<b>For Level 4 small MS4s:</b> Procedures for identifying and creating a list of priority areas within the small MS4s likely to have illicit discharges	
<b>For Level 4 small MS4s:</b> Procedures for a dry weather field screening program to assist in detecting and eliminating illicit discharges to the small MS4. Dry weather field screening consists of (1) field observations and (2) field screening.	
<b>For Level 4 small MS4s:</b> Procedures to reduce the discharge of floatables in the small MS4	
SWMP lists BMPs used to fulfill this MCM. Examples of possible BMPs could be hazardous materials disposal opportunities, inspections of the storm sewer system, and dye testing.	
SWMP includes measurable goals that are clear, specific, and measurable, and the method of measurement, for addressing stormwater quality	
SWMP has been fully implemented, or includes a schedule of implementation not to exceed five (5) years from the general permit issuance date of January 24, 2019	

### **MCM 3: Construction Site Stormwater Runoff Control**

Table 3: Required Elements for MCM 3

<b>MCM 3 Required Elements</b>	<b>SWMP page number</b>
Program requires operators of construction sites one acre and greater (including larger common plan) to select, install, implement, and maintain stormwater control measures	
Description of ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under state and local law	

MCM 3 Required Elements	SWMP page number
Program requires construction site operators to implement BMPs for erosion and sediment control	
Program requires construction site operators to have procedures for initiating and completing soil stabilization measures	
Program requires construction site operators to implement BMPs to control pollutants from equipment and vehicle washing and other wash waters	
Program requires construction site operators to implement BMPs to minimize exposure to stormwater of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials	
Program requires construction site operators to implement BMPs to minimize the discharge of pollutants from spills and leaks.	
Program ensures that the construction site has developed a stormwater pollution prevention plan in accordance with the TPDES Construction General Permit TXR150000	
Program prohibits illicit discharges such as wash out wastewater, fuels, oils, soaps, solvents, and dewatering activities	
Procedures for construction site plan review to consider water quality impacts	
Procedures for construction site inspections and enforcement of control measures, to the extent allowable under state and local law	
Procedures for receipt and consideration of information submitted by the public	
Procedures for MS4 staff training	
<b>For Level 3, and 4 small MS4s:</b> Procedures to develop and maintain an inventory of all permitted active public and private construction sites greater than one acre (and sites that are less than one acre if part of larger common plan of development or sale)	
SWMP lists BMPs used to fulfill this MCM. Examples may include: notification to discharger of responsibilities under TPDES CGP; hire staff to review construction site plans; provide a web page for public input on construction activities; perform site inspections and enforcement; provide education and training for construction site operators; and mechanism to prohibit discharges into MS4 where necessary.	
SWMP includes measurable goals that are clear, specific, and measurable, and the method of measurement, for addressing stormwater quality	

<b>MCM 3 Required Elements</b>	<b>SWMP page number</b>
SWMP has been fully implemented, or includes a schedule of implementation not to exceed five (5) years from the general permit issuance date of January 24, 2019	

#### **MCM 4: Post Construction Stormwater Management in New Development and Redevelopment**

Table 4: Required Elements for MCM 4

<b>MCM 4 Required Elements</b>	<b>SWMP page number</b>
Description of a program that will be developed, implemented and enforced, to control stormwater discharges from private and public new development and redeveloped sites that discharge into the small MS4 that disturb one acre or more (and sites that disturb less than one acre that are part of a larger common plan of development or sale)	
Description of ordinance or other regulatory mechanism that is in place or planned which will regulate discharges from new development and redevelopment projects	
Establish, implement, and enforce a requirement that owners or operators of new development and redeveloped sites design, install, implement, and maintain a combination of structural and non-structural BMPs appropriate for the community and that protects water quality	
Procedures to document and maintain records of enforcement actions	
Procedures to ensure long-term operation and maintenance of post construction stormwater control measures	
Operation and maintenance of post construction stormwater control measures is documented	
<b>For Level 4 small MS4s:</b> Develop and implement an inspection program to ensure that all post construction stormwater control measures are operating correctly and are being maintained. Inspections must be documented	
SWMP lists BMPs used to fulfill this MCM. Examples may include: local ordinance in place or planned; guidance document for developers to use; specific BMPs established for particular watersheds; list of appropriate BMPs provided to operators; elimination of curbs and gutters; incentives for use of permeable choices, such as porous pavement; requirements for wet ponds or other BMPs for certain size sites; and xeriscaping.	
SWMP includes measurable goals that are clear, specific, and measurable, and the method of measurement, for addressing stormwater quality	

<b>MCM 4 Required Elements</b>	<b>SWMP page number</b>
SWMP has been fully implemented, or includes a schedule of implementation not to exceed five (5) years from the general permit issuance date of January 24, 2019	

### **MCM 5: Pollution Prevention and Good Housekeeping for Municipal Operations**

Table 5: Required Elements for MCM 5

<b>MCM 5 Required Elements</b>	<b>SWMP page number</b>
Description of an operation and maintenance (O&M) program, including an employee training component, to reduce/prevent pollution from municipal activities and municipally owned areas included but not limited to park and open space maintenance; street, road, or highway maintenance; fleet and building maintenance; stormwater system maintenance; new construction and land disturbances; municipal parking lots; vehicle and equipment maintenance and storage yards; waste transfer stations; and salt/sand storage locations	
Develop and maintain an inventory of facilities and stormwater controls that are owned or operated by the MS4	
Procedures to inform or train staff involved in implementing pollution prevention and good housekeeping practices. Maintain training attendance records	
Procedures to remove and properly dispose of waste from the MS4	
Contractors hired by the MS4 must be required to comply with operating procedures. Develop contractor oversight procedures	
Evaluate O&M activities for their potential to discharge pollutants in stormwater for road and parking lot maintenance, bridge maintenance, cold weather operations, right-of-way maintenance, etc.	
Identify pollutants of concern that could be discharged from the O&M activities	
Develop and implement pollution prevention measures that will reduce discharge of pollutants from O&M activities	
Conduct inspections of pollution prevention measures and maintain inspection log	
Procedures for inspecting and maintaining structural controls	
<b>For Level 3 and 4 small MS4s:</b> Develop and implement an O&M program to reduce the collection of pollutants in catch basins and other surface structures in the storm sewer system	

MCM 5 Required Elements	SWMP page number
<b>For Level 3 and 4 small MS4s:</b> Develop a list of potential problem areas in the storm sewer system for increased inspection (for example, areas with recurring illegal dumping)	
<b>For Level 3 and 4 small MS4s:</b> Implement an O&M program to reduce discharge of pollutants from roads that includes at least a street sweeping and cleaning program, or inlet protection. The program includes an implementation schedule and a waste disposal procedure	
<b>For Level 3 and 4 small MS4s:</b> Assess its facilities for their potential to discharge pollutants into stormwater and identify high priority facilities that have a high potential to generate stormwater pollutants. At a minimum, facilities include the MS4s maintenance yards, hazardous waste facilities, fuel storage locations, and any other facilities at which chemicals or other materials have a high potential to be discharged in stormwater. Document the results of the assessments	
<b>For Level 3 and 4 small MS4s:</b> Develop facility specific stormwater management Standard Operation Procedures for high priority facilities	
<b>For Level 3 and 4 small MS4s:</b> MS4 implements stormwater controls at high priority facilities that address good housekeeping; de-icing and anti-icing storage; fueling operations and vehicle maintenance; equipment and vehicle washing	
<b>For Level 3 and 4 small MS4s:</b> Develop and implement an inspection program that includes high priority facilities	
<b>For Level 4 small MS4s:</b> Develop an application and management program for pesticides, herbicides, and fertilizers used at public open spaces. Implement the following: educational activities, permits, etc for applicators and distributors; encourage of non-chemical solutions for pest management; develop schedules that minimizes discharge of pollutants; ensure collection and proper disposal of unused pesticides, herbicides, and fertilizers	
<b>For Level 4 small MS4s:</b> Evaluate flood control projects. Design, construct, and maintain new flood control structures to provide erosion prevention and pollutant removal from stormwater. Retrofitting of existing structural flood control devices is implemented to the maximum extent practicable (MEP)	
SWMP lists BMPs used to fulfill this MCM. Examples may include: BMPs which address fleet vehicle maintenance/washing; BMPs which address parking lot and street cleaning; catch basin and storm drain system cleaning; landscaping and lawn care (e.g. xeriscaping); waste materials management; road salt application and storage practices; used oil recycling; pest management practices; fire training facilities; BMPs which address roadway and bridge maintenance; golf course maintenance/waste	

<b>MCM 5 Required Elements</b>	<b>SWMP page number</b>
disposal; disposal of cigarette butts; and park maintenance (e.g., providing trash bags).	
SWMP includes measurable goals that are clear, specific, and measurable, and the method of measurement, for addressing stormwater quality	
SWMP has been fully implemented, or includes a schedule of implementation not to exceed five (5) years from the general permit issuance date of January 24, 2019	

#### **MCM 6: Industrial Stormwater Sources**

Table 6: Required Elements for MCM 6

<b>MCM 6 Required Elements</b>	<b>SWMP page number</b>
<b>For Level 4 MS4 only:</b> Identify and control industrial stormwater sources that at least includes the MS4's landfills; other treatment, storage, or disposal facilities for municipal waste; hazardous waste treatment, storage, disposal and recovery facilities; and facilities that are subject to Emergency Planning and Community Right-to-Know Act (EPCRA).	
<b>For Level 4 MS4 only:</b> Procedures for inspecting and implementing control measures for discharges from industrial stormwater sources.	

#### **Optional MCM 7: Municipal Construction Activities**

This MCM is only applicable where the small MS4 has selected to be the construction site operator for their municipal construction activities. This MCM provides an alternative to the MS4 operator seeking discharge authorization under the Construction Stormwater General Permit TXR150000.

Table 7: Required Elements for MCM 7

<b>MCM 7 Required Elements</b>	<b>SWMP page number</b>
Description of how municipal construction activities will be conducted so as to take into consideration local conditions of weather, soils, and other site specific considerations	
Description of the area that this MCM will address and where the MS4 operator's municipal construction activities are covered (e.g. within the boundary of the urbanized area, the corporate boundary, a special district boundary, an extra territorial jurisdiction, or other similar jurisdictional boundary)	

<b>MCM 7 Required Elements</b>	<b>SWMP page number</b>
If the area included in this MCM includes areas outside of the UA, then all MCMs (MCM 1 through MCM 7) will be implemented over those additional areas as well	
Description of how contractor activities will be supervised or overseen to ensure that the Stormwater Pollution Prevention Plan (SWP3) requirements are properly implemented at the construction site(s); or how the MS4 operator will make certain that contractors have a separate authorization for stormwater discharges if needed	
General description of how a construction SWP3 will be developed for each municipal construction site	
Records of municipal construction activities authorized under this optional MCM	

# Texas Commission on Environmental Quality

## General Permit Payment Submittal Form

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Use this form to submit your Application Fee only if you are mailing your payment.

- Complete items 1 through 5 below.
- Staple your check in the space provided at the bottom of this document.
- Do not mail this form with your NOI form.
- Do not mail this form to the same address as your NOI.

### Mail this form and your check to:

#### *BY REGULAR U.S. MAIL*

Texas Commission on Environmental  
Quality  
Financial Administration Division  
Cashier's Office, MC-214  
P.O. Box 13088  
Austin, TX 78711-3088

#### *BY OVERNIGHT/EXPRESS MAIL*

Texas Commission on Environmental  
Quality  
Financial Administration Division  
Cashier's Office, MC-214  
12100 Park 35 Circle  
Austin, TX 78753

Fee Code: GPA

General Permit: TXR040000

1. Check / Money Order No:
2. Amount of Check/Money Order:
3. Date of Check or Money Order:
4. Name on Check or Money Order:
5. NOI INFORMATION

If the check is for more than one NOI, list each Project/Site (RE) Name and Physical Address exactly as provided on the NOI. DO NOT SUBMIT A COPY OF THE NOI WITH THIS FORM AS IT COULD CAUSE DUPLICATE PERMIT ENTRIES.

If more space is needed, you may attach a list.

Project/Site (RE) Name:

Project/Site (RE) Physical Address:

Staple Check in This Space

# **Instructions for Notice of Intent (NOI) for Small Municipal Separate Storm Sewer Systems (MS4) authorized under TPDES Phase II MS4 General Permit TXR040000**

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## **GENERAL INFORMATION**

### **Where to Send the Notice of Intent (NOI)**

**You are required to submit the original and one copy of the NOI, Core Data Form(s), Stormwater Management Program (SWMP) Cover Sheet, and the SWMP.** Submit these documents to one of the following addresses:

#### **BY REGULAR U.S. MAIL:**

Texas Commission on Environmental  
Quality  
ARP Team (MC-148)  
P.O. Box 13087  
Austin, Texas 78711-3087

#### **BY OVERNIGHT/EXPRESS MAIL:**

Texas Commission on Environmental  
Quality  
ARP Team (MC-148)  
12100 Park 35 Circle  
Austin, TX 78753

### **Fees Associated with this General Permit**

The application fee of \$400 is required to be paid at the time the NOI is submitted. Failure to submit payment at the time the application is filed will cause delays in acknowledgment or denial of coverage under the general permit. Payment of the fee may be made by check or money order, payable to TCEQ, or through EPAY (electronic payment through the web).

#### **Mailed Payments:**

Use the attached General Permit Payment Submittal Form. The application fee is submitted to a different address than the NOI. Read the General Permit Payment Submittal Form for further instructions.

### **Where to Send the Payment**

#### **BY REGULAR U.S. MAIL:**

Texas Commission on Environmental  
Quality  
Financial Administration Division  
Cashier's Office, MC 214  
P.O. Box 13088  
Austin, Texas 78711-3087

#### **BY OVERNIGHT/EXPRESS MAIL:**

Texas Commission on Environmental  
Quality  
Financial Administration Division  
Cashier's Office, MC 214  
12100 Park 35 Circle  
Austin, TX 78753

**ePAY Electronic Payment:** <http://www.tceq.texas.gov/epay>

When making the payment you must select Water Quality, and then select the fee category "General Permit MS4 Phase II Stormwater Discharge NOI Application". You must include a copy of the payment voucher with your NOI. Your NOI will not be considered complete without the payment voucher.

## Annual Water Quality Fee

This fee is assessed to permittees with an active authorization under the general permit on September 1 of each year. The designated billing contact will receive an invoice for payment of the annual fee in November of each year. The payment will be due 30 days from the invoice.

A 5% penalty will be assessed if the payment is not received by TCEQ by the due date. Annual fee assessments cannot be waived as long as the authorization under the general permit is active on September 1.

It is important for the permittees to submit an NOT when coverage under the general permit is no longer required. An NOT is effective on the postmarked date of mailing the form to TCEQ. If the NOT is mailed it is recommended that the NOT be mailed using a method that documents the date mailed and received by TCEQ.

### Mailed Payments:

You must return your payment with the billing coupon provided with the billing statement.

ePAY Electronic Payment: <http://www.tceq.texas.gov/epay>

You must enter your account number provided at the top portion of your billing statement. Payment methods include American Express, MasterCard, Visa, and electronic check payment (ACH).

## TCEQ Contact List

Small Business & Local Government Assistance	800-447-2827
Application – status and form questions:	512-239-4671
Technical questions:	512-239-4671
Environmental Law Division:	512-239-0600
Records Management - obtain copies of forms:	512-239-0900
Reports from databases (as available):	512-239-DATA (3282)
Cashier's office:	512-239-0357 or 512-239-0187

## Notice of Intent Process

When your Core Data Form, NOI, and SWMP are received by the program, the form will be processed as follows:

**Administrative Review:** Each item on the form will be reviewed for a complete response. In addition, the operator's legal name must be verified with Texas Secretary of State as valid and active (if applicable). The address(s) on the form must be verified with the US Postal service as receiving regular mail delivery. Do not give an overnight/express mailing address.

**Notice of Deficiency:** If an item is incomplete or not verifiable as indicated above, a notice of deficiency (NOD) will be mailed to the operator. The operator will have 30 days to respond to the NOD. The response will be reviewed for completeness.

**Technical Review of SWMP:** The NOI and SWMP will be reviewed to verify compliance with the requirements in the general permit. More information may

be requested by phone or technical NOD letter mailed to the SWMP contact. When a determination is made that the SWMP meets the requirements of the general permit, the Executive Director's preliminary determination will be prepared and filed with the TCEQ Office of Chief Clerk (OCC).

**Public Participation Process:** The OCC will mail the Executive Director's preliminary determination to the public participation contact provided in the NOI. This individual must publish the notice in the newspaper of largest circulation in the county where the small MS4 is located.

The comment period begins on the first date the notice is published and ends 30 days later, unless a public meeting is held. If a public meeting is held, the comment period will end at the closing of the public meeting.

The applicant must submit a copy of the newspaper clipping and an affidavit signed by the newspaper staff to the OCC within 60 days of receiving the written instructions from the OCC.

If significant public interest exists, the executive director will direct the applicant to publish notice of the meeting and to hold the public meeting. The applicant must publish the notice of public meeting at least 30 days prior to the public meeting and hold the meeting in the county where the MS4 is located.

**Acknowledgment of Coverage:** An Acknowledgment Certificate will be mailed to the operator. This certificate acknowledges coverage under the general permit.

or

**Denial of Coverage:** Coverage may be denied if the operator fails to respond to the NOD, the response is inadequate, or the NOI and SWMP do not meet the requirements of the general permit. If coverage is denied, the operator will be notified.

## General Permit

Coverage under the general permit begins upon approval of the NOI, Core Data Form, and SWMP by TCEQ and after the public notice process has been completed. You should have a copy of your general permit when submitting your application. You may view and print your permit for which you are seeking coverage, at the following website <http://www.tceq.texas.gov>. Search using keyword TXR040000.

## General Permit Forms

The Notice of Intent (NOI), Notice of Termination (NOT), Notice of Change (NOC) and Core Data Form (including instructions) are available at the TCEQ web site <http://www.tceq.texas.gov>.

## Change in Operator

An authorization under the general permit is not transferable. If the operator changes, the present permittee must submit a Notice of Termination (NOT) and the new operator must submit a Notice of Intent and a Core Data Form. The NOT, NOI and Core Data Form must be submitted no later than 10 days prior to the change in status.

## INSTRUCTIONS FOR FILLING OUT THE FORM

**Renewal of General Permit:** Dischargers holding an active authorizations under the expired General Permit are required to submit a NOI to continue coverage. The existing authorization number is required. If the authorization number is not provided or has been terminated, expired, or denied a new permit number will be issued.

This number will begin with TXR04. Do not use TXR040000, it is *the general permit* number *not your* authorization number.

### Section 1. Operator (Applicant)

**a) Customer Number (CN)**

TCEQ assigns each customer a number that begins with CN, followed by nine digits. This is not a permit number, registration number, or license number. If the applicant is an existing TCEQ customer, the Customer Number is available at the following website: <http://www15.tceq.texas.gov/crpub/>. If the applicant is not an existing TCEQ customer, leave the space for CN blank.

**b) Legal Name of Applicant**

Provide the current legal name of the applicant. The name must be provided exactly as filed with the Texas Secretary of State, or on the legal documents forming the entity as filed with the county. If filed in the county, provide a copy of the legal documents showing the legal name.

**c) Core Data Form**

Complete and attach a Core Data Form (TCEQ-10400) for each customer.

### Section 2. Annual Billing Contact

An annual fee is assessed to each operator holding an active authorization under the general permit on September 1 of each year.

Provide the contact name and complete mailing address where the annual fee invoice should be mailed. Verify the address with the USPS. It must be an address for delivery of regular mail, not overnight express mail.

The phone number should provide contact to the individual responsible for paying the annual fee.

The fax number and e-mail address are optional and should correspond to the individual responsible for paying the annual fee.

### Section 3. Application Contact

Provide the name, title and contact information of the person that TCEQ can contact for additional information regarding this application. This contact may be a consultant or entity other than the applicant.

### Section 4. Regulated Entity (RE) Information For Site

**a) Regulated Entity Reference Number (RN)**

The RN is issued by TCEQ to sites where an activity is regulated by TCEQ. This is not a permit number, registration number, or license number. Search TCEQ's Central Registry to see if the site has an assigned RN at

<http://www15.tceq.texas.gov/crpub/>. If this regulated entity has not been assigned an RN, leave this space blank.

**b) Name of the Project or Site**

Provide the name of the site or project as known by the public in the area where the site is located. The name you provide on this application will be used in the TCEQ Central Registry as the Regulated Entity name.

**c) Name of Urbanized Area**

List the formal name of the urbanized area(s) where the MS4 is located using the 2010 U.S. Census maps referenced in Section 5. c) below. For example: Dallas-Fort Worth-Arlington Urbanized area.

**d) Describe the boundaries of the regulated portion of the small MS4**

Briefly describe the boundaries of the regulated portion of the small MS4.

### **Section 5. General Characteristics**

**a) Indian Country Lands**

If your site is located on Indian Country Lands, the TCEQ does not have authority to process your application. Do not submit this application form to TCEQ. You must obtain authorization through EPA, Region 6, in Dallas.

**b) TCEQ “Designated” Small MS4**

A small MS4 that is outside of an urbanized area that is formally “designated” by TCEQ is eligible for coverage under this general permit. The small MS4 Operator must obtain authorization under this general permit or apply for coverage under an individual TPDES stormwater permit within 180 days of notification of their designation. If the small MS4 was already designated, please attach a copy of the documentation sent to the MS4 by TCEQ.

**c) MS4 Level**

The general permit defines MS4s by four different levels, based on the population served within the 2010 U.S. Census urbanized area (UA). “Population served” means the residential population within the regulated portion of the small MS4 based on the 2010 U.S. Census, except for non-traditional small MS4s that are classified as Level 2.

A reference map identifying the 2010 U.S. Census UAs can be found at [www.epa.gov/npdes/urbanized-area-maps-npdes-ms4-phase-ii-stormwater-permits](http://www.epa.gov/npdes/urbanized-area-maps-npdes-ms4-phase-ii-stormwater-permits).

Districts that did not have a population during the 2010 U.S. Census, are required to apply when their population exceeds the population threshold for permit coverage.

**d) Estimated Population**

List the current estimated population served by the MS4. This number will not be used to determine the Levels.

**e) Coalitions of MS4 entities**

Indicate if the MS4 is part of a coalition that share efforts in meeting any or all of the SWMP requirements.

**f) Members of the Coalition**

List the name of each member of the coalition *and* their unique Phase II MS4 authorization number.

**g) Annual Reporting Year**

The annual report must address the previous reporting year. The selected reporting year cannot be changed during the permit term.

- If the MS4 selects the calendar year, then the reporting year is from January 1 through December 31 of each year.
- If the MS4 selects the Phase II MS4 General Permit year, the reporting year is from the effective date of the general permit plus 365 days of each year.
- If the MS4 selects the fiscal year, the reporting year is from the first day of the MS4's fiscal year through the last day of the MS4's fiscal year. Provide the month and last day of the MS4's fiscal year.

**h) SWMP**

1. Certify, by selecting Yes, that the SWMP has been developed in accordance with the general permit requirements and is attached to this NOI.
2. Certify, by selecting Yes, that the SWMP Cover Sheet has been completed and is attached to the front of the SWMP.
3. If the MS4 was previously authorized under the general permit, the program elements in the previous SWMP must be re-assessed and modified. Additionally, new program elements must be developed. Do not submit the exact same SWMP that was previously submitted. Indicate that you have revised the previous SWMP, or that this is a newly regulated MS4.
4. Indicate if the MS4 is seeking coverage under this general permit for the optional MCM 7 for municipal construction activities where the MS4 meets the definition of "construction site operator".

If Yes, the SWMP must include the geographic area or boundary where MCM 7 will be implemented. If this area extends beyond the geographic area or boundary of the urbanized area, then all MCMs 1-7 must be implemented in the urbanized and non-urbanized areas. The MS4 operator can utilize MCM 7 only in areas that are in compliance with the SWMP's MCMs 1-7. If you do **NOT** incorporate the entire SWMP (MCMs 1-7) in the urbanized and the non-urbanized areas, then the MS4 cannot utilize only MCM 7 outside of the urbanized area.

If No, the MS4 can obtain this coverage at any time during the general permit term by submitting a Notice of Change.

5. Provide the name and contact information of the designated person responsible for implementing or coordinating implementation of the SWMP.

**i) Discharge Information**

1. Provide the name of all waterbodies that receive discharges from the MS4. The discharge eventually reaches a receiving waterbody such as a local stream or lake, possibly via a drainage ditch or even through another MS4 prior to reaching the waterbody. Please note that this general permit does not grant permission to use another MS4 as a conveyance of stormwater and certain non-storm water discharges along the discharge route.
2. Identify the classified segment number(s) that will eventually receive the

discharge. You can find classified segment numbers in the Atlas of Texas Surface Waters at: [www.tceq.texas.gov/publications/gi/gi-316](http://www.tceq.texas.gov/publications/gi/gi-316) or the Surface Water Quality (Segments) Viewer at: <https://www.tceq.texas.gov/gis/segments-viewer>

Indicate if the discharge is directly into the classified segment or if it reaches the classified segment after being discharged into another waterbody or MS4.

3. Indicate if any waterbodies receiving discharges are identified as impaired waters (Category 4 or 5) in the *Texas Integrated Report of Surface Water Quality*, which is available at: [http://www.tceq.texas.gov/waterquality/assessment/305\\_303.html](http://www.tceq.texas.gov/waterquality/assessment/305_303.html).  
If Yes, provide the name(s) of the impaired waterbodies and the pollutants of concern for those waterbodies. The pollutants of concern are the parameters for which the waterbody is impaired.
4. Indicate if the impaired waterbody has a TMDL and list the pollutants with a TMDL (Category 4 waterbody).
5. Indicate if the discharge is into any other MS4 entity's jurisdiction prior to reaching water in the state.  
If Yes, provide the name of the MS4 operator that receives the discharge.

#### **6. Edwards Aquifer Rule**

Indicate if the discharge or potential discharge is within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer. See maps on the TCEQ website to determine if the site is located within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer at <https://www.tceq.texas.gov/permitting/eapp/viewer.html>.

If Yes, additional requirements may exist under the Edwards Aquifer Protection Program (30 TAC Chapter 213). For activities regulated under 30 TAC Chapter 213, any required plans must be included in the SWMP. Compliance with any Edwards Aquifer requirements is in addition to the requirements of this general permit.

#### **j) Public Participation**

1. Provide the name and contact information of the person responsible for publishing the public notice in the newspaper.
2. Provide the name and location of a public place where copies of the NOI, SWMP, General Permit, and permit fact sheet will be available to the public for viewing. Examples of public places include public libraries, city hall, municipal buildings, etc.
3. Provide the address for the website where the MS4's SWMP and annual report will be posted. Indicate if the MS4 does not have a website.

### **Section 6. Certifications**

Failure to indicate "Yes" to ALL of the certification items may result in denial of coverage under the general permit. The certification must bear an original signature of a person meeting the signatory requirements specified under 30 Texas Administrative Code §305.44.

**IF YOU ARE A CORPORATION:**

The regulation that controls who may sign an application form is 30 Texas Administrative Code §305.44(a), which is provided below. According to this code provision, any corporate representative may sign an NOI or similar form so long as the authority to sign such a document has been delegated to that person in accordance with corporate procedures. By signing the NOI or similar form, you are certifying that such authority has been delegated to you. The TCEQ may request documentation evidencing such authority.

**IF YOU ARE A MUNICIPALITY OR OTHER GOVERNMENT ENTITY:**

The regulation that controls who may sign an NOI or similar form is 30 Texas Administrative Code §305.44(a), which is provided below. According to this code provision, only a ranking elected official or principal executive officer may sign an NOI or similar form. Persons such as the City Mayor or County Commissioner will be considered ranking elected officials. In order to identify the principal executive officer of your government entity, it may be beneficial to consult your city charter, county or city ordinances, or the Texas statutes under which your government entity was formed. An NOI or similar document that is signed by a government official who is not a ranking elected official or principal executive officer does not conform to §305.44(a) (3). The signatory requirement may not be delegated to a government representative other than those identified in the regulation. By signing the NOI or similar form, you are certifying that you are either a ranking elected official or principal executive officer as required by the administrative code. Documentation demonstrating your position as a ranking elected official or principal executive officer may be requested by the TCEQ.

If you have any questions or need additional information concerning the signatory requirements discussed above, please contact the Texas Commission on Environmental Quality's Environmental Law Division at 512-239-0600.

**30 TEXAS ADMINISTRATIVE CODE §305.44. SIGNATORIES TO APPLICATIONS**

(a) All applications shall be signed as follows.

(1) For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

(2) For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this paragraph, a principal executive officer of a federal agency includes

the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator of the EPA).

### **SWMP Cover Sheet**

The SWMP cover sheet must be completed and placed on the front of the SWMP. Both the SWMP cover sheet and the SWMP must be submitted with the complete NOI.

Provide the name of the MS4 operator.

For each MCM, complete the table by entering the page number (or page number range) where each required program element can be found in the SWMP.

Note: Some program elements are only required for certain MS4 levels. The tables clearly identify these MS4 level specific requirements. If one of these program element does not apply to the MS4 level for this facility, enter NA. Additionally, MCM 7 is optional. If you selected “No” on the NOI Section 5.e.4 question, enter NA on Table 7.

## **APPENDIX B**

Memorandum: SWMP Update Site Visit  
Summary

(13 PAGES)

## MEMORANDUM

**To:** Steve McMahon, Naval Facilities Engineering Systems Command (NAVFAC) Southeast  
Jay Halepeska, Naval Air Station Corpus Christi (NASCC)

**From:** AH Environmental Consultants, Inc. (AH)

**Subject:** Contract No. N69450-20-D-0031; Delivery Order No. N6945024F0166  
Stormwater Management Plan (SWMP) Update Site Visit Summary

**Date:** 3 June 2024

### 1. Background

AH was contracted by NAVFAC Southeast to update NASCC's existing SWMP to comply with the Texas Small Municipal Separate Storm Sewer System (MS4) General Permit (TX0400000). Under the current General Permit, MS4s were required to develop and implement best management practices (BMPs) to fulfill the permit's six (6) minimum control measures (MCMs) aimed at protecting stormwater quality. For some MCMs, permittees were allowed to develop and implement BMPs that best fit their systems. This changes under the new General Permit (currently in draft form and set to renew in August 2024), where specific BMPs are prescribed, with no apparent option for creating alternate, system specific BMPs. For some MCMs, permittees may choose a certain number of listed BMPs to implement, and for other MCMs, all listed BMPs must be implemented. The requirements vary based upon the MS4 level – NASCC is a Level 2b system.

AH reviewed the existing SWMP and compared it to the draft General Permit. AH also met onsite (30 April to 2 May 2024) with NASCC personnel responsible for the installation's MS4 program. Some current BMPs meet the new requirements proposed in the draft; however, modified or new BMPs will need to be established, too. This memorandum breaks down the new requirements by MCM and lists the BMPs associated with each including recommendations for the most suitable options at NASCC (where there are options). BMP recommendations prioritized continuation of current, effective BMPs and overall ease of implementation. Once NASCC verifies its intended approach to meet the new requirements, AH will use this memorandum as the basis for updates to the SWMP.

### 2. Summary of Findings and Recommendations

#### MCM 1: Public Education and Outreach

NASCC's existing Public Education and Outreach program is defined in the existing SWMP. For the new permit, the Texas Commission on Environmental Quality (TCEQ) defined the intended audience for military bases as "military personnel (and dependents), and employees (including contractors)." Part IV.D.1(a)(2) identifies target pollutants and states "Each small MS4 shall have

a minimum of one target pollutant for each target audience.” As a Level 2b system, NASCC must implement a minimum of four of the MCM 1 BMPs prescribed in Table 4 of the draft General Permit. The following table summarizes these BMPs and indicates those which are most appropriate for implementation at NASCC.

**Table 1 BMPs for MCM 1: Public Education and Outreach**

<b>BMP</b>	<b>Measurable Goal from TCEQ</b>	<b>NASCC Activity</b>
<b>1A: Information on the MS4 operator’s website</b>	Maintain a webpage with current and accurate information and working links. <ul style="list-style-type: none"> <li>• All links shall be checked, and the page shall be updated at least once annually.</li> <li>• Must be maintained for the full year, each year.</li> </ul>	NASCC staff indicate that they can put the SWMP and annual reports on their website.
<b>1B: Social media posts, social media campaign</b>	Post at least four times each year on one social media platform. <ul style="list-style-type: none"> <li>• The message shall address ways attendees can minimize or avoid adverse stormwater impacts or practices to improve the quality of stormwater runoff.</li> <li>• The messages shall be seasonally appropriate.</li> <li>• Must make a minimum of one post per quarter and all quarterly posts must be visible by attendees for the full year, every year.</li> </ul>	Refer to previous SWMP BMP PE-2.  NASCC staff currently post on Facebook two to three times per year. This will need to be increased to quarterly publication and cover the same target pollutant per year. Since Facebook posts are not deleted, they meet the last bulleted requirement.
<b>1C: Mark or maintain storm drains and inlets with, “No Dumping – Drains to Creek” or similar message.</b>	Placard, stencil, or paint a minimum of 10% of all known stormwater inlets in the MS4 area each year. <ul style="list-style-type: none"> <li>• Where all known stormwater inlets have been marked, inspect and maintain the markers for a minimum of 15% of all known stormwater inlets in the MS4 area each year.</li> </ul>	Refer to previous SWMP BMP PE-3.  All outfalls are marked. Most but not all inlets are marked. The BMP for this will include marking the remaining inlets and maintaining the existing inlet placards.
<b>Media/advertising campaign/public service announcements (PSAs)</b>	Develop topics that address activities or pollutants of concern.  Advertisement must be active for a minimum of three weeks each year; or must have an estimated public exposure for the duration of the advertising campaign that is equal to twice the population of the small MS4 area.	Not recommended.
<b>Publish articles in local newspaper or newsletter</b>	Develop article topics that are group specific and address activities or pollutants of concern at a seasonally appropriate time.  A minimum of two articles must be published or emailed to target audience groups each year.	Not recommended. Historically, NASCC has maintained such a publication; however, this publication is no longer active.
<b>1D: Fact sheets/brochures/ utility bill inserts/ door hangers</b>	Develop material topics that are group specific and address activities of pollutants of concern.  The number of fact sheets, brochures, bill inserts, door hangers, or handouts distributed each year shall at a minimum be enough to reach at least 75% of the intended audience.	Refer to previous SWMP BMP PE-1.  NASCC currently sends flyers to the residential population of the base. This will need to be expanded; staff indicate an all-hands email can be distributed to meet this BMP.

**Table 1 BMPs for MCM 1: Public Education and Outreach, continued**

<b>BMP</b>	<b>Measurable Goal from TCEQ</b>	<b>NASCC Activity</b>
<b>1E: Permanent stormwater signage</b>	Place signage in a location where the message is relevant, and highly visible to the target audience.  Signage will count as an annual BMP for the year it was put in place and for each subsequent year of this permit cycle as long as each of those years, the permittee inspects and maintains, as necessary, 100% of the signage once annually.	NASCC plans to install kiosks for shoreline clean-up. Signage for those kiosks will meet this criterion provided the signage includes relevant educational stormwater information.
<b>Promote, host, or develop educational meetings, seminars, or training.</b>	<ul style="list-style-type: none"> <li>• Hold, host, or promote a minimum of two events annually.</li> <li>• The events shall address ways attendees can minimize or avoid adverse impacts to stormwater or practices to improve the quality of stormwater runoff.</li> <li>• These events may address different pollutants and audiences.</li> </ul>	Not recommended.
<b>Targeted education campaign via mail, email, or in person.</b>	<ul style="list-style-type: none"> <li>• Minimum of one campaign annually or with a specific event to each at least 75% of the intended audience.</li> </ul>	Not recommended.

#### MCM 2: Public Involvement/Participation

The Public Involvement/Participation MCM was developed to encourage participation of the public in stormwater management and pollution reduction. Under the previous SWMP, Public Involvement/Participation activities were listed as Public Education and Outreach BMPs. NASCC must implement a minimum of three of the BMPs listed in Table 5 of the draft General Permit. Table 2 summarizes these BMPs and indicates those which are most appropriate for implementation at NASCC.

**Table 2 BMPs for MCM 2: Public Involvement/Participation**

<b>BMP</b>	<b>Measurable Goal from TCEQ</b>	<b>NASCC Activity</b>
<b>2A: Stream/lake or watershed clean-up events; litter/trash clean-up events such as Texas Stream Team, Adopt-A-Highway, etc.</b>	Host at a minimum, two events annually <ul style="list-style-type: none"> <li>• To be considered an event, the land area cleaned must be a minimum of two acres, OR 400 yards of stream/streambank/riparian area, OR two miles of roadside.</li> <li>• These may be combined.</li> </ul>	Refer to previous SWMP BMP PI-1.  NASCC already implements an annual base-wide clean-up; however, <i>two</i> clean-up events are required. NASCC should continue the existing base-wide clean-up event then complete either of the following: <ul style="list-style-type: none"> <li>• Coordinate with the Chaplin's Office, use their existing events in the SWMP.</li> <li>• Add a separate, area-specific clean-up (e.g., Ocean Drive or Laguna Madre).</li> </ul>

**Table 2 BMPs for MCM 2: Public Involvement/Participation, continued**

<b>BMP</b>	<b>Measurable Goal from TCEQ</b>	<b>NASCC Activity</b>
<b>Habitat Improvement; Tree planting; invasive vegetation removal; stream restoration.</b>	Host a minimum two events annually. <ul style="list-style-type: none"> <li>To be considered an event, the project must be a minimum of 0.5 acres or 25 yards.</li> <li>An event may take place in streams, parks, areas adjacent to public waterways, or other green space.</li> <li>An event may be a combination of locations and areas.</li> </ul>	Not recommended.
<b>Volunteer water quality monitoring.</b>	Host a minimum one event annually. To be considered an event, the monitoring must be conducted at minimum once each year.	Not recommended.
<b>Stormwater related speaker series.</b>	Provide a minimum of two sessions each year. These may be different speakers or audiences.	Not recommended.
<b>2B: MS4 area-wide stormwater survey for input on program implementation.</b>	Provide a minimum of one public survey annually for input on the program implementation to be distributed to reach at least 75% of the intended audience.	NASCC could add a short survey to either or both of the following: <ul style="list-style-type: none"> <li>Distributed fact sheets (see BMP 1D)</li> <li>Environmental Compliance, Assessment, Training, and Tracking System (ECATTS) (see BMP 6B and other BMPs that use ECATTS)</li> </ul>
<b>Hold events to train residents or work a project for homeowner associations (HOAs) or other public groups to cover stormwater topics such as: How to recognize illicit discharge activities and communicate observations to appropriate MS4 staff.</b>	Provide at minimum one project or training annually.	During the site visit, using ECATTS to meet this criterion was discussed, however, upon further review of the draft permit, it appears an event is necessary.
<b>2C: Educational display/booth at a school, public event, or similar event to provide information or displays that work to improve public understanding of issues related to water quality.</b>	Provide one booth or display at minimum annually. The booth or display must be staffed during the time which the event is open to the public.	Once per year, PWD EV could set up a display/booth at a Child Development Center (CDC) during pickup/drop off time. The audience would be base residents and employees, as well as their children.
<b>Public meeting for input on the program implementation such as a city council meeting, board meeting, or stakeholder meeting.</b>	Host a minimum of one meeting annually for input on the program implementation to be advertised to reach at least 75% of the intended audience.	Not recommended.

### MCM 3: Illicit Discharge Detection and Elimination (IDDE)

Under the TCEQ draft permit, all permittees “shall develop, implement, and enforce a program to investigate, detect, and eliminate illicit discharges in the small MS4.” NASCC’s current SWMP uses four BMPs to meet the expectations of the previous permit. Under the draft permit, NASCC will need to update and create new BMPs to meet all eight required criteria. AH proposes development and implementation of one or more standard operating procedures (SOPs) to meet several of these requirements. Table 3 lists the eight BMPs and describes how existing or proposed NASCC activities satisfy the MCM 3 requirements.

**Table 3 BMPs for MCM 3: Illicit Discharge Detection and Elimination**

<b>BMP</b>	<b>Measurable Goal from TCEQ</b>	<b>NASCC Activity</b>
<b>3A: Maintain a current and accurate MS4 map.</b>	Review and update, as necessary, at least one time annually to include features which have been added, removed, or changed.	Refer to previous SWMP BMP ID-1.  NASCC should continue to maintain and ensure the accuracy of its geographic information system (GIS) stormwater data.
<b>3B: Conduct training for all permittee’s field staff.</b>	Conduct a minimum of one training annually for 100% of MS4 field staff that may come into contact with or otherwise observe an illicit discharge, illegal dumping, or illicit connection to the small MS4 as part of their normal job responsibilities.	All NASCC Public Works Department (PWD) personnel are required to complete annual ECATTS training, which will be updated to include information specific to IDDE.
<b>3C: Maintain and publicize a public reporting method for the public to report illicit discharges, illegal dumping, or water quality impacts associated with discharges into or from the small MS4 such as a reporting hotline, online form, or other similar mechanism.</b>	Maintain a minimum of one public reporting mechanism 100% of the time during the permit term.  Publicize the public reporting mechanism a minimum of two times annually in a method designed to reach at least 75% of the target audience. In addition, if the MS4 operator has a public website, the public reporting mechanism must be publicized on the public website 100% of the time during the permit term.	The NASCC public, through their association with the military, are aware of their responsibility to contact the installation command duty officer (CDO) to report any questionable activity (e.g., illegal dumping).  ECATTS training will be updated to include instructions on how to report illicit discharges.  PWD personnel and tenants whose jobs include working with hazardous materials and POLs are specifically trained to call 911 and the CDO to report illicit discharges. Specific reporting requirements are included in the installation’s Facility Response Plan (FRP) and associated Red Plan.  AH recommends adding information relative to public reporting to the NASCC PWD EV webpage.
<b>3D: Develop and maintain procedures for responding to illicit discharges, illegal dumping, and spills.</b>	Review and update procedures at least one time annually to address changes and make improvements to the established procedures.	Refer to BMPs 3E, 3F, 3G, and 3H for development of a comprehensive IDDE SOP. This SOP will be reviewed annually for its effectiveness in detecting and eliminating illicit discharges.

**Table 3 BMPs for MCM 3: Illicit Discharge Detection and Elimination, continued**

BMP	Measurable Goal from TCEQ	NASCC Activity
<b>3E: Source investigation and elimination of illicit discharges and illegal dumping.</b>	<p>Respond to 100% of known illicit discharges and illegal dumping incidents each year to investigate sources.</p> <p>Each year, respond to 100% of high priority discharges within 24 hours.</p> <p>For 100% of known illicit discharges or illegal dumping incidents where the small MS4 does not have jurisdiction, notify the adjacent MS4 operator or the applicable TCEQ regional office each year.</p> <p>Notify TCEQ immediately of 100% of illicit flows believed to be an immediate threat to human health or the environment throughout the permit term.</p>	<p>Refer to previous SWMP BMP ID-2, ID-3, ID-4, and ID-5.</p> <p>AH recommends development of a written SOP to cover the remaining criteria for this MCM (BMPs 3E, 3F, 3G, and 3H). Recommend adding that 25% of outfalls will be inspected each year as part of identifying illicit discharges (an activity that NASCC is already conducting).</p> <p>AH will support development of this SOP under this delivery order.</p>
<b>3F: Corrective action to eliminate illicit discharges and illegal dumping.</b>	For 100% of illicit discharges or illegal dumping where a source has been determined, notify the responsible party of the problem within 24 hours. Require the responsible party to perform all necessary corrective actions to eliminate the illicit discharge.	
<b>3G: Inspection Procedures</b>	Review and update the procedures at least one time annually to address changes and make improvements to the established procedures where applicable.	
<b>3H: Inspections in response to complaints</b>	<p>Conduct inspections in response to 100% of complaints each year according to the established procedures.</p> <p>Conduct follow up inspections in 100% of cases each year where necessary.</p>	

#### MCM 4: Construction Site Stormwater Runoff Control

This MCM was developed to protect the quality of stormwater runoff from construction sites against erosion and sedimentation and other construction related pollutants. The current SWMP includes four BMPs for MCM 4. The challenge for this MCM is that NASCC is required to follow federal rules and cannot enact its own regulations to exactly match the draft General Permit. The updated SWMP will detail how current policies are implemented, and how those policies match the criteria associated with this MCM. All MS4s must meet the seven criteria included in Table 4.

**Table 4 BMPs for MCM 4: Construction Site Stormwater Runoff Control**

<b>BMP</b>	<b>Measurable Goals</b>	<b>NASCC Activity</b>
<b>4A: Develop and maintain an ordinance or other regulatory mechanism.</b>	Review and update the ordinance or other regulatory mechanism at least one time during the permit term to address changes and make improvements to the ordinance where applicable.	<p>Refer to previous SWMP BMP CS-1.</p> <p>All proposed construction activities are required to complete the NASCC National Environmental Policy Act (NEPA) process prior to beginning construction. The NEPA process includes a project environmental review (PER) that identifies and applicable requirements for each project including, but not limited to, the following MCM 4-related requirements:</p> <ul style="list-style-type: none"> <li>• Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit (CGP), TXR150000, for small and large construction activities</li> <li>• Environmental Protection Plan (EPP)</li> <li>• Construction Site Stormwater Pollution Prevention Plan (SWPPP)</li> </ul> <p>PWD (FEAD and EV) is responsible for verifying compliance with the requirements identified by the PER.</p> <p>Furthermore, NASCC requires adherence to contract documents that specifically address erosion and sediment control and pollution prevention at all installation construction sites.</p>
<b>4B: Prohibit discharges.</b>	<p>Develop and maintain an ordinance or other regulatory mechanism to prohibit these discharges.</p> <p>Review and update the mechanism at least once during the permit term.</p>	<p>Refer to previous SWMP BMP CS-2.</p> <p>Refer to BMP 4A. NASCC construction specifications will be updated to prohibit the specific construction discharges listed in the draft MS4 General Permit.</p>
<b>4C: Maintain and implement site plan review procedures that describe which plans will be reviewed as well as when an operator may begin construction.</b>	<p>Review and update site plan review procedures at least one time annually to address changes and make improvements to the established procedures where applicable.</p> <p>Implement site plan review procedures for 100% of new construction site plans received each year.</p>	<p>Refer to previous SWMP BMP CS-3.</p> <p>PWD Facilities Engineering and Acquisition Division (FEAD) forwards all construction plans to PWD Environmental (EV) for review. Among other environmental concerns, EV reviews plans for required erosion and sediment control (E&amp;SC) elements. FEAD is responsible for overall plan approval.</p> <p>As a check to ensure all construction activities receive PWD EV review, all dig permits also require PWD EV approval.</p> <p>AH recommends development of a SOP to cover this BMP as well as BMPs 4D, 4E, and 4F. Existing SOPs, developed under the current permit term, may be used to support development of this more comprehensive SOP.</p> <p>AH will support development of this SOP under this delivery order.</p>

**Table 4 BMPs for MCM 4: Construction Site Stormwater Runoff Control, continued**

<b>BMP</b>	<b>Measurable Goals</b>	<b>NASCC Activity</b>
<b>4D: Implement procedures for inspection large and small construction projects.</b>	Review and update inspection procedures at least one time annually to address changes and make improvements to the established procedures, where applicable.	Refer to previous SWMP BMP CS-4.  Refer to BMPs 4C, 4E, and 4F for development of a comprehensive Construction Site Stormwater Runoff Control SOP. This SOP will be reviewed annually for its effectiveness in protecting stormwater runoff quality from construction activities.
<b>4E: Conduct construction site inspections.</b>	Conduct inspections at 80% of active construction sites annually according to the established procedures. Each year, follow up inspections in 100% of cases where necessary.	Refer to previous SWMP BMP CS-4.  NASCC PWD EV implements a construction inspection check list. Implementation of this checklist will be included in the SOP referenced in BMP 4C.
<b>4F: Develop, implement, and maintain procedures for receipt and consideration of information submitted by the public.</b>	Review and update procedures for the receipt and consideration of information submitted by the public at least one time annually to address changes and make improvements to the established procedures. Maintain one website, hotline, or similar method for receipt of information submitted by the public throughout the permit term.	This BMP will be covered by the comprehensive SOP referenced in BMP 4C.  AH recommends adding information relative to public reporting to the NASCC PWD EV webpage.
<b>4G: Conduct training for all MS4 staff whose primary job duties are related to implementing the construction stormwater program.</b>	Conduct a minimum of one training annually for 100% of MS4 staff whose primary job duties are related to implementing the construction stormwater program.	PWD EV provides environmental training annually to all PWD staff involved in maintaining compliance with this MCM including Seabee construction managers and environmental technicians. The training specifically includes CGP requirements as well as the various elements of the SOP referenced in BMP 4C.

#### MCM 5: Post Construction Stormwater Management in New Development and Redevelopment

NASCC's current Post Construction Stormwater Management program is compliant with the draft MS4 General Permit requirements for MCM 5. Table 5 lists the draft requirements and describes how NASCC complies with these requirements.

**Table 5 BMPs for MCM 5: Post Construction Stormwater Management**

<b>BMP</b>	<b>Measurable Goals</b>	<b>NASCC Activity</b>
<b>5A: Develop and maintain an ordinance or other regulatory mechanism.</b>	Review and update the ordinance or other regulatory mechanism at least one time during the permit term to address changes and make improvements to the ordinance where applicable.	Refer to previous SWMP BMP PC-1.  All federal construction projects, including those at NASCC, must comply with Energy Independence and Security Act (EISA) Section 438 requirements: "any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow."
<b>5B: Document and maintain records of enforcement actions and make them available for review by TCEQ.</b>	Maintain records of 100% of enforcement actions taken each year.  Make 100% of enforcement records available to TCEQ for review within 24 hours of request.	Refer to previous SWMP BMP PC-1.  The Navy conducts both internal (by NASCC) and external (by NAVFAC Southeast or other Navy agency) audits that include a review of compliance with EISA Section 438. Deficiencies are logged in EMSWeb, which is also used to track progress in addressing any noted deficiencies.
<b>5C: Ensure long term operation and maintenance of structural stormwater control measures.</b>	Maintain 100% of stormwater control measures each year where the MS4 is responsible for maintenance.  Each year, require 100% of the owners or operators of any new development sites to develop and implement a maintenance plan addressing maintenance requirement for any structural control measures installed on site.  Require the site owner or operators to maintain documentation onsite of 100% of maintenance performed and made available for review by the small MS4 operator or TCEQ within 24 hours of the request.	Refer to previous SWMP BMP PC-2.  NASCC PWD is responsible for maintenance of all structural stormwater control measures (SCMs) at the installation. PWD EV inspects each SCM annually and reports deficiencies to the PWD Facilities Management Division (FMD) who initiate any required maintenance or repairs via existing facilities maintenance contracts.  PWD EV maintains an inventory of all SCMs at NASCC.

#### MCM 6: Pollution Prevention and Good Housekeeping for Municipal Operations

MCM 6 appears to try to connect existing requirements for industrial facilities (i.e., TCEQ Multi-Sector General Permit [MSGP] requirements) to similar municipal operations. NASCC currently implements four BMPs to address MCM 6 of the current General Permit. These BMPs will be adapted and expanded to comply with the BMPs listed in the draft permit.

**Table 6 BMPs for MCM 6: Pollution Prevention and Good Housekeeping**

<b>BMP</b>	<b>Measurable Goals</b>	<b>NASCC Activity</b>
<b>6A: Permittee-owned Facilities and Control Inventory</b>	<p>Develop and maintain an annual inventory for 100% of the small MS4 owned and operated facilities and controls in the small MS4 area.</p> <p>Review and update the inventory at least one time annually to address changes or additions to the facilities and controls where applicable.</p>	<p>AH and NASCC collaborated during the May 2024 site visit to develop the inventory for this criterion. The inventory will be included in the updated SWMP.</p>
<b>6B: Training and Education</b>	<p>Conduct a minimum of one training annually for 100% of the employees involved in implementing pollution prevent and good housekeeping practices.</p>	<p>Refer to previous SWMP BMP GH-1 and GH-2.</p> <p>All NASCC PWD personnel <b>and contractors</b> are required to complete annual ECATTS training, which includes training on good housekeeping and pollution prevention as it related to stormwater quality.</p>
<b>6C: Disposal of Waste Material</b>	<p>Ensure that 100% of waste from the MS4 is disposed of in accordance with 30 TAC Chapters 330 or 335.</p>	<p>All solid waste is contracted for removal from the NASCC in accordance with 30 TAC 330. Hazardous waste is disposed of in accordance with the NASCC Hazardous Waste Management Plan (HWMP), which complies with 30 TAC 335.</p>
<b>6D: Contractor Requirements and Oversight</b>	<p>Each year, ensure 100% of contractor activities hired by the MS4 to perform maintenance activities of permittee-owned facilities is contractually required to comply with all stormwater control measures, good housekeeping practices, and facility-specific stormwater management operating procedures.</p> <p>Provide oversight of 100% of contractor activities to ensure that contractors are using appropriate control measures and SOPs each year.</p> <p>Oversight procedures must be maintained on-site 100% of the time and made available for review by TCEQ within 24 hours of request.</p>	<p>NASCC's current contractor performance assessment process should meet this criterion. PWD FEAD contract managers oversee 100% of contractor activities. Performance assessment representatives (PARs) periodically verify contractor compliance with their contractual obligations. A summary of this oversight process will be included in the updated SWMP.</p>

**Table 6 BMPs for MCM 6: Pollution Prevention and Good Housekeeping, continued**

<b>BMP</b>	<b>Measurable Goals</b>	<b>NASCC Activity</b>
<b>6E: Assessment of permittee-owned operations</b>	<p>Evaluate 100% of O&amp;M activities for their potential to discharge pollutants in stormwater annually including but not limited to:</p> <ul style="list-style-type: none"> <li>• Road and parking lot maintenance, including such areas as pothole repair, pavement marking, sealing, and re-paving;</li> <li>• Bridge maintenance, including such areas as re-chipping, grinding, and saw cutting;</li> <li>• Cold weather operations, including plowing, sanding, and application of deicing and anti-icing compounds and maintenance of snow disposal areas; and</li> <li>• Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation.</li> </ul>	<p>Refer to previous SWMP BMP GH-3.</p> <p>The NASCC NEPA PER process is conducted for each of the listed O&amp;M activities and other PWD operations that could have negative environmental impacts if not properly conducted.</p>
<b>6F: Identify pollutants of concern</b>	<p>Identify pollutants of concern that could be discharged from all the O&amp;M activities described in Part IV.D.6.(b)(5)b and maintain a list of 100% of pollutants identified.</p> <p>Including for example, metals: chlorides; hydrocarbons such as benzene, toluene, ethyl benzene, and xylenes; sediment; and trash.</p> <p>Review and update the pollutants of concern list at least one time annually to address changes or additions to the O&amp;M activities where applicable.</p>	<p>Refer to previous SWMP BMP GH-3.</p> <p>The following programs/plans contribute to compliance with this BMP:</p> <ul style="list-style-type: none"> <li>• Pollution Prevention Management Plan</li> <li>• Hazardous Waste Manage Plan</li> </ul> <p>AH recommends including a list of pollutants of concern along with the inventory developed for BMP 6A.</p>

**Table 6 BMPs for MCM 6: Pollution Prevention and Good Housekeeping, continued**

<b>BMP</b>	<b>Measurable Goals</b>	<b>NASCC Activity</b>
<b>6G: Pollutant Prevention Measures</b>	<p>Develop and implement a set of pollutant prevention measures that will reduce the discharge of pollutants in stormwater from permittee-owned operations. Implement at least two of the following pollution prevention measures:</p> <ul style="list-style-type: none"> <li>• Replace at least 50% of the MS4's materials and chemicals with more environmentally friendly materials or methods by the end of the permit term;</li> <li>• Track 100% of the application of deicing and anti-icing compounds in the MS4 area and record the amount of compound used for each compound annually;</li> <li>• Use suspended tarps, booms, vacuums to capture paint, solvents, rust, paint chips and other pollutants during 80% of regular bridge maintenance each year; and</li> <li>• Place barriers around or conduct runoff away from 100% of deicing chemical storage areas to prevent discharge into surface waters each year.</li> </ul>	<p>Refer to previous SWMP BMP GH-3.</p> <p>NASCC does not conduct many of the activities listed but does conduct similar operations with the potential to pollute stormwater. PWD EV maintains a list of pollution prevention practices that are applicable to PWD and conducts periodic inspections of its facilities to ensure implementation of those practices (refer to BMP 6H).</p> <p>AH recommends update of the PWD pollution prevention practices and associated inspection checklist and will support this update as part of this delivery order.</p>
<b>6H: Inspection of Pollution Prevention Measures</b>	<p>At least one time annually, visually inspect 100% of pollution prevention measures implemented at permittee-owned facilities to ensure they are working properly.</p> <p>Develop and maintain written procedures that describe the frequency of inspections and how they will be conducted.</p> <p>Review and update the inspection procedures at least one time annually to address changes or additions to the pollution prevention measures.</p>	<p>Refer to previous SWMP BMP GH-3.</p> <p>PWD EV will inspect each activity identified in the inventory developed under BMP 6A annually using an updated inspection checklist (to be updated under this task order). Inspection items will evaluate proper implementation of the PWD pollution prevention practices referenced in BMP 6G.</p>

**Table 6 BMPs for MCM 6: Pollution Prevention and Good Housekeeping, continued**

<b>BMP</b>	<b>Measurable Goals</b>	<b>NASCC Activity</b>
<b>6I: Structural Control Measures</b>	<p>At least once annually, perform maintenance of 100% of the structural controls which require maintenance. Maintenance must be consistent with the effectiveness of this BMP.</p> <p>The permittee shall develop and maintain written procedures that define the frequency of inspections and how they will be conducted.</p> <p>Review and update the maintenance procedures at least one time annually to address changes or additions to the pollution prevention measures.</p>	<p>During the May 2024 site visit, a list of structural control measures was developed. Specific checklist items will be included in the updated inspection checklists associated with BMP 6H. Any required maintenance or deficiencies noted relative to structural controls during the annual inspections of PWD activities will be addressed through existing facilities maintenance <b>contracts managed by FEAD</b>.</p>

## **APPENDIX C**

### **MCM 1: Public Education and Outreach Supporting Documentation**

**(11 PAGES)**

## Keep Safety Data Sheets on Site!

SDSs provide useful information about product contents, hazards, and cleanup guide. Know which products used on site are hazardous and keep the SDS for each regulated product easily accessible.



## Handling and Disposal of Hazardous Waste

- ❖ Use a proper funnel when pouring liquid into recycle/disposal drum or storage tank.
- ❖ **DO NOT** pour liquid/fluid waste into floor drains, sinks, storm drain inlets, or other sewer connections.
- ❖ Store hazardous materials or wastes in spill containment and under cover to prevent contact with stormwater.
- ❖ Provide secondary containment for **ALL** liquid hazardous material or waste storage ≥ 55 gallons.
- ❖ Separate liquid wastes. Many unmixed fluids can be recycled through hazardous waste disposal contractors.

Refer to NAS Corpus Christi Hazardous Waste Management Plan.

## Stormwater Pollution Prevention

Stormwater runoff is one of the leading causes of water pollution. Stormwater carries dirt, trash, oil, grease, chemicals, and other pollutants as it flows over facilities, parking lots, and streets. Facility maintenance shops and activities must follow stormwater pollution prevention protocols and Best Management Practices (BMPs) to prevent adverse environmental impacts.

This brochure was developed to educate NAS Corpus Christi personnel who conduct facility maintenance activities about stormwater pollution prevention in accordance with the Texas Pollutant Discharge Elimination System (TPDES) Multi-Sector General Permit (MSGP) for Industrial Facilities (TXR050000) and General Permit to Discharge Under the TPDES for Small Municipal Separate Storm Sewer Systems (MS4); (TXR040000).



## References:

- ❖ NASCC Stormwater Pollution Prevention Plans
- ❖ NASCC Stormwater Management Program
- ❖ NASCC Facility Response Plan
- ❖ NASCC Hazardous Waste Management Plan

Copies of these documents available upon request from the NAS Corpus Christi Public Works Environmental Office or at:

[https://www.cnic.navy.mil/regions/cnrse/installations/nas\\_corpus\\_christi/om/environmental\\_support.html](https://www.cnic.navy.mil/regions/cnrse/installations/nas_corpus_christi/om/environmental_support.html)

### ***Your stormwater program contact:***

NAS Corpus Christi Public Works Environmental Office,  
Stormwater Program Manager:  
361-961-5363

# General Guide: Stormwater Pollution Prevention For Facility Maintenance Shops and Activities



## Naval Air Station Corpus Christi, Texas



The best management practices (BMPs) presented in this brochure apply at all NAS Corpus Christi facilities and shops conducting facility maintenance activities.

## Inspection

- ❖ Inspect facilities regularly for spills, leaking vehicles, or other problems.
- ❖ Inspect areas that need extra attention, such as storm drain inlets located on site and areas where equipment or vehicles awaiting repair are stationed, more frequently.
- ❖ Document any problems you find as well as those identified by facility staff. Consider taking digital photographs during inspections to document.



## Painting

### Paint Preparation and Removal

- ❖ Store products used for painting indoors or outside in an area not exposed to rain or runoff.
- ❖ Protect or cover storm drains when removing paints with pressure washer.
- ❖ Use drop cloths during paint removal, mixing, and application.

### Paint Clean-up and Spills

- ❖ Never clean brushes or rinse equipment where the wastewater may run into the storm drain system.
- ❖ For water-based paint, rinse and dispose of wastewater in sanitary sewer.
- ❖ For oil-based paints, use paint thinner; dispose of as hazardous waste.
- ❖ Reuse or recycle leftover paint or dispose of properly.
- ❖ To avoid spills, place lids on paint / paint thinner cans when not in use.
- ❖ Use dry methods to clean-up spills. Do not hose down outside spills.



## Landscaping / Ground Maintenance

- ❖ Follow directions / application guidelines on pesticides / fertilizer labels and use only as directed.
- ❖ Avoid applying near curbs and driveways. Sweep driveways, sidewalks, roads, and parking lots so that the chemicals don't run off into the storm drain.
- ❖ Do not apply pesticides and fertilizers if rain or wind is predicted.
- ❖ Use natural, non-toxic alternative fertilizers / pesticides if possible.
- ❖ Properly dispose of chemicals – Do not pour into sink, storm drain, or street.
- ❖ Store landscape materials indoors or in a covered area and properly cover stockpiles of soil, compost, or mulch with a tarp.
- ❖ Properly dispose of yard wastes. Recycle or compost yard waste if possible. Do not blow, rake, sweep, or hose it into streets, waterways, or the storm drain system.
- ❖ Avoid overwatering to prevent runoff – inspect sprinklers; repair leaks and misaligned sprinkler heads. Plant native vegetation to reduce the need for irrigation.
- ❖ Prevent erosion – use ground cover, berms, and vegetation to capture runoff and prevent erosion.

## Eliminate Illicit Discharges

- ❖ Plumbing from indoor sinks and floor drains should discharge to the sanitary sewer system not the storm drainage system.
- ❖ Facility operators should eliminate any illicit discharge / drain connections immediately.
- ❖ Regularly inspect points of discharge from the facility for evidence of potential illicit discharges. Flows during dry weather may indicate an illicit connection or discharge.
- ❖ Report suspected illicit connections or discharges to the NAS Corpus Christi Public Works Environmental Office.

## Street Maintenance

- ❖ Implement an effective and routine street sweeping program.
- ❖ Eliminate street flushing activities, or temporarily protect storm drain inlets during flushing.
- ❖ Recycle leaf material as compost, if possible.
- ❖ Use only covered roll off trucks and drop boxes to temporarily store street cleaning debris and leaf material.
- ❖ Establish a procedure for quickly dealing with illegally dumped materials discovered by street cleaning crews.
- ❖ Post "Do Not Dump" signs in areas where dumping tends to occur the most.
- ❖ Create a recordkeeping system that allows crews to track curb miles swept, amount of debris collected, and problems requiring follow-up. Set up a routine procedure for the forms to make sure incidents are followed up promptly.



## Pressure Power Washing

Discharge of pressure washing wastewater containing cleaning chemicals/detergents, paints, or other toxic compounds to the storm drain system is prohibited. Discharge of street wash water and external building wash downs that do not use detergents are allowed.

- ❖ Sweep or vacuum all dirt, debris, and trash prior to washing.
- ❖ Use absorbent materials to clean-up oil deposits.
- ❖ Use as little water as possible.
- ❖ Seal all stormwater inlets in the area if cleaning chemicals/detergents are used or wash water contains hazardous particles/chemicals. Dispose of wash water properly to sanitary sewer.

## Everyone Lives in a Watershed!

A watershed is an area of land where stormwater runoff ultimately drains to a particular stream, river, wetland, or other body of water. As responsible caretakers of our environment, we must take actions to protect our water resources.

*Stormwater runoff occurs when rain falls and flows over the surface of the ground in the watershed.*

*Hard Surfaces like rooftops, driveways, sidewalks, and streets prevent stormwater from naturally soaking into the ground.*

## Stormwater Runoff can be a Problem!

Stormwater runoff can pick up soil, trash, fertilizer, chemicals, and other debris and carry it into a storm sewer that transports it directly to a lake, stream, river, or wetland in your watershed.

Anything that enters a storm sewer goes untreated into the same waterbodies we use for swimming, fishing, and drinking water. The way you take care of your home and yard impacts water quality.



## For More Stormwater Education and Outreach Materials/Information:

- ❖ EPA Website for 'NPDES Stormwater Webcasts': <https://www.epa.gov/npdes/npdes-stormwater-webcasts>
- ❖ EPA Website for 'Media Campaigns' for Non-point Source Pollution Outreach Tool Box: <https://cfpub.epa.gov/npstbx/MediaCampaign.cfm>
- ❖ EPA Website for 'Water Topics': <https://www.epa.gov/environmental-topics/water-topics#what-you-can-do>
- ❖ EPA Website for 'Trash-Free Water': <https://www.epa.gov/trash-free-waters>
- ❖ EPA Website for 'NPDES Stormwater Program': <https://www.epa.gov/npdes/npdes-stormwater-program>
- ❖ 'National Extension Water Outreach Education' Website: <https://fyi.uwex.edu/wateroutreach/>

This brochure was developed as part of an effort to educate NAS Corpus Christi residents about stormwater pollution prevention in accordance with the General Permit to Discharge Under the Texas Pollution Discharge Elimination System (TPDES) for Small Municipal Separate Storm Sewer Systems (MS4) TPDES General Permit No. TXR040000.

### ***Your stormwater program contact:***

NAS Corpus Christi Public Works Environmental Office, Stormwater Program Manager:  
361-961-5363

# Keeping Pollutants Out of Stormwater

## A Family Housing Residents' Guide



## Naval Air Station Corpus Christi, TX



## NAS Corpus Christi Residents Can Protect Stormwater Quality!

- ❖ Purchase and use nontoxic, biodegradable, and recyclable products whenever possible
- ❖ Check vehicles for leaks and recycle used motor oil; never pour it on the ground or into a storm drain
- ❖ Minimize pesticides use
- ❖ Follow directions on fertilizer labels and sweep off driveways, sidewalks, and roads so that chemicals don't run off into the storm drain
- ❖ Compost yard wastes – leaves and grass; don't dump them in ditches or waterways
- ❖ Pick up after your pet; don't let pet waste enter the storm drain
- ❖ Harvest rainwater for plant watering and/or direct gutter downspouts onto vegetated areas and away from paved surfaces
- ❖ Cover and do not overfill trash cans or recycling bins
- ❖ NEVER pour any kind of waste onto the ground or into a storm drain!
  - ❖ Oils and lubricants
  - ❖ Paints or paint chips

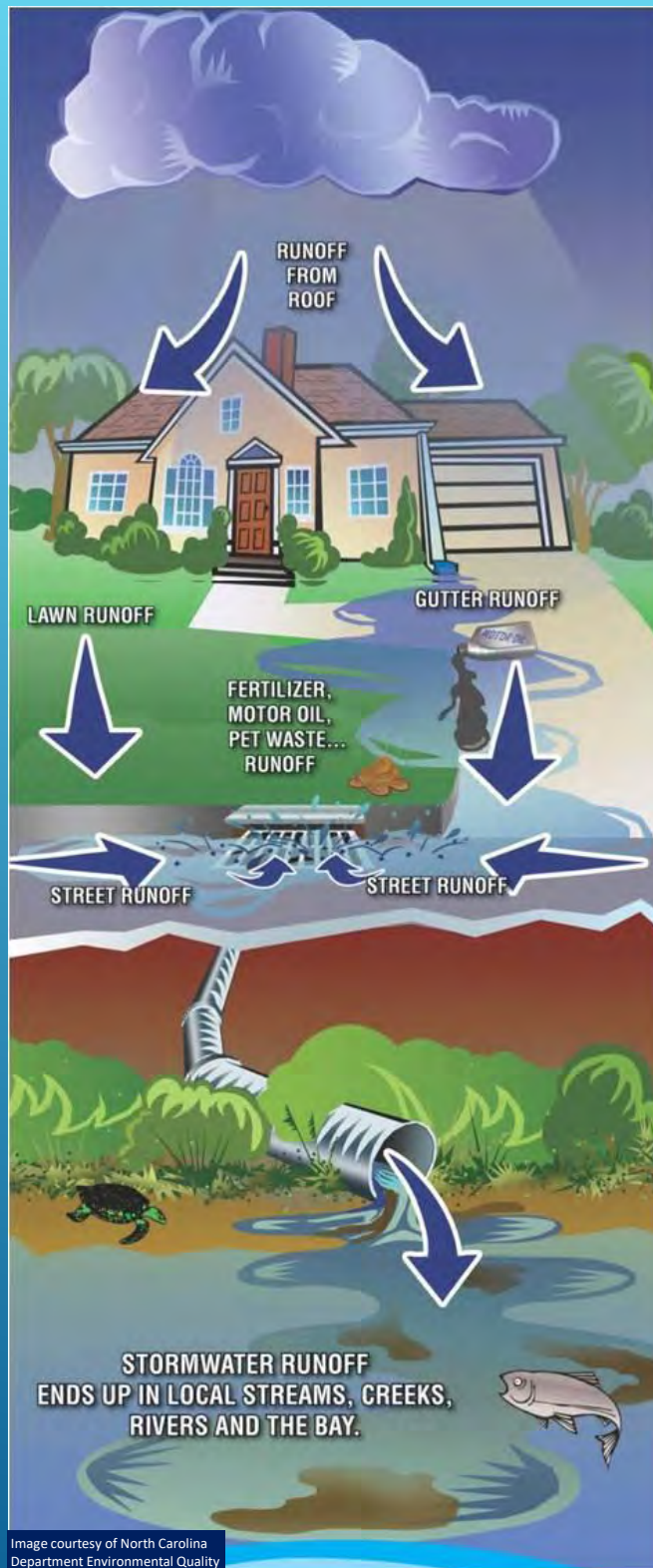


Image courtesy of North Carolina  
Department Environmental Quality

## Be Aware of Non-Stormwater Discharges & Illicit Discharges

Non-stormwater discharges are any discharges other than clean stormwater that end up in the storm sewer or natural waterbodies. Some are allowable:

- ❖ Landscape irrigation
- ❖ Uncontaminated air conditioning condensate
- ❖ Pavement wash water where no spills or leaks of hazardous materials may have occurred and where detergents are not used

Others are prohibited; these are called Illicit discharges:

- ❖ Sanitary sewer overflow
- ❖ Wash water containing detergents
- ❖ Improper oil or antifreeze disposal
- ❖ Improper disposal of household toxics
- ❖ Paint brush rinsing or disposal of paint waste, including chips
- ❖ Pet waste
- ❖ Used cooking oil or grease

Report suspected illicit connections or discharges to the NAS Corpus Christi Public Works Department Environmental Office.



# Hazardous Waste

## Proper Storage

- ❖ Separate liquid wastes. Many unmixed fluids can be recycled through hazardous waste disposal contractors.
- ❖ Store hazardous materials or wastes in spill containment and under cover to prevent contact with stormwater.
- ❖ Provide secondary containment for **ALL** liquid hazardous material or waste storage ≥ 55 gallons.

Refer to NAS Corpus Christi Hazardous Waste Management Plan.



## Handling and Disposal

- ❖ Use a proper funnel when pouring liquid into recycle/disposal drum or storage tank.
- ❖ Clean up **ALL** oil drips/spills during oil collection.
- ❖ **DO NOT** pour liquid/fluid waste into floor drains, sinks, storm drain inlets, or other sewer connections.
- ❖ Recycle used motor oil, oil filters, anti-freeze, batteries, lubricants, tires, and metal filings.

## Keep Safety Data Sheets on Site!

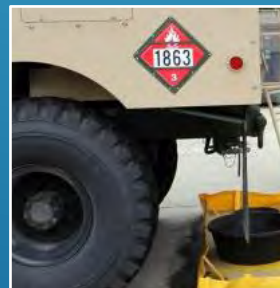
SDSs provide useful information about product contents, hazards, and cleanup guide. Know which products used on site are hazardous and keep the SDS for each regulated product easily accessible.



## Prevent Leaks and Spills!

### Proper Automotive Fluid Handling

- ❖ Place drip pans under leaky vehicles to capture fluids - schedule maintenance!
- ❖ Regularly inspect vehicles and equipment for evidence of leaks.
- ❖ Use absorbent cleaning agents instead of water to clean work areas.
- ❖ Drain fluids (unused gas, transmission and hydraulic oil, brake and radiator fluid) from vehicles or parts in storage.
- ❖ Conduct automotive fluid handling indoors or undercover in a designated area with no connection to the storm sewer.



**Your stormwater program contact:**  
NAS Corpus Christi Public Works Environmental  
Office, Stormwater Program Manager:  
361-961-5363

# General Guide: Stormwater Pollution Prevention at Vehicle Maintenance and Repair Shops



## Naval Air Station Corpus Christi, Texas



The best management practices (BMPs) presented in this brochure apply anywhere vehicles or equipment are stored, maintained, or washed. This includes facilities that conduct any of the following activities: fluid changes; parts lubrication; engine, mechanical, transmission, steering, brake or body repair.



## Cleaning Spills

- ❖ Use dry methods for spill cleanup (i.e., sweeping and absorbent materials).
- ❖ Locate spill response equipment close to fluid handling and storage areas. Properly dispose of saturated absorbent materials according to the NAS Corpus Christi Hazardous Waste Management Plan.
- ❖ Follow the Spill Prevention, Control, and Countermeasure (SPCC) Plan. Be sure that all employees are aware of the plan and capable of implementing spill response procedures.
- ❖ Report all spills with potential stormwater exposure to the NAS Corpus Christi Public Works Environmental Office.



## Cleaning Auto Parts

- ❖ Scrape parts with a wire brush instead of liquid cleaners.
- ❖ Arrange drip pans, drying racks, and drain boards to direct fluids back into a parts washer or fluid holding tank.
- ❖ Never wash parts or equipment in a shop sink, parking lot, driveway, or roadway.



## Automotive / Big Equipment Washing

- ❖ Use a designated washing rack to prevent oil, sediment, and other toxic pollutants from entering the storm drains. Designated wash racks should be bermed or protected from storm drains and should drain to an oil/water separator before discharging to the sewer.
- ❖ Use phosphate-free biodegradable detergents.
- ❖ Conserve water! Use a bucket or a close-grip nozzle handle (not a running hose) to wash and rinse vehicles.



## Oil/Water Separator Maintenance

Automotive repair or fueling facilities are often equipped with an oil/water separator. These must be properly maintained with an annual maintenance schedule that includes pumping and cleaning of the system.

This brochure was developed to educate NAS Corpus Christi personnel who conduct vehicle/equipment maintenance activities about stormwater pollution prevention in accordance with the Texas Pollutant Discharge Elimination System Multi-Sector General Permit for Industrial Facilities (TXR050000).



## Good Housekeeping

- ❖ Sweep/vacuum daily; use only a damp mop for general cleanups; avoid hosing down work areas; seal the shop floor with impervious materials, if possible.
- ❖ Conduct daily inspection of vehicles and vehicle maintenance/parking areas for any wastes, trash, debris, leaks, or spills.



## Eliminate Illicit Discharges

- ❖ Plumbing from indoor sinks and floor drains should discharge to the sanitary sewer system not the storm drainage system.
- ❖ Facility operators should eliminate any illicit discharge / drain connections immediately.
- ❖ Regularly inspect points of discharge from the facility for evidence of potential illicit discharges. Flows during dry weather may indicate an illicit connection or discharge.
- ❖ Report suspected illicit connections or discharges to the NAS Corpus Christi Public Works Environmental Office.



# STORMWATER POLLUTION PREVENTION AIRCRAFT MAINTENANCE

**Naval Air Station Corpus Christi, Texas**

## *USE DRIP PANS*

Place drip pans  
under any leaks

Label all drip  
pans "Used Oil"



**If your equipment leaks, use  
a drip pan... and get it fixed!**

Make sure your  
drip pan doesn't  
leak

Check, empty,  
and clean drip  
pans regularly

## *DO NOT OVERFILL TANKS OR DRUMS*

Leave adequate  
head space for  
expansion; fill to  
maximum 90% of  
drum volume



Look for  
indicators that  
the drum may  
be over full

## *CONDUCT MAINTENANCE INDOORS WHEN POSSIBLE*



This poster was developed to educate NAS Corpus Christi personnel about stormwater pollution prevention in accordance with the Texas Pollutant Discharge Elimination System (TPDES) Multi-Sector General Permit (MSGP) for Industrial Facilities (TXR050000).

*Your stormwater program contact:*  
NAS Corpus Christi Public Works Environmental Office,  
Stormwater Program Manager:  
**361-961-5363**



# STORMWATER POLLUTION PREVENTION OUTDOOR MATERIAL STORAGE

## Naval Air Station Corpus Christi, Texas

### *STORE LIQUID MATERIALS AND WASTES ON SPILL PALLETS*

Store liquid wastes  
and materials on  
spill containment  
pallets or within  
secondary  
containment

Drain accumulated  
rainwater only after  
inspection for  
sheen



Required for  
containers  $\geq 55$   
gallons

Pallet should hold  
volume of largest  
container stored

### *STORE CHEMICALS INDOORS OR UNDER COVER*



Store materials and equipment indoors or in  
racks or containers to prevent contact with  
stormwater

Dispose or recycle excess or unusable metal  
equipment and parts

Rusty metal contributes metals,  
suspended solids, and other  
pollutants to stormwater



This poster was developed to educate NAS Corpus Christi personnel about stormwater pollution prevention in accordance with the Texas Pollutant Discharge Elimination System (TPDES) Multi-Sector General Permit (MSGP) for Industrial Facilities (TXR050000).

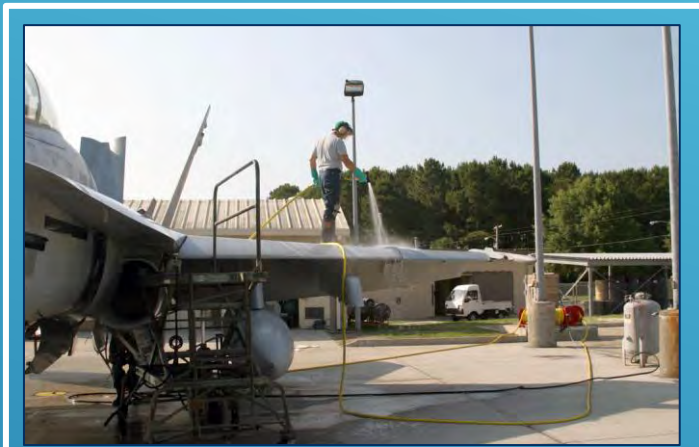
*Your stormwater program contact:*  
NAS Corpus Christi Public Works Environmental Office,  
Stormwater Program Manager:  
**361-961-5363**



# STORMWATER POLLUTION PREVENTION AIRCRAFT WASHING

**Naval Air Station Corpus Christi, Texas**

*CONDUCT AIRCRAFT WASHING ONLY AT  
WASH RACK OR OTHER DESIGNATED AREA*



*ENSURE PROPER TRAINING ON WASH  
PROCEDURES AND WASH RACK OPERATION*



- ❖ Ensure wash rack valves are in proper position prior to washing activities
- ❖ Discharge wash water to sanitary sewer only
- ❖ Treat wash water with oil/water separator before discharge
- ❖ Use non-emulsifying degreasers/soaps
- ❖ Inspect cleaning area regularly to ensure BMPs are implemented and maintained

This poster was developed to educate NAS Corpus Christi personnel about stormwater pollution prevention in accordance with the Texas Pollutant Discharge Elimination System (TPDES) Multi-Sector General Permit (MSGP) for Industrial Facilities (TXR050000).

*Your stormwater program contact:*  
NAS Corpus Christi Public Works Environmental Office,  
Stormwater Program Manager:  
**361-961-5363**



# STORMWATER POLLUTION PREVENTION AIRCRAFT FUELING

**Naval Air Station Corpus Christi, Texas**

*CONDUCT FUELING OPERATIONS ONLY  
IN DESIGNATED AREAS*



*ENSURE PROPER TRAINING IN  
FUELING PROCEDURES AND BMPS*



- ❖ Conduct fueling operations (including transfers to tanker trucks) on impervious concrete or contained pad. Asphalt is not chemically resistant to fuels!
- ❖ Use drip pans and absorptive materials beneath aircraft where leaks occur and where making and breaking hose connections
- ❖ Use fueling hoses with check valves
- ❖ Ensure stormwater valves, plugs, and similar appurtenances are closed during fuel transfer operations
- ❖ Provide spill kits for all fuel trucks, fueling stations, and other strategic areas; keep spill response materials readily available
- ❖ Use spill and overflow protection devices
- ❖ Minimize run-on of stormwater into the fueling area
- ❖ Do not allow "topping off" of fuel

This poster was developed to educate NAS Corpus Christi personnel about stormwater pollution prevention in accordance with the Texas Pollutant Discharge Elimination System (TPDES) Multi-Sector General Permit (MSGP) for Industrial Facilities (TXR050000).

*Your stormwater program contact:*  
NAS Corpus Christi Public Works Environmental Office,  
Stormwater Program Manager:  
**361-961-5363**



# STORMWATER POLLUTION PREVENTION GOOD HOUSEKEEPING

**Naval Air Station Corpus Christi, Texas**

*DRY SWEEP, DO NOT HOSE TO STORM DRAIN*

**DO**  
sweep and  
pick up dirt  
and debris

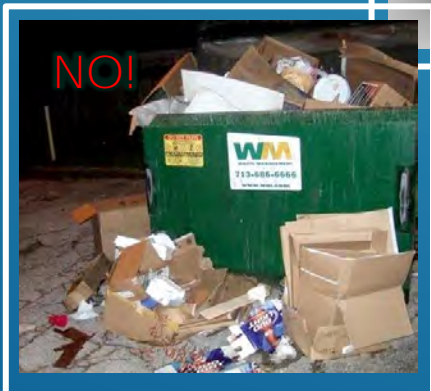


**DO NOT**  
sweep debris  
out the door  
of your shop  
into the road  
or parking lot

Use oil absorbent pads, boom, and absorbent granules for spills of petroleum-based materials

*KEEP DUMPSTER LIDS CLOSED*

*CONDUCT INSPECTIONS*



When not in use,  
keep dumpster  
lids and doors  
closed; drain  
plugs should be  
in place at all  
times



Inspect industrial areas periodically  
for leaks or conditions that allow  
stormwater to contact pollutant  
sources

This poster was developed to educate NAS Corpus Christi personnel about stormwater pollution prevention in accordance with the Texas Pollutant Discharge Elimination System (TPDES) Multi-Sector General Permit (MSGP) for Industrial Facilities (TXR050000).

*Your stormwater program contact:*  
NAS Corpus Christi Public Works Environmental Office,  
Stormwater Program Manager:  
**361-961-5363**

## **APPENDIX D**

### **MCM 2: Public Involvement / Participation Supporting Documentation**

**(10 PAGES)**



## DEPARTMENT OF THE NAVY

NAVAL AIR STATION CORPUS CHRISTI  
11001 D STREET SUITE 101  
CORPUS CHRISTI, TX 78419-5021

NASCCNOTE 5050

N00

5 Apr 2024

### NASCC NOTICE 5050

From: Commanding Officer, Naval Air Station Corpus Christi

Subj: 2024 ANNUAL EARTH DAY BASE CLEANUP

Encl: (1) Assignments of Responsibilities  
(2) Points of Contact  
(3) Schedule of Events  
(4) Environmental/Safety Brief  
(5) Participant Waiver  
(6) Base Map with Designated Cleanup Areas

1. Purpose. To assign and promulgate responsibilities for the Naval Air Station Corpus Christi (NASCC) 2024 Annual Earth Day Base Cleanup, scheduled for Friday, 26 April 2024.

2. Background. The 2024 Annual Earth Day Base Cleanup, sponsored by the NASCC Public Works Department, will be conducted on Friday, 26 April 2024 unless cancelled due to foul weather. Foul weather event will be conducted during the time period starting Monday, 29 April 2024, and ending Friday, 3 May 2024. The foul weather event is modified to provide flexibility to tenant commands and for greater participation within each command. Volunteers who are not DOD employees will be required to sign a waiver for participation. This annual base cleanup fulfills storm water permit requirements and provides an excellent opportunity to improve the environmental quality of NASCC.

3. Action. Assignment of responsibilities, points of contact, environmental/safety points, participant waiver, and base map are attached in enclosures (1) through (5).

4. Uniform. Physical Training Uniform, Navy Working Uniform, Flight Suits, other service equivalents, or appropriate civilian attire suitable for collecting trash with closed-toe shoes, hats, bug repellent, safety vest, and sunscreen.

5. Points of Contact. LTJG Steven Gottlieb, 361-961-2152.

6. Cancellation Contingency. This notice is cancelled upon completion of the 2024 Annual Earth Day Base Cleanup

  
T. C. JURICA

### ASSIGNMENTS OF RESPONSIBILITY

1. Commanding Officer. Sponsor Annual Base Cleanup.
2. Base Cleanup Overall Team Leader. LTJG Gottlieb will coordinate/ oversee volunteer efforts on respective cleanup routes, provide maps and detailed instructions of designated start time and locations.
3. Public Works Environmental Department
  - a. Act as overall coordinator for Base Cleanup.
  - b. Lead all planning and preparation.
  - c. Provide cleanup equipment to volunteers (i.e. gloves, trash bags, and safety vests).
  - d. Provide water to volunteers during event.
  - e. Pick-up trash bags on routes during event; unload bags onto stake trucks; weigh trucks.
4. Safety Department. Review and approve Operational Risk Management analysis prepared by event organizer and advise command of applicable risks/controls.
5. Public Affairs Officer. Provide social media and base billboard announcement prior to event.
6. Navy Medicine Readiness and Training Command Corpus Christi. Provide at least one standby Corpsman for First Aid.
7. Base Cleanup Team Leaders. Each team leader will muster their assigned group and read safety brief (Enclosure 4) prior to cleanup efforts for their area of responsibility. In case of emergency, Team Leader will notify Environmental Team.
8. All Tenant Commands and NASCC Departments. Provide as many Earth Day Base Cleanup volunteers as allowable.
9. Air Operations. Plan and execute annual Base FOD Walkdown in conjunction with Earth Day Base Cleanup. Weigh all accumulated trash and debris and provide the total to Environmental Team. Also coordinate with CCAD to cleanup seawall hangar areas.
10. Morale, Welfare, and Recreation. Coordinate with local RV Park tenants to conduct cleanup of RV Park areas in conjunction with Earth Day Base Cleanup.
11. PPV Housing Office. Coordinate with local housing residents to cleanup applicable housing areas in conjunction with Earth Day Base Cleanup.

POINTS OF CONTACT

LTJG Gottlieb

COMM. (361) 961-2152  
Steven.j.gottlieb2.mil@us.navy.mil

Jay Halepeska

COMM: (361) 961-5363  
jay.t.halepeska.civ@us.navy.mil

Rachel Houston

COMM: (361) 961-3776  
rachel.l.houston2.civ@us.navy.mil

### SCHEDULE OF EVENTS

#### Friday 12 April 2024

Team Leaders contact event POCs with estimated number of volunteers.

#### Monday 22 April 2024 – Thursday 25 April 2024

0800-1500 Provide Tenant POCs with supplies as needed. Please contact Jay Halepeska or Rachel Houston to schedule supply pick-up at Environmental office, Building 19, first floor.

#### Friday, 26 April 2024

0630 LTJG Gottlieb recommends Go/No-Go decision to CO, XO and Environmental Director based on weather conditions.

0700 Notify Command/Tenant POCs of Go/No-Go Decision

0800-1100 Volunteer Teams will pick up trash and debris in their designated areas (Enclosure 6). Place full trash bags and debris on side of road. Please do not place any trash bags or debris in dumpsters. If bulky item is found, Team Leader will contact Environmental Team for removal of item.

Environmental Team will pick up and weigh all full trash bags, debris and bulky items. Environmental Team will deliver water to all volunteers and replenish supplies.

1100 Volunteer Teams will place all unused supplies, vests and grabbers in clean trash bags and place on side of road. Team Leader will contact Environmental Team with pick up location.

End of Annual Earth Day Base Cleanup

### FOUL WEATHER EVENT

#### Monday 29 April 2024 – Friday 3 May 2024

Commands/Tenants are requested to contact the Environmental Team to schedule and conduct the base cleanup area of responsibility on a day within this period. Environmental Team will provide support.

**EARTH DAY ANNUAL BASE CLEANUP  
ENVIRONMENTAL / SAFETY BRIEF  
26 April 2024**

- IDENTIFYING WASTE
  - Domestic wastes at NASCC are defined as any item that can be disposed of in installation dumpsters.
  - Non-domestic wastes are not to be disposed of with domestic waste which includes empty paint containers, sealant containers, oil, batteries, tires, wood, and scrap metal.
- HANDLING WASTE
  - Do not handle leaking batteries, sealant tubes.
  - Do not move any waste that is leaking something other than water.
- WASTE DISPOSAL
  - Notify Team Leader of non-domestic waste and ensure it is picked up separately for proper disposal.
  - Report chemical or oil spills to Team Leader for proper cleanup and reporting.
- HEAT STRESS
  - Stay hydrated by drinking plenty of water
  - Take breaks if necessary based on physical conditioning
- SUNBURN
  - Wear sunscreen
  - Wear a head covering
- SLIPS, TRIPS, FALLS
  - Look at your walking path, do not be distracted
  - Watch for trip hazards – Curbs, Holes in the ground, Objects in path
- BACK INJURY - LIFTING HEAVY OBJECTS
  - Ask for help if lifting heavy objects
  - Use proper lifting techniques
- LACERATIONS/INSECT, SNAKE BITES
  - Wear gloves and proper footwear
  - Be aware of sharp objects – Nails, Glass, etc.
  - Be aware of snakes, spiders, bees/wasps, ant piles.
  - Wear insect repellent to aid against mosquitos

- When cleaning in or near tall grass, utilize a pick-up device to disturb grass and be aware of any snakes in that area.
- TRAFFIC HAZARDS
  - Wear safety vests for visibility when working near all roadways and parking areas
  - Be aware of vehicles/distracted drivers next to roadways and parking
  - Use crosswalks – caution when crossing roadways
  - Use vehicles appropriately
    - No personnel in back of trucks while in motion
    - No personnel riding in trailers
    - If using Gators or ATVs – Two-person limit and only vehicles authorized for operation on roadways may do so.
    - Personnel riding in the back of trucks while in operation is prohibited.
- OCEAN DRIVE AREA OUTSIDE NORTH GATE
  - Be cautious around rocks and pilings
- DO NOT PICK UP USED NEEDLES OR DRUG PARAPHERNALIA. MARK AREA AND ALLOW SME TO HANDLE

**NAVAL AIR STATION CORPUS CHRISTI  
EARTH DAY ANNUAL BASE CLEANUP 2024**

**Waiver & Release of Liability & Indemnification Form**

I, \_\_\_\_\_, acknowledge, agree and understand that:

1) I elect to participate in a Base Cleanup event at Naval Air Station Corpus Christi in April 2024.

2) I understand that there are certain risks and hazards involved in this activity which have the risk of causing serious injury or loss of personal property and have read the Environmental / Safety Points (Enclosure 4.)

3) I voluntarily elect or accept and solely assume all risk of damages, injury, including death, incurred or suffered by myself as a result of the activity listed in paragraph 1.

4) I agree to indemnify and hold harmless the Installation and its staff, Navy MWR, the U.S. Navy, and the U.S. Government and its members, agents and employees ("the Parties") from all claims, damages, losses, injuries and expenses arising out of or resulting from my participation in the activity listed in paragraph 1. I further agree to release, acquit and covenant not to sue the Parties for all actions, damages in law or remedies in equity of whatever kind, including the negligence of the Parties; nor shall my family, myself, or my heirs, on behalf of myself, bring any such action against the Parties arising out of the use of a dinghy. In short, I cannot sue the Parties.

BY MY SIGNATURE, I ACKNOWLEDGE THAT I HAVE READ AND THAT I UNDERSTAND EACH AND EVERY SPECIFICATION OF THE ABOVE PROVISIONS IN THE WAIVER, RELEASE OF LIABILITY AND INDEMNIFICATION AGREEMENT AND AGREE TO ABIDE BY THEM.

EMERGENCY CONTACT: \_\_\_\_\_

EMERGENCY PHONE NUMBER: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

PRINT NAME: \_\_\_\_\_



TEAM	POC	ORGANIZATION	EMAIL
1		MATSG-22	matsg22poolaic@gmail.com
2	Malcolm Patchett	TW4	malcolmpatchett20@gmail.com
	Sasha Cordova	CDC/YA	sasha.n.cordova.naf@us.navy.mil
	Brooke Techur	Housing	stmh@allied-rion.com
	Tanya Henigman	MWR	tanya.l.henigman.naf@us.navy.mil
	Douglas Godown	MWR	douglas.e.godown.naf@us.navy.mil
3	Malcolm Patchett	TW4	malcolmpatchett20@gmail.com
		Navy Lodge	
4	Shaun Lemon	Fire House 1	shaun.t.lemon.civ@us.navy.mil
		Fire House 1	
		Emergency Mgmt	
		CNATRA	
		USO	
5		Commissary	
		Commissary	
	Steve Evans	NEX	steven.evans@nexweb.org
	MAC Hill	Security	joshua.s.hill22.mil@us.navy.mil
	RP1 Nabel Cruz	Chapel	nabel.n.cruz.mil@us.navy.mil
6	RP2 Montelongo	NMRTC	joshua.m.montelongo.mil@us.navy.mil
7		NAVSUP	
		NAVSUP	
8	Peggy Hatcher	CCAD	peggy.v.hatcher.civ@mail.mil
	Santos De La Rosa	CCAD	santos.a.delarosa2.civ@army.mil
	Kevin Zavrotny	PWD FEAD	kevin.w.zavrotny.mil@us.navy.mil
	Rachel Houston	PW ENVIRONMENTAL	rachel.l.houston2.civ@us.navy.mil
	Jay Halepska	PW ENVIRONMENTAL	jay.t.halepska.civ@us.navy.mil
	BMC Cedillo	1st LT	dominga.cedillo.mil@us.navy.mil
10	Kevin S. Sharp	DLA	kevin.1.sharp@dla.mil
11	Tony Berry	CBP	anthony.berry@cbp.dhs.gov
	Frank Ewald	LB&B	frank.a.ewald.ctr@us.navy.mil
	Martin Wheeler	Pass and Tag	martin.f.wheeler.civ@us.navy.mil
	Steve Evans	NEX - Minimart	steven.evans@nexweb.org
		NRC	
	Shaun Lemon	Fire House 2	shaun.t.lemon.civ@us.navy.mil
Safety	Aldin Huber	Safety	aldin.s.huber.civ@us.navy.mil
PAO	Dale Davis	PAO	delbert.d.davis2.civ@us.navy.mil
PAO	Sean Dath	PAO	sean.m.dath.civ@us.navy.mil
FL	LT Mallette	VT-31	austin.w.mallette.mil@us.navy.mil
		VT-35	
		VT-27	
	LCDR White	VT-28	john.c.white191.mil@us.navy.mil
		Air Ops	

## RISK MANAGEMENT

1. TASK: 20__ Annual Earth Day Base Cleanup			2a. DATE BEGIN __ APR 2024		2b. DATE END __ APR 2024		3. DATE PREPARED 22 February 2024	
4. PREPARED BY:								
a. LAST NAME Halepeska, Jay			b. RANK CIV		c. POSITION Environmental Water Program Manager			
5. SUBTASK	6. HAZARDS	7. INITIAL RAC	8. CONTROLS	9. RESIDUAL RAC	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFECTIVE?	
Outside Activities	- Sunburn - Heat Injuries	3	- Monitor weather conditions - Use sunscreen - Hydrate	4	- Team Leaders to brief prior to event Coordinator monitors weather	- Supervisor / Team Leader monitor		
Picking up trash, walking, bending	- Lacerations - Trips falls – uneven ground - Back injury / lifting heavy objects	3	- Wear gloves / PPE - Appropriate footwear / closed toe - Be aware of surroundings - Use legs to lift or ask for assistance	4	- Safety brief	- Supervisor / Team Leader monitor		
Animals / Insects	- Snake bite - Bee Sting - Ant bites	2	- Be aware of surroundings - Use caution in tall grass - Use repellent	3	- Safety Brief prior to event and provide Handouts to volunteers ** Increased risk of rattle snakes **	- Supervisor / Team Leader monitor		
Traffic, Driving-moving vehicles/ equipment	- Street Crossings - Crashes - Personnel using vehicles/ equipment inappropriately	3	- Caution when crossing streets-cross at designated crosswalks - Follow vehicle traffic laws - Use vehicles as intended - Wear safety vest - Drive on designated roadways/ at safe speeds - Do not allow personnel to stand on vehicle in motion	4	- Safety Brief prior to event and provide handouts to volunteers - All volunteers working closely to streets are required to wear safety vests	- Supervisor / Team Leader monitor		
13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED (Check one)								
<input type="checkbox"/> LOW <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> HIGH <input type="checkbox"/> EXTREMELY HIGH								
14. RISK DECISION AUTHORITY								
a. LAST NAME			b. RANK		c. DUTY POSITION		d. SIGNATURE	

# **APPENDIX E**

## **MCM 3: IDDE Supporting Documentation**

**(18 PAGES)**

# Naval Air Station Corpus Christi Spill Report Form

IN CASE OF EMERGENCY, CALL 911.

FOR REPORTABLE SPILLS, NOTIFY COMMAND DUTY OFFICER (CDO) 361-534-9093.

SUBMIT THIS SPILL REPORT WITH PHOTOS AND NOTIFY ENVIRONMENTAL DEPT. OF ALL SPILLS, INCLUDING NON-REPORTABLE AND INCIDENTAL SPILLS AT 361-961-5353/3776/5356.

Spillers are responsible for spill cleanup, report, and costs.

Date of reporting:		Time of reporting:	
A. REPORTING AND RESPONSIBLE PARTY INFORMATION			
Is the Reporting Party responsible for the Spill?		YES	NO
	Reporting Party	Responsible Party	
Name:			
Title and Company:			
Phone No.:			
Email Address:			
INCIDENT INFORMATION			
Location of Spill Site:			
Date of Spill, if different from above:		Time of Spill, if different from above:	
Description of source of spill:			
Type of substance spilled:			
MS4 Compliance/Prioritized Risk of Pollution: LOW			
Quantity of spilled:		Is it reportable:	
Description of spill location and surroundings (parks, Child Development Center, hospital, building numbers, etc.):			
Did spill impact stormwater conveyance features (drains, inlets, culverts, ditches), water bodies, lift stations? Explain.			
Actions taken to address the threat or hazard caused by the spill:			
NAME OF THOSE NOTIFIED			
Command Duty Officer (CDO): (361-534-9093) Contact Name:			
PWD Environmental: (361-961-5353/3776/5356) Contact Name:		Jillian Dunnam / Rennie Penitusi	
For CDO or NASCC PWD Respondents after initial notification:			
Texas Commission on Environmental Quality(TCEQ) (Mon. - Friday 8am to 5pm): (361-825-3100)			
Contact Name:			
Date contacted:		Time contacted:	
TCEQ After Hours Hotline: ChemTEL 1-800-832-8224			
Date contacted:		Time contacted:	
National Response Center: 1-800-424-8802			
Date contacted:		Time contacted:	



Standard Operating Procedure  
MS4 Quarterly Dry Weather Outfall Inspection  
Naval Air Station Corpus Christi, Texas

**Quarterly Outfall Inspections (QOI) of Naval Air Station Corpus Christi's (NASCC)** stormwater outfalls is a requirement of the **facility's Stormwater Management Program** and Municipal Separate Storm Sewer System (MS4) Permit (Authorization No. TXR040329). Both industrial and non-industrial outfalls are included in the QOI form, **even though the industrial outfalls are monitored and sampled under the facility's Multi Sector General Permit (MSGP) for Industrial Activities (Permit Auth. No. TXR05P596)**. NASCC has 44 outfalls with seven of the 44 listed as industrial. Outfalls are identified by a three-digit number and have GPS coordinates for ease of finding. NASCC discharges to three receiving water bodies, Corpus Christi Bay and Oso Bay (refer to the table at the end of this SOP). Maps of the outfalls per water body are included with the QOI forms to assist with finding the outfalls. Refer to the TCEQ Regulatory Guidance 403 to assist with the visual inspection. While RG403 is for the MSGP, the visual monitoring required for wet inspections is the same for the MS4. The protocol below describes the steps for completing the inspections.

Required PPE and equipment:

Gloves	Sampling pole
Muck boots or steel toe	Distilled water
3 Sampling jars for Visual Inspections (one for each of the receiving water bodies)	Sharpie and pens
Sample collection jars, just in case	Small cooler with ice
	Inspection forms
	Plastic bag for waste

**MS4 – TXR040329**  
**BMP IDDE-4**  
**NASCC, TEXAS**

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Procedure:

1. Request access to the following areas in advance, recommend 3 to 7 days:
  - a. Flightline areas
    - i. All Oso Bay Outfalls
    - ii. Outfall 007
  - b. Ordinance area
    - i. Outfalls 011 to 015
2. Make sure it has not rained in the last 24 hours. Inspect outfalls using the Outfall Inspection Form. One form per outfall. Do not leave blanks.
3. Use the map and GPS coordinates to assist in the location of the outfall.
4. Observe the outfall and condition of the outfall conveyance structure to confirm there are no illicit discharges or structural damages. If the outfall is unreachable, use an upstream drain, inlet or culvert to make the observation and note it in the comments.
5. If an illicit discharge is observed, go to step 9. If an illicit discharge is not observed and the outfall is wet, use the sampling pole to obtain a grab sample of the water from the outfall. Be sure to wear gloves. Place the sample in the clean, clear glass jar provided for the specific water body. Attempt to take the sample from the middle of the water column to avoid scooping sediment or solids into the sample. Once the observations are completed, dump the sample back into the same outfall. Rinse the container with distilled water and pour the rinsate into the same outfall.
6. If notifications or corrective actions are required, explain the notification or corrective action and include the date of the notification or corrective action. Make notifications after completion of the inspections.
7. Be sure to sign your name and include the date.
8. Provide a report of the inspection to the Environmental Program Director, who will provide a copy to the Public Works Officer if the outfalls are in need of repairs or corrective actions. Be sure to write the date of the notifications and date of repairs on the inspection forms. A copy of the inspection report and figures are located in the following file:
9. If an illicit discharge is detected, complete the following:
  - a. Fill out the NASCC Spill Report Form
  - b. Collect a sample using the instructions above using an unused sample jar. Put date, time, initials, and location (outfall number) on bottle. Place in ice chest.
  - c. Speak to Biji regarding funding.



### NASCC Stormwater Outfall Locations

Outfall	Latitude	Longitude
001	-97.2926	27.7058
<b>002*</b>	-97.2860	27.7049
003	-97.2856	27.7050
004	-97.2837	27.7048
005	-97.2826	27.7045
006	-97.2822	27.7044
<b>007*</b>	-97.2736	27.7024
008	-97.2613	27.6989
009	-97.2539	27.6967
010	-97.2523	27.6963
011	-97.2446	27.6891
012	-97.2472	27.6912
013	-97.2496	27.6918
014	-97.2514	27.6922
015	-97.2530	27.6929
016	-97.2558	27.6934
<b>017*</b>	-97.2566	27.6911
018	-97.2574	27.6890
019	-97.2574	27.6889
020	-97.2576	27.6881
021	-97.2580	27.6873
<b>022*</b> (formerly 026)	-97.2734	27.6806
<b>023*</b> (formerly 033)	-97.2970	27.6951
<b>024*</b>	-97.2672	27.6819
<b>025*</b> (formerly 042)	-97.2700	27.7014
026 (formerly 022)	-97.2587	27.6854
027	-97.2976	27.6840
028	-97.2982	27.6847
029	-97.2988	27.6853
030	-97.2999	27.6886
031	-97.2980	27.6915
032	-97.2972	27.6919

**MS4 – TXR040329**  
**BMP IDDE-4**  
**NASCC, TEXAS**

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Outfall	Latitude	Longitude
033 (formerly 023)	-97.2604	27.6818
034	-97.2972	27.6953
035	-97.3018	27.7047
036	-97.3023	27.6997
037	-97.3005	27.7059
038	-97.2507	27.6952
039	-97.2818	27.7042
040	-97.2814	27.7041
041 (formerly 024)	-97.2635	27.6801
042 (formerly 025)	-97.2656	27.6814
043 (formerly 024, 041)	-97.2780	27.7037
044	-97.2661	27.6815

\*Industrial Outfall regulated in the TCEQ Multi-Sector General Permit (MSGP).






# Quarterly Outfall Inspection Form

(One form per outfall. Do not leave blanks. Include notifications and/or corrective actions with dates.)

Outfall Number:		Circle one Non-industrial or Industrial	Name:		
Quarter/Year:		Date/Time:		Receiving Water Body:	
Parameter	Parameter Description	Parameter Characteristics			
1. Dry	Is the soil stained? <b>Yes or No</b>	Describe:			
2. Wet	Is the outfall flowing? <b>Yes or No</b>	Describe:			
3. Color	Does the water appear to be colored? <b>Yes No N/A</b>	Describe:			
4. Clarity	Can you see through the water? <b>Yes or No N/A</b>	Clear	Milky	Opaque	
		Other (describe):			
5. Oily Sheen	Can you see a rainbow effect or sheen on the surface of the water? <b>Yes or No N/A</b>	Oily	Silver	Iridescent	
		Other (describe):			
6. Odor	Does the sample have an odor? <b>Yes or No N/A</b>	Describe:			
7. Floating Solids	Is there something floating on the surface of the sample? <b>Yes or No N/A</b>	Describe:			
8. Suspended Solids	Is there something suspended in the water column? <b>Yes or No N/A</b>	Describe:			
9. Settled Solids	Is there something settled in the bottom of the sample? <b>Yes or No N/A</b>	Describe:			
10. Foam	Is there foam or material forming on the top of the water? <b>Yes or No N/A</b>	Describe:			
11. Functionality	Is the outfall draining properly? <b>Yes or No</b>	Describe:			
12. Structurally	Is the outfall structure damaged or in need of repair? <b>Yes or No</b>	Describe:			
Describe any concerns, corrective actions taken, dates of corrective actions, and any other obvious indicators of pollution:					
Signature:					



**Legend**

-  Stormwater Outfall
-  Stormwater Inlet
-  Stormwater Manhole
-  Stormwater Pipe
-  Open Drainage

GIS Source: NAVFAC SE, AH  
Date: July 2024

0 500 1,000 Feet



**MS4 Stormwater Outfalls**  
Naval Air Station Corpus Christi, Texas

Figure 1







GIS Source: NAVFAC SE, AH  
Date: July 2024

0 500 1,000 Feet



**MS4 Stormwater Outfalls**  
Naval Air Station Corpus Christi, Texas

Figure 4







GIS Source: NAVFAC SE, AH  
Date: July 2024

0 500 1,000 Feet



**MS4 Stormwater Outfalls**  
Naval Air Station Corpus Christi, Texas

Figure 7



GIS Source: NAVFAC SE, AH  
Date: July 2024

**MS4 Stormwater Outfalls**  
Naval Air Station Corpus Christi, Texas

Figure 8



## Standard Operating Procedure for Illicit Discharge Investigation and Elimination Naval Air Station Corpus Christi

Dry weather outfall inspections (IDDE-4) are likely to result in the identification of flows that cannot be readily attributed to known allowable non-stormwater discharges (suspected/potential illicit discharges). In these instances, or when potential illicit discharges are reported by the public NASCC implements the SOPs included herein for investigating and eliminating such flows if determined to be illicit. The following steps summarize the general tracing and removal procedures:

1. Follow flow to the most upstream stormwater structure where flow can be observed.
2. Attempt to isolate or verify source using sonic testing, flow testing, video inspection, temporary dams, smoke testing, and/or dye testing.
3. If the flow is not an allowable non-stormwater discharge (refer to Section 5.1 of the SWMP), complete the NASCC Spill Report Form (included in this appendix). If possible, implement immediate mitigation.
4. Develop and document a plan and schedule for removal.
5. Remove the illicit discharge.
6. Six months after removal, conduct a follow up dry weather outfall inspection at the most upstream stormwater structure where the flow was originally observed.

### ISOLATION AND SOURCE VERIFICATION

Once the source of an illicit discharge has been traced to a pipe of unknown origin or approximated to a section of pipe between two drainage structures, one or more of the following techniques shall be implemented to determine the source:

- Sonic testing
- Flow testing
- Video (CCTV) inspections
- Temporary dams
- Smoke testing
- Dye testing



### Sonic Testing

Sonic testing is the least invasive investigative method for determining connectivity of a pipe of unknown origin. This method is typically applied early in the investigative process due to its low impact and ease of implementation. Sonic testing requires two or more personnel. One person creates a noise, either at the drainage structure where the discharge was observed or at the suspected source (catch basin, drain, etc.), while the other person attempts to observe the noise at the other structure. The most effective method for creating a noise is using a hammer to strike a closed manhole lid or storm grate. At the noise observation point, the structure may need to be **uncovered, as in the case of manhole, with the listener's ear held close to the structure opening.** Sonic testing is often used as a preliminary test to determine connectivity, but the results of this method of testing are often inconclusive and additional investigative techniques may be necessary.

### Flow Testing

Flow testing is usually the next simple test to be implemented in determining connectivity of a pipe of unknown origin. Similar to sonic testing, this is a minimally invasive test and can be implemented with relative ease. Flow test requires two or more personnel. One person is stationed at the drainage structure where the discharge was observed and watches the discharge pipe of interest. The second person introduces an artificial flow at the suspected upstream end of the pipe. The introduced flow must be uncontaminated water (i.e., potable water or surface water). If the test is located in the vicinity of a potable water source (e.g., hose bib), a hose may be used to initiate the artificial flow. In cases where there is no readily accessible clean water source, a portable tank can be used. Flow testing is generally more conclusive than sonic testing, but is limited when the suspected illicit discharge flowrate is on the order of, or greater than the artificial flow. Non-toxic, biodegradable dyes (usually in pellet or powder form) may be added to the artificial flow stream to assist with visibility (refer to *Dye Testing*).

### Video (CCTV) Inspections

Another method of source verification involves deploying mobile closed-circuit cameras that are guided remotely through stormwater drain lines to observe potential illicit discharges. CCTV equipment can range from high-tech, track-mounted cameras that include rotating lenses, winch



retrieval systems, and advanced recording technology to inexpensive universal serial bus (USB) wire cameras that attach to a lap top computer. The high-tech version is effective and usually definitive, but is costly, requires trained operators, and can be time consuming. Furthermore, implementation of the track-mounted systems is usually limited to pipes equal to or greater than 12 inches. USB wire cameras require less skill to implement and can be used for smaller diameter piping, but must be manually pushed into the piped using a pipe snake or similar device, limiting the range of inspection (i.e., length of pipe inspected).

#### Temporary Dams

Using temporary dams is a useful technique for isolating illicit discharges that are intermittent or those with very low flow. This technique is employed by creating a barrier within a stormwater manhole or junction box to form a temporary dam that retains flow that would otherwise be difficult to observe or sample for analysis. Temporary damming can be achieved with sandbags, caulking, or weir plates. The dams should be left in place for 48 hours, and should only be installed if the precipitation forecast is dry for that time period. If, after 48 hours of dry weather, no flow has collected behind the temporary dam, the contributing upstream pipe network can reasonably be eliminated as a source of illicit discharge. Limitations to this technique include weather dependence and instances where deep structures require a permitted confined space entry.

#### Smoke Testing

Smoke testing consists of introducing non-toxic / non-hazardous smoke into the storm drainage structure where the potential illicit discharge was observed. Smoke is introduced by a high-volume, gasoline-fueled smoke blower. Smoke bombs or liquid smoke can be used as the smoke source. The blower is placed over the opening to the manhole or catch basin to force smoke into the system and through the pipes. Inflatable rubber pipe plugs may be used to exclude pipes that are not of interest. Ideally, a smoke testing team consists of one blower operator and two smoke spotters. Once smoke is introduced to the system, the spotters provide surveillance in areas where illicit connections or cracks/leaks are suspected. Escape of smoke, other than through connected stormwater structures, may indicate an illicit connection (smoke emitting from a plumbing vent or drain) or a damaged pipe (smoke emitting from the ground). The smoke used for these tests can cause minor respiratory irritation and be an unnecessary cause for alarm for an uninformed



public. Prior to smoke testing, written smoke test notifications should be distributed to affected departments and tenant commands. The notices provide information about the purpose of smoke testing, the testing schedule, and proper actions to take if smoke enters a building. The testing team must also notify installation emergency services dispatch at the beginning of each smoke testing event.

#### *Dye Testing*

Dye testing is an effective method to confirm a suspected sanitary connection to the storm system. This test involves introducing a non-toxic, biodegradable dye (of a highly visible color) at the suspected source of the discharge in question, then observing the storm sewer structure or outfall downstream of the suspected illicit discharge for presence of the dye. As with smoke testing, notifications should be distributed to affected departments and tenant commands, as well as emergency services dispatch prior to dye testing. The notices provide information about the purpose of dye testing and the testing schedule. Dye testing requires two or more people: one person applying the dye at the suspected discharge source, and one or more people observing the downstream storm system. Communication between the testing team members is important throughout a dye test and can be achieved with two-way radios or mobile telephones.

## **APPENDIX F**

### **MCM 4: Construction Site Stormwater Runoff Pollutant Control Supporting Documentation**

**(7 PAGES)**

Naval Air Station Corpus Christi – Environmental Division	
Construction SWP3 Review Checklist	
Project Name:	Primary Site Operator:
Description of the nature of the construction activity:	
List of potential pollutants and their sources: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Description of the intended schedule or sequence of activities that will disturb soil for major portions of site: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Total acres of the entire property and the total number of acres where construction activities will occur:	Data describing the soil:
Map showing the general location of the site: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Y / N <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Detailed Map (as applicable): 1. Drainage patterns and approximate slopes anticipated after major grading 2. Areas where soil disturbance will occur 3. Locations of all major structural controls (planned or in place) 4. Location where temporary or permanent stabilization practices are expected to be used 5. Location of construction support activities 6. Surface water 7. Locations where stormwater discharges from the site directly to a surface water body 8. Vehicle wash areas 9. Concrete wash areas
Location and description of support activities authorized by the permit: Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Name of receiving water(s):	
Description of BMPs (Erosion & Sediment Controls): Yes <input type="checkbox"/> No <input type="checkbox"/>	
Description of any permanent stormwater control measure: Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Description of controls utilized to minimize dust and off-site tracking of sediment: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Description of construction and waste materials expected to be stored on-site and controls to minimize pollutants: Yes <input type="checkbox"/> No <input type="checkbox"/>	

Print name and title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



Standard Operating Procedure for  
Construction Site Stormwater Inspections  
Naval Air Station (NAS) Corpus Christi

SCOPE: Construction site stormwater inspections of sites covered under the Texas Commission on Environmental Quality (TCEQ) Stormwater General Permit for Construction Activities (CGP) at NAS Corpus Christi are to be completed in accordance with this Standard Operating Procedure (SOP). Sites shall be inspected for compliance with the CGP and the MS4 General Permit No. TXR040000.

REFERENCES:

- a. NAS Corpus Christi Stormwater Management Plan (SWMP)
- b. TCEQ Construction General Permit No. TXR150000
- c. TCEQ MS4 General Permit No. TXR040000
- d. TCEQ Regulatory Guidance – 348, Chapter 1: Temporary Best Management Practices

PURPOSE: The purpose of this SOP is to provide guidelines for performing periodic construction site stormwater inspections at NAS Corpus Christi in order to ensure that contamination is not leaving the installation in the stormwater conveyance system. While inspections are required annually for permitted sites, inspections of smaller jobs and more frequent inspections of permitted sites having issues are encouraged and should be completed as time permits.

**MS4 – TXR040329**  
**BMP CS-3**  
**NAS CORPUS CHRISTI, TEXAS**

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PROCEDURE:

Planning Considerations:

- Employees should review and understand the information presented in reference (a) through (d) regarding the requirements for construction site stormwater control.
- Inspectors should complete annual E&SC training provided by the NAS Corpus Christi Public Works Department (PWD) Environmental Division (EV).
- If conducting a scheduled inspection, notify contractor and PWD Facilities, Engineering and Acquisition Division (FEAD) of the date and time. Unannounced inspections may be conducted to ensure compliance is not occurring just in time for MS4 inspections.
- Attempt to time inspections over the lifetime of the project to capture both dry and wet weather conditions.
- Review Construction Site Stormwater Pollution Prevention Plan (SWP3) and previous inspection reports.

Equipment List:

- ☐ Appropriate Personal Protective Equipment (PPE)
- ☐ Construction Site Inspection Checklist
- ☐ Camera Pass
- ☐ Cell phone w/ camera
- ☐ Clipboard and pens

**MS4 – TXR040329**  
**BMP CS-3**  
**NAS CORPUS CHRISTI, TEXAS**

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Field Methods:

- **Notify the contractor's environmental manager. Encourage the manager to attend the inspection so that deficiencies are clear.**
- Complete the construction site stormwater inspection checklist.
- Inspect areas within the active construction area only if safe to do so.
- Photograph any major compliance issues and take detailed notes of locations of findings.
- If dry weather flow is present, refer to BMPs IDDE-3 and IDDE-5 in the SWMP for guidance on how to proceed.

RESPONSIBILITIES:

- a. The PWD EV Water Program Manager shall ensure that all construction stormwater inspections are completed and documented. The Water Program Manager will report all potential illicit discharges to the Installation Environmental Program Director (IEPD).
- b. After consulting the IEPD, the Water Program Manager will coordinate with FEAD and the contractor to ensure that all issues noted during the inspection are addressed within 7 days. Refer to Section 9.4 of the SWMP for information on enforcement as it relates to construction site stormwater management.

# Construction Site Stormwater Inspection Report

General Information			
<b>Project Name</b>			
<b>TPDES Tracking No.</b>		<b>Start Time</b>	
<b>Date of Inspection</b>		<b>End Time</b>	
<b>Construction Site Operator:</b>			
<b>Construction Operator Contact:</b>			
<b>Type of Inspection:</b> <input type="checkbox"/> Regular <input type="checkbox"/> Pre-storm event <input type="checkbox"/> During storm event <input type="checkbox"/> Post-storm event			
Weather Information			
<b>Has there been a storm event since the last inspection?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>If yes, provide:</b> Storm Start Date: _____ Approximate Amount of Precipitation (in): _____			
<b>Weather at time of this inspection?</b> <input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snowing <input type="checkbox"/> High Winds <input type="checkbox"/> Other: _____ Temperature: _____			
<b>Are there any discharges at the time of inspection?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>If yes, describe:</b>			

	<b>BMP/activity</b>	<b>Implemented?</b>	<b>Maintenance Required?</b>	<b>Corrective Action Needed and Notes</b>
1	Site Notice Posted in an area readily available for review?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
2	Have structural controls been implemented on all down-slope boundaries of the construction site?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4	Are discharge points and receiving waters free of any sediment deposits?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5	Are storm drain inlets properly protected?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6	Is the construction exit preventing sediment from being tracked into the street?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7	Is trash/litter from work areas collected and placed in covered dumpsters?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

**NAVAL AIR STATION CORPUS CHRISTI**

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	<b>BMP/activity</b>	<b>Implemented?</b>	<b>Maintenance Required?</b>	<b>Corrective Action Needed and Notes</b>
8	Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
10	Are materials that are potential stormwater contaminants stored inside or under cover?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
11	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
12	Was SWP3 developed and Implemented?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
13	Are inspections of controls being conducted as required?	<input type="checkbox"/> Yes <input type="checkbox"/> No		

**Non-Compliance**

Describe any incidents of non-compliance not described above:

Print name and title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# EROSION & SEDIMENT CONTROL BMPs FOR CONSTRUCTION ACTIVITIES

## Naval Air Station Corpus Christi, Texas

BMPs are used to minimize the potential for stormwater pollution.  
The following 10 steps demonstrate typical construction site BMPs.



- 1 Protect Areas Reserved for Vegetation or Infiltration and Preserve Existing Trees** – Ensure areas surrounding mature trees and infiltration based features such as rain gardens are designated as off limits to avoid compaction.
- 2 Stockpile Your Soil** – MDEQ Construction General Permits require operators to preserve native topsoil on site, unless infeasible, and protect all soil storage piles from run-on and runoff. For smaller stockpiles, covering the entire pile with a tarp may be sufficient.
- 3 Protect Construction Materials from Run-On and Runoff** - Cover materials that could leach pollutants at the end of each workday and during precipitation events.
- 4 Designate Waste Disposal Areas** - Clearly identify and label separate on site waste disposal areas for hazardous waste, construction waste, and domestic waste. Protect all waste disposal areas from run-on and runoff.
- 5 Install Perimeter Controls on Downhill Lot Line** - Install perimeter controls such as sediment filter logs or silt fences around the downhill boundaries of your site.
- 6 Install Inlet Controls** - Sediment control logs, gravel barriers, and sand or rock bags provide effective inlet controls. Periodically remove accumulated sediment.
- 7 Install a Concrete/Stucco Washout Basin** - Designate a leak-proof basin lined with plastic for washing out used concrete and stucco containers.
- 8 Maintain a Stabilized Exit Pad** - Minimize sediment track-out from vehicles exiting your site by maintaining an exit pad made of crushed rock spread over geotextile fabric.
- 9 Post Your NOI and Keep a Current Copy of Your SWPPP on Site** - Post a sign or other notice of your permit coverage, including site contact information. Keep a complete, current, and easily accessible SWPPP on site, including site maps showing locations of all existing and planned BMPs.
- 10 Site Stabilization** - Immediately stabilize exposed portions of the site whenever construction work will stop for 14 or more days. Final stabilization is required prior to terminating permit coverage.

This poster was developed to educate NAS Corpus Christi personnel about stormwater pollution prevention in accordance with the Texas Pollution Discharge Elimination System (TPDES) Construction General Permit (CGP) TXR150000.

*Your stormwater program contact:*  
NAS Corpus Christi Public Works Environmental Office,  
Stormwater Program Manager:  
**361-961-5363**

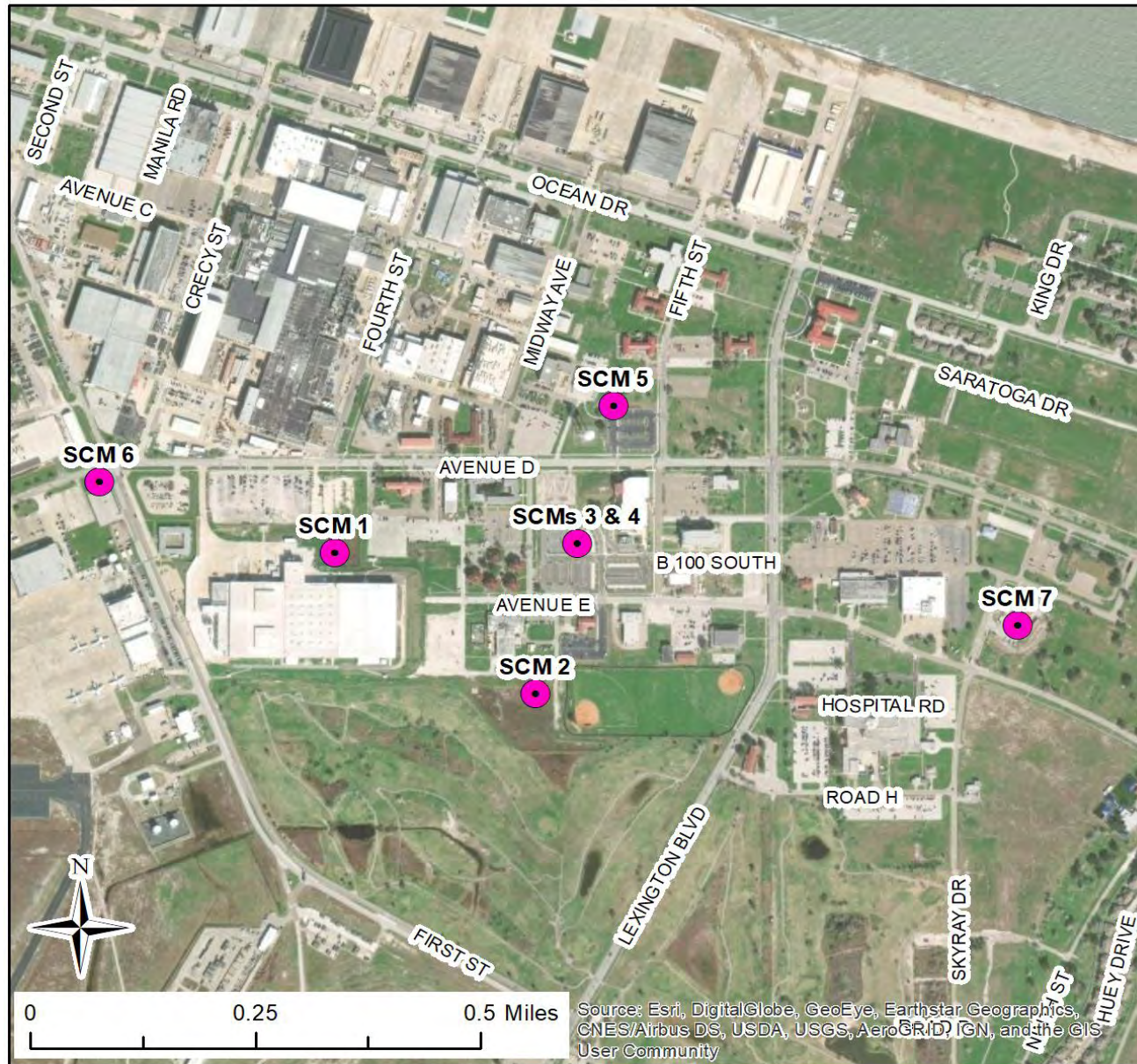
## **APPENDIX G**

### **MCM 5: Post-Construction Stormwater Management Supporting Documentation**

**(3 PAGES)**

## PERMANENT SCM INVENTORY

SC M No.	Location	Owner	SCM Description	Latitude Longitude	Inspection & Maintenance Requirements
1	Building 1700 (north side)	NASCC	Vegetated infiltration basin receiving runoff from a portion of the Building 1700 compound. Basin includes an underdrain system connected to an overflow riser structure in the northwest corner.	27.6932° -97.2751°	- Inspect annually. - Maintain vegetation at least monthly. - Clean overflow riser as needed.
2	Southeast of Intersection of Ave. F and Bougainville St.	NASCC	Vegetated infiltration basin receiving runoff from a portion of the Building 1700 compound. Basin includes an outlet structure in the northeast corner.	27.6907° -97.2723°	- Inspect annually. - Maintain vegetation at least monthly. - Clean outlet structure as needed.
3	Building 1734 Parking Lot (Southwest)	NASCC	Network of raingardens receiving flow from surrounding parking areas serving Building 1734. Each raingarden includes a catch basin outlet structure.	27.6931° -97.2710°	- Inspect annually. - Maintain vegetation at least monthly. - Clean outlet structure as needed.
4	Building 1734 Parking Lot (Southwest)	NASCC	Permeable pavement (pavers) in portions of the Building 1734 parking lot.	27.6931° -97.2710°	- Inspect Annually. - Vacuum pavement annually.
5	Building 1734 Parking Lot (North)	NASCC	Vegetated infiltration trench receiving runoff from adjacent parking lot located south of the SCM. Outlet structure is a concrete weir.	27.6953° -97.2709°	- Inspect annually. - Maintain vegetation at least monthly. - Clean outlet structure as needed.
6	Southeast of Intersection of 1st St. and D St.	NASCC	Boulder-lined infiltration basin receiving flow from adjacent parking lot to the south. Basin includes an overflow riser structure on its north end.	27.6941° -97.2791°	- Inspect annually. - Maintain vegetation at least monthly. - Clean overflow riser as needed.
7	Building 4008 (south side)	NASCC	Vegetated infiltration basin receiving runoff from Building 4008 and its parking lot. Basin does not include an overflow structure.	27.6916° -97.2645°	- Inspect annually. - Maintain vegetation at least monthly.



**Stormwater Control Measure (SCM) Inspection Form**  
**Naval Air Station Corpus Christi, TX**

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Inspector: \_\_\_\_\_ Date Last Rainfall >0.1": \_\_\_\_\_

Inspection Date/Time: \_\_\_\_\_ Rainfall Amount (in): \_\_\_\_\_

<b>Identify SCM:</b>	
----------------------	--

Reason for Inspection				
<input type="checkbox"/> Annual	<input type="checkbox"/> Rain Event	<input type="checkbox"/> Complaint	<input type="checkbox"/> Follow-up	<input type="checkbox"/> Construction
<input type="checkbox"/> Other (explain):			<input type="checkbox"/> Awaiting Maintenance/Repair	

Erosion/Sediment/Pollution Issues	YES	NO	N/A
Is there evidence of erosion or sediment accumulation around the SCM?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is vegetation associated with the SCM overgrown?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there evidence of trash, debris, or other pollutants (spills) in or around the SCM?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the outlet structure blocked or damaged and in need of repair? If yes, explain below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Action/Follow Up Required?</b> If yes, explain below.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Is photo documentation attached or available:	<input type="checkbox"/>	<input type="checkbox"/>
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<b>Describe Condition of SCM:</b>	

<b>Other Comments:</b>	

Work Order # or Project #:	
Date WO or Project submitted	
Expected Completion Date:	

## **APPENDIX H**

MCM 6: Pollution Prevention / Good  
Housekeeping for Municipal Operations  
Supporting Documentation

(39 PAGES)



# STORMWATER POLLUTION PREVENTION - NAVAL AIR STATION (NAS) CORPUS CHRISTI, TEXAS

Presented by:



ah  
ENGINEERS & SCIENTISTS  
AH Environmental Consultants, Inc.




NAVFAC  
Naval Facilities Engineering Systems Command  
NAVFAC SOUTHEAST

1



## TWO VERY DIFFERENT "SEWER" SYSTEMS

A SANITARY sewer system flows to a wastewater treatment plant that removes contaminants and disinfects the discharge (we still need to be careful what we put into the sanitary sewer!).

A STORM sewer system receives little to no treatment prior to discharge. Storm sewer lines typically include metal or concrete culverts and pipes, concrete or vegetated ditches, and catch basins (inlets).

2

## TYPES OF STORMWATER POLLUTION



Sediment



Metals



Surfactants



Fuels/POLs



Nutrients



Trash



Pathogens

3

## IS IT A "STORM DRAIN"?



*If it's outside, it's probably a storm drain!*

4



# THINGS THAT **SHOULDN'T** GO DOWN A STORM DRAIN





CLEANING COMPOUNDS, SOAP, OR DETERGENT  
 PETROLEUM PRODUCTS (OIL, HYDRAULIC FLUID, JP5)  
 FLOOR OR DECK SWEEPINGS  
 CARDBOARD, STYROFOAM, OR OTHER PRODUCT PACKAGING  
 ENGINE WASH WATER  
 MOP WATER  
 PAINT OR PAINT CHIPS  
 METAL SHAVINGS  
 TRASH  
 CIGARETTE BUTTS  
 CHT/SEWAGE  
 BILGE WATER  
 PET WASTE  
 SEDIMENT





ANYTHING THAT ISN'T STORMWATER OR DECHLORINATED DRINKING WATER

**What would you do with the waste in this photo???**

5



# GENERAL STORMWATER BEST MANAGEMENT PRACTICES AT MILITARY INSTALLATIONS






6

## STORMWATER BEST MANAGEMENT PRACTICES



Make sure your drip pan is  
appropriately sized and  
**doesn't leak**



Check, empty, and clean  
drip pans regularly



Label all drip pans  
**"Used Oil"**

*If your equipment leaks, use a drip pan... and get it fixed!*

7

## STORMWATER BEST MANAGEMENT PRACTICES



Clean spills with sorbents. Oil absorbent pads, boom, and absorbent granules are approved methods for cleaning up spills of petroleum-based materials. Recycled red rags can be used to clean routine drips and residues of oil and other petroleum products on shop equipment or surfaces.



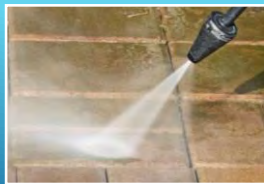
Oil spills and leaks are common! Sites that store or handle petroleum products should have a spill kit readily available. Check with your Hazardous Waste Coordinator for proper procedure to dispose of used sorbents.

8

## STORMWATER BEST MANAGEMENT PRACTICES



DO sweep and pick up dirt and debris.  
DO NOT sweep debris into the road or parking lot – it will end up in our waterways.



You can use a power washer (**no detergents/chemicals**) to clean sidewalks where there is no history of spills.

9

## STORMWATER BEST MANAGEMENT PRACTICES



- ▶ Store Wastes on Spill Pallets
  - ▶ Store liquid wastes and materials on spill containment pallets or within secondary containment out of contact with rainwater.
  - ▶ Containers of 55 gallons or greater must have secondary containment. Keep containments clean and dry.



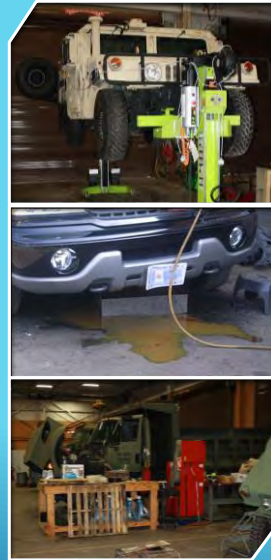
10

## STORMWATER BEST MANAGEMENT PRACTICES



### ► Conduct Maintenance Indoors

- When maintenance is conducted indoors, spilled liquids and debris can be easily noticed, contained, and cleaned.
- When maintenance is conducted outdoors, spilled liquids and debris can be absorbed into the ground or carried off site in stormwater runoff.



11

## STORMWATER BEST MANAGEMENT PRACTICES



### ► Assure Proper Valve Operation

- Only authorized, trained personnel should operate or align valves.
- Keep containment valves closed when not draining stormwater – valves are closed when the handle is perpendicular to the drainpipe.
- When drain valves are left open, liquids may leak onto the ground and enter the stormwater system.



12

## STORMWATER BEST MANAGEMENT PRACTICES



- ▶ Inspect industrial areas periodically for leaks or conditions that allow stormwater to contact pollutant sources:

- ▶ Leaking pipes, pumps, or hose connections
- ▶ Corroded or damaged drums
- ▶ Cracked containments
- ▶ Leaking vehicles and equipment
- ▶ Poor storage of hazardous materials or hazardous wastes
- ▶ Excess or abandoned materials
- ▶ Litter and debris



- ▶ Sloppy storage areas and on-going leaks are a good sign that thorough inspections are not being conducted.

13

## STORMWATER BEST MANAGEMENT PRACTICES



- ▶ Keep dumpster lids closed to keep out rainwater.
- ▶ Plug dumpster drain holes to prevent garbage leachate from draining onto the ground.
- ▶ Do not overfill dumpsters!



14



## STORMWATER BEST MANAGEMENT PRACTICES

### ► Do Not Overfill Tanks or Drums

- Look for indicators that the drum may be over full!
- Leave drums adequate head space for expansion. Fill to maximum 90% of drum volume.
- Do not top off your gas tank. When the gas pump nozzle clicks off automatically, do not attempt to add more.



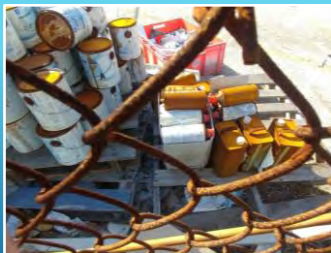
15



## STORMWATER BEST MANAGEMENT PRACTICES

Store chemicals indoors and under cover. When you finish a project or your shift, return hazardous materials to their appropriate storage location.

Chemicals not properly stored indoors or undercover can lead to stormwater contamination – a violation.



Containers may rust; contents may leak. Containers or their contents may not be usable and could be considered abandoned hazardous waste – another violation.

16

## SPECIFIC STORMWATER ISSUE: FAMILY HOUSING



- ▶ Use nontoxic, biodegradable, and recyclable products whenever possible.
- ▶ Check vehicles for leaks and recycle used motor oil; never pour it on the ground or into a storm drain.
- ▶ Minimize pesticide use.
- ▶ Follow directions on fertilizer labels and sweep off driveways, sidewalks, and roads so that the chemicals don't wash into the storm drain.
- ▶ Compost leaves and grass clippings; don't dump them in ditches or waterways.
- ▶ Pick up after your pet; don't let pet waste enter the storm drain.
- ▶ Harvest rainwater for plant watering and/or direct gutter downspouts onto vegetated areas and away from paved surfaces.
- ▶ Cover and do not overfill trash cans or recycling bins.
- ▶ NEVER pour any kind of waste onto the ground or into a storm drain!
  - ▶ Oils and lubricants
  - ▶ Paints or paint chips



17

## SPECIFIC STORMWATER ISSUE: LANDSCAPING/GROUNDS MAINTENANCE



- ▶ Follow application guidelines on pesticides / fertilizer labels.
- ▶ Avoid chemical application near curbs and driveways; sweep off driveways, sidewalks, roads and parking lots so that the chemicals don't wash into the storm drain.
- ▶ Do not apply pesticides and fertilizers if rain or wind is predicted.
- ▶ Use natural, non-toxic fertilizers / pesticides if possible.
- ▶ Store landscape materials in a covered area and properly cover stockpiles of soil, compost or mulch with a tarp.
- ▶ Properly dispose of yard waste - do not blow, rake, sweep, or hose it into streets, waterways, or the storm drain system.
- ▶ Avoid overwatering to prevent runoff.
- ▶ Plant native vegetation to reduce the need for irrigation.
- ▶ Properly dispose of chemicals – do not pour into sink, storm drain, or street.
- ▶ Use ground cover, berms, and vegetation to capture runoff and prevent erosion.

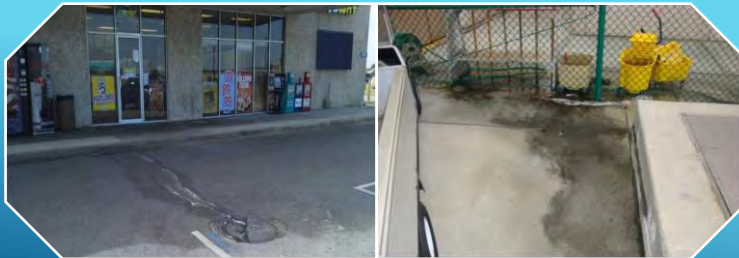


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## A SPECIAL NOTE ABOUT: MOP WATER

- ▶ Pour mop and wash water into a deep sink or down a floor drain, not into gutters, storm drains, or parking lots.
- ▶ Mop water contains detergents, oil and grease, food wastes, and solid materials that should not enter the stormwater system.
- ▶ Mop water from some industrial areas contains hazardous waste such as heavy metals or solvents and must be containerized for proper disposal.



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## A SPECIAL NOTE ABOUT: PAINTING AND PAINT REMOVAL

When preparing to paint, place tarps or plastic sheeting to capture chips scraped off buildings. NEVER use a power washer to remove loose paint. Collect paint chips on the ground by hand or with a LABELED vacuum cleaner and containerize.

Improper Paint Removal



Improper Paint Cleanup



DO NOT clean paint containers or tools onto the ground or into a drain. SCRAPE all residual paint from the container using a scraper or rubber spatula. WIPE the container completely dry using a rag – remember to containerize the rag as waste.

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## A SPECIAL NOTE ABOUT: CONCRETE CLEANUP

**Whether for major construction or a small "DIY" project, proper handling of excess concrete and washout of concrete equipment is important for protecting stormwater.**



DO NOT dump excess concrete or rinse chutes or other equipment into the ground or stormwater drain.

DO rinse chutes and hoppers into pre-fabricated, field erected, or leased washout containers.



Washout facilities must be constructed and maintained to resist damage and prevent leaks.



To minimize rinse water, wipe containers and tools and dispose of the concrete wipe rags in construction debris. Allow collected liquids to evaporate. Recycle dry solids or place in a construction dumpster.

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## A SPECIAL NOTE ABOUT: RUSTING OBJECTS

- ▶ Metal objects and equipment are often stored outside, exposed to rain and stormwater run-on. Rusty metal flakes contribute pollutants such as metals, suspended solids, and color to stormwater.
- ▶ Store materials and equipment indoors or in racks or containers that prevent contact with stormwater whenever possible.
- ▶ Dispose of or recycle excess or unusable metal equipment/objects to remove the source of rusty metal flakes.
- ▶ Routinely sweep up metal chips/flakes and place them in a metal shavings container for recycling.



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## A SPECIAL NOTE ABOUT: CIGARETTE BUTTS

- ▶ Cigarette butts are the most common form of litter found in the ocean and rivers (and in parking lots and storm drains!).
  - ▶ Cigarette butts, like most other floatable trash, are ingested by marine animals. This interferes with the animals' ability to eat and digest food.
- ▶ "What's the problem? They are biodegradable, right?" **No!**
  - ▶ The filter portion of the cigarette is made of cellulose acetate, a plastic that takes an estimated 10 to 15 years to degrade in the environment.

Please dispose  
of your butts  
properly!





MUNICIPAL  
SEPARATE STORM  
SEWER SYSTEM  
(MS4) TRAINING -  
NAVAL AIR  
STATION (NAS)  
CORPUS CHRISTI,  
TEXAS

Presented by:

**ah**  
ENGINEERS & SCIENTISTS

AH Environmental  
Consultants, Inc.

**NAVFAC**  
Naval Facilities Engineering Systems Command  
NAVFAC SOUTHEAST

1

TYPES OF STORMWATER  
POLLUTION



**NAVFAC**

Sediment

Metals

Surfactants

Fuels/POLs

Nutrients

Trash

Pathogens

2

## IMPACTS OF STORMWATER POLLUTANTS

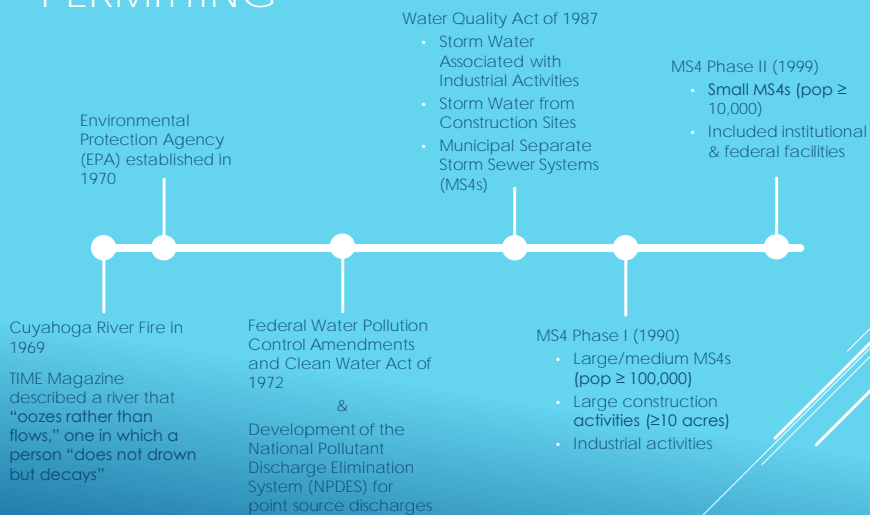


- ▶ Human Health:
  - ▶ Exposure to chemicals and bacteria through drinking water, seafood, and contact recreation.
- ▶ Fish and Wildlife:
  - ▶ Sterility, stunted growth, genetic damage, or death.
  - ▶ Degradation of food supplies, shelter, and breeding or nesting sites for nearby wildlife.
- ▶ Economic
  - ▶ Tourism
  - ▶ Fishing (commercial & recreational)



3

## HISTORY OF STORMWATER PERMITTING



4

## NPDES - STORMWATER



- ▶ All point source stormwater discharges require NPDES Permits
- ▶ NPDES permits are managed by the states (i.e., TCEQ)
  - Industrial (MSGP)
  - Construction General Permits
  - MS4 General Permit
    - Municipal, institutional, and federal facilities



5



6



## MSGP

- ▶ For Storm Water Discharge Associated with Industrial Activity
  - ▶ Developed by EPA
  - ▶ Adopted by Texas Commission on Environmental Quality (TCEQ)
  - ▶ Applies only to specific industrial activities/facilities

7



## MS4 GENERAL PERMIT

- ▶ Develop, implement, and enforce Stormwater Management Program (SWMP) that includes the following minimum control measures (MCMs):
  1. Public Education, Outreach, and Involvement
  2. Illicit Discharge Detection and Elimination (IDDE)
  3. Construction Site Stormwater Runoff Control
  4. Post-Construction Stormwater Management
  5. Pollution Prevention/Good Housekeeping
- ▶ SWMP submitted to TCEQ with Notice of Intent (NOI)
- ▶ Annual review and update of the SWMP
- ▶ Personnel Training
- ▶ Monitoring, Reporting, and Recordkeeping
- ▶ Facility-wide program implementation; **everyone's plays a part!**

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## MS4 GENERAL PERMIT - TMDL

- ▶ Bacteria TMDLs for Corpus Christi and Oso Bay
- ▶ NASCC generally not a contributor to the bacteria TMDLs
  - ▶ Lack of potential sources in watershed



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## MS4 GENERAL PERMIT - MCMs

SWMP must identify best management practices (BMPs) that the installation is doing in order to meet the goals of each MCM

- ▶ BMPs must be “measurable”
- ▶ Documentation of implementation must be maintained
- ▶ Implementation schedule required
- ▶ Responsible party must be identified

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## MCM 1: PUBLIC EDUCATION, OUTREACH, AND INVOLVEMENT

### ► Goals and Objectives:

- Raise awareness that polluted stormwater runoff is a significant source of water quality problems
- Motivate residents and tenants to use BMPs to reduce polluted stormwater runoff
- Reduce polluted runoff as a result of increased awareness and utilization of BMPs



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## MCM 1: PUBLIC EDUCATION & OUTREACH

- Develop, provide, and distribute educational materials
- Target pollutant sources:
  - Illicit discharges, spills/leaks
  - Household hazardous waste
- Target audiences:
  - Station housing residents
  - Military, civilian, and contractor employees



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## THINGS THAT **SHOULDN'T** GO DOWN A STORM DRAIN



CLEANING COMPOUNDS, SOAP, OR DETERGENT  
 PETROLEUM PRODUCTS (OIL, HYDRAULIC FLUID, JP5)  
 FLOOR OR DECK SWEEPINGS  
 CARDBOARD, STYROFOAM, OR OTHER PRODUCT PACKAGING  
 ENGINE WASH WATER  
 MOP WATER  
 PAINT OR PAINT CHIPS  
 METAL SHAVINGS  
 TRASH  
 CIGARETTE BUTTS  
 CHT/SEWAGE  
 BILGE WATER  
 PET WASTE  
 SEDIMENT






ANYTHING THAT ISN'T STORMWATER OR DECHLORINATED DRINKING WATER

**What would you do with the waste in this photo???**

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## MCM 2: ILLICIT DISCHARGE DETECTION & ELIMINATION

► Objectives:

- Identify and remove all illicit discharges
- Stormwater system mapping

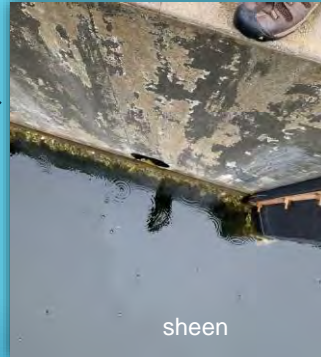



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## MCM 2: ILLICIT DISCHARGE DETECTION & ELIMINATION



- ▶ Maintain MS4 mapping (Geographic Information System [GIS])
- ▶ Outfalls Inspection Program
- ▶ Illicit discharge Tracing and Removal
- ▶ Prevent Sanitary Sewer Leaks and Overflows



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## MCM 3: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL



- ▶ Objectives:
  - ▶ Erosion and Sediment Control (E&SC) Program
  - ▶ Plan Review Process
  - ▶ Construction Site Inspections



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## MCM 3: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL



- ▶ Construction Plan Review Procedures (FEAD supported by EV)
- ▶ Construction Site Inspections (FEAD supported by EV)



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## FOCUS ON E&SC



1. Protect Areas Reserved for Vegetation or Infiltration & Preserve Existing Trees
2. Stockpile Your Soil
3. Protect Construction Materials from Run-On and Runoff
4. Designate Waste Disposal Areas
5. Install Perimeter Controls on Downhill Lot Line

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## FOCUS ON E&SC



6. Install Inlet Controls
7. Install a Concrete/Stucco Washout Basin
8. Maintain a Stabilized Exit Pad
9. Post Your Notice of Intent (NOI) and Keep an Up-to-Date Copy of Your SWPPP on Site
10. Site Stabilization

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## MCM 4: POST-CONSTRUCTION STORMWATER MANAGEMENT



- Goal:
  - Control runoff from developed sites including quantity and velocity control and stormwater treatment



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## MCM 4: POST-CONSTRUCTION STORMWATER MANAGEMENT



- ▶ New development and redevelopment
- ▶ Energy Independence and Security Act (EISA) Section 438
  - ▶ Project over 5,000 ft<sup>2</sup> must restore predevelopment hydrology
  - ▶ United Facilities Criteria (UFC) 3-210-10 provides Low Impact Development (LID) techniques
  - ▶ Infiltrate, evapotranspire, harvest, and/or use the first inch of every rainfall



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## MCM 4: POST-CONSTRUCTION STORMWATER MANAGEMENT



- ▶ Long-term operation and maintenance (O&M) of stormwater control measures
  - ▶ Implemented via trouble calls or work requests
  - ▶ Control measures inspections (EV, FMD)
  - ▶ Stormwater Manager tracks maintenance requests



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## MCM 5: POLLUTION PREVENTION/ GOOD HOUSEKEEPING



- ▶ Goal:
  - ▶ Reduce stormwater pollution from activities such as facility maintenance and stormwater system maintenance



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## MCM 5: POLLUTION PREVENTION/ GOOD HOUSEKEEPING



- ▶ Staff & Contractor Training
- ▶ Stormwater Control for Public Works Maintenance
- ▶ Proper Waste Disposal
- ▶ Inspections of Municipal Facilities
- ▶ O/WS Maintenance



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## Standard Operating Procedure PWD Maintenance Activities Pollution Prevention Naval Air Station Corpus Christi, TX

### Public Works - Air Conditioning Repair, Work Center PW-23

Location: Building 19

Operated by: NASCC Public Works

#### Work Center Description

Air conditioning repair maintains and repairs air conditioning units and refrigeration equipment. They also maintain air conditioning units that have cooling water towers (for large buildings).

#### Work Center Processes

Air conditioning and refrigeration repair

### Process Description: A/C and Refrigeration Repair

Shop personnel maintain mainly window air conditioning units, industrial refrigerators, and some on NASCC ice machines. Shop personnel also install new units when old units cannot be repaired. Air conditioning repair personnel remove Freon using a recovery unit from equipment prior to repair or scrapping. The Freon is either recharged into the equipment or sent off site through a certified vendor. Scrapped refrigeration equipment is sent to DRMO, which provides disposition/disposal services of excess property received from the military services. Oil from old compressors are placed in the SAA for disposal through NASCC Environmental Services.

KEY MATERIALS USED	ACTION PERFORMED	KEY WASTE PRODUCED
R404 R410 R134a Compressor Oil	Service Refrigerant/Freon	Refrigerants to be Sent Off Site R22 Still in Use, But Being Phased Out
Filters Degreaser	Preventive Maintenance	Used Filters Contaminated Rags
New Fittings	Leak Repair	Scrap Fittings
	Replacement	Recovered Refrigerant



		Old Units as Scrap Oil from Compressors
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### **Stormwater Pollution Prevention Measures to Be Incorporated Into Scope of Work**

Ensure work areas are properly cleaned daily and when job is completed. Dispose of waste materials properly.

Ensure compressor oil drips, leaks, and spills are promptly cleaned using dry techniques. Dispose of waste materials properly.

Materials or dumpsters that are stored outside must be covered at all times except when adding or removing materials/waste.

Do not store materials or dumpsters on or near storm drains.

If storm drains are nearby, use a storm drain cover, filter fabric, or similarly effective runoff control device to prevent dust, grit, or other pollutants from escaping the work area and entering a catch basin. The containment device(s) must be in place at the beginning of the workday. Collect contaminated runoff and solids and properly dispose of such wastes before removing the containment device(s) at the end of the workday.

### **Public Works - Carpenter Shop, Work Center PW-01**

Location: Building 19

Operated by: NASCC Public Works

#### Work Center Description

The carpenter shop does basic woodworking for NASCC. They also hang doors (interior and exterior). Locksets are no longer installed by the Carpenter Shop; they are now installed by the Locksmith.

#### Work Center Processes

Carpentry

#### **Process Description: Carpentry**

Carpentry shop personnel mainly repair existing woodwork, such as furniture and stairs. In addition, this shop is responsible for hanging doors. Personnel use a dust collection system for woodworking equipment (e.g., band saw with, router, planer, table saw, lathe).



KEY MATERIALS USED	ACTION PERFORMED	KEY WASTE PRODUCED
Wood Glue Hardware Paint Paint Thinner Stain	Repair Woodwork and Hang Doors	Scrap Wood Saw Dust Contaminated Rags Used Paint Brushes Waste Paint Thinner Empty paint cans

### **Pollution Prevention Measures to Be Incorporated Into Scope of Work**

Keep the working area clean every day. Sweep up wood splinters, paint chips, and other residues every day, as well as a thorough cleanup at the end of the project.

If a chemical spills, leaks, or drips, clean up promptly using dry techniques.

Materials or dumpsters that are stored outside must be covered at all times except when adding or removing materials/waste.

Mill, cut, paint, and stain as much materials as possible in doors to reduce the possibility of contaminants contacting stormwater runoff.

Wood preservatives, seal coating, and other outdoor surface treatments commonly contain metals, pesticides, solvents, or polymers that are hazardous materials. Handle and dispose of them properly, as follows: Apply only as much of the chemical as the surface can absorb or as needed to cover the area.

Soak up excess chemicals with absorbent material or rags rather than allowing them to flow to the storm drains or soak into the soil.

Do not store paints, stains, dumpsters or other building materials on or near storm drains.

Use a ground cloth, pail, drum, drip pan, tarp, or other protective device for activities such as paint mixing, painting and tool cleaning outside or where spills can contaminate stormwater.

Do not pour leftover paint down the storm drain or onto the ground. Do not clean brushes into the storm drain or pour buckets of clean up water into the drain.



Clean brushes and tools covered with non-water-based paints, finishes, or other materials indoor and in a manner that allows collection of used solvents (e.g., paint thinner or turpentine) for recycling or proper disposal.

Clean paintbrushes and tools covered with water-based paints in sinks connected to sanitary sewers or in portable containers that can be dumped into a sanitary sewer drain.

If storm drains are nearby, use a storm drain cover, filter fabric, or similarly effective runoff control device to prevent dust, grit, or other pollutants from escaping the work area and entering a catch basin. The containment device(s) must be in place at the beginning of the workday. Collect contaminated runoff and solids and properly dispose of such wastes before removing the containment device(s) at the end of the workday.

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**Public Works - Low Voltage Electrician (Work Center PW-21), High Voltage Electrician (Work Center PW-22), and Fire Alarm Electrician (Work Center PW-20)**

Location: Building 20

Operated by: NASCC Public Works

Work Center Description

Work center personnel maintain high voltage (i.e., overhead and underground power going to the buildings) and low voltage (i.e., all electrical components inside buildings) electrical equipment and fire alarms at NASCC.

Work Center Processes

High voltage maintenance

Low voltage maintenance

Emergency generator maintenance

**Process Description: High Voltage Electrical Maintenance**

When necessary high voltage electricians will install the necessary transformers and power lines for a new building or when a building needs more power. Approximately one transformer is replaced or added per year. All transformers on NASCC have been tested and determined to have dielectric fluid free of polychlorinated biphenyl contamination. The high voltage electricians also repair and maintain the current electrical power going to the buildings and airfields (for airfield lighting) on the air station. Most of the work performed in this work center is post transformer.



Personnel also maintain, repair, and replace electrical switches; there are both SF<sub>6</sub> gas switches and oil filled switches still in service.

KEY MATERIALS USED	ACTION PERFORMED	KEY WASTE PRODUCED
New Transformer (Dry Type) Cleaning Compound	Transformer Servicing or Addition	Old Transformer (With Oil)
Marking Paint (Aerosol)	Marking Underground Cable	Empty Aerosol Cans
Cable Prep Kit Epoxy Kit (Airfield Only) Insulation Lubricant (Water Based)	Cable Repair/Splicing/Pulling	Empty Containers

### Process Description: Low Voltage Electrical Maintenance

The electricians maintain all electrical lines, fixtures, outlets, and switches inside the buildings and structures at the air station.

KEY MATERIALS USED	ACTION PERFORMED	KEY WASTE PRODUCED
Wire Lubricant	Pulling Wire	Empty Containers
New Ballast	Changing Lighting Ballast	Old Ballast
Wire Switch Outlet	Install and Repair Outlet/Switch	Used Wire Scrap Building Material

### Emergency Generator Maintenance

The electricians maintain emergency generators at the air station. The maintenance performed is light maintenance only: oil and coolant top offs, battery replacement, etc. Generator functionality is routinely tested by electricians.

KEY MATERIALS USED	ACTION PERFORMED	KEY WASTE PRODUCED
Fuel	Oil Changes, Load Tests, Maintenance	Batteries Oil Wastewater



### **Pollution Prevention Measures to Be Incorporated Into Scope of Work**

Keep the working area clean every day. Sweep up wood splinters, paint chips, and other residues every day, as well as a thorough cleanup at the end of the project.

Ensure all transformer oil, paint, fuel, and lubricant leaks, drips and spills are properly cleaned using dry techniques. Properly dispose of waste materials.

Materials or dumpsters that are stored outside must be covered at all times except when adding or removing materials/waste.

If storm drains are nearby, use a storm drain cover, filter fabric, or similarly effective runoff control device to prevent dust, grit, or other pollutants from escaping the work area and entering a catch basin. The containment device(s) must be in place at the beginning of the workday. Collect contaminated runoff and solids and properly dispose of such wastes before removing the containment device(s) at the end of the workday.

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### **Public Works - Machining, Work Center PW-10**

Location: Building 19

Operated by: NASCC Public Works

#### Work Center Description

Machining shop processes include metal machining and equipment repair at NASCC.

#### Work Center Processes

Metal machining

#### **Process Description: Metal Machining**

Work center personnel perform machining services as needed including repair motors, air compressors, pumps, and air handlers.



KEY MATERIALS USED	ACTION PERFORMED	KEY WASTE PRODUCED
Replacement Parts New Motors Pumps Compressors Grease Bearings	Replacing or Repairing Equipment	Spent Parts and Equipment Scrap Metal Contaminated Rags Used Oil

### **Pollution Prevention Measures to Be Incorporated Into Scope of Work**

Keep the working area clean every day. Sweep up metal shavings, paint chips, and other residues every day, as well as a thorough cleanup at the end of the project.

If fluids, oils, or chemicals spill, leak, or drip, clean up promptly using dry techniques.

Materials or dumpsters that are stored outside must be covered at all times except when adding or removing material/waste.

Immediately repair or replace leaking connections, valves, pipes, hoses and equipment that causes the contamination of stormwater. Use drip pans in the interim to prevent leaks from contaminating the ground and stormwater runoff.

If storm drains are nearby, use a storm drain cover, filter fabric, or similarly effective runoff control device to prevent dust, grit, or other pollutants from escaping the work area and entering a catch basin. The containment device(s) must be in place at the beginning of the workday. Collect contaminated runoff and solids and properly dispose of such wastes before removing the containment device(s) at the end of the workday.

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### **Public Works - Painting, Work Center PW-02**

Location: Building 19

Operated by: NASCC Public Works

#### Work Center Description

This work center provides all painting services at NASCC.



Work Center Processes

Painting

**Process Description: Painting**

Shop personnel respond to service calls and perform various types of painting projects. Services include indoor painting (i.e., offices, ceiling tiles) and exterior painting (i.e., road lines, crosswalks, mechanical equipment). Painting of building exteriors is not performed in-house, and is contracted outside of NASCC.

KEY MATERIALSED	ACTION PREFORMED	KEY WASTE PRODUCED
<b>Primer</b> <b>Paint</b> <b>Thinner</b> <b>Solvent</b> <b>Brushes</b> <b>Rollers</b> <b>Aerosol Paint</b>	<b>Interior/Exterior</b> <b>Painting and Caulking</b>	<b>Used Disposable Brushes and Rollers</b> <b>Contaminated Rags</b> <b>Empty Paint Cans</b> <b>Waste Paint</b> <b>Empty Aerosol Cans</b> <b>Caulk Tubes</b>
<b>Paint</b> <b>Glass Beads</b> <b>Small Engine Fuel</b> <b>Lubricant</b>	<b>Striping Machine</b> <b>Painting</b>	<b>Latex Paint/Water Mixture</b> <b>Excess Paint</b> <b>Glass Beads</b> <b>Oily Waste</b> <b>Used Oil</b>
<b>Latex Paint</b>	<b>Paint Sprayers and</b> <b>Hand Painting</b>	<b>Latex Paint/Water Mixture</b> <b>Excess Paint</b>

**Pollution Prevention Measures to Be Incorporated Into Scope of Work**

Keep the working area clean every day. Sweep up wood splinters, paint chips, and other residues every day, as well as a thorough cleanup at the end of the project.

Before painting, while scraping to remove old paint, spread a tarp to collect dust and paint chips. Dispose of paint chips properly.

If a chemical spills, leaks, or drips, clean up promptly using dry techniques.

Materials or dumpsters that are stored outside must be covered at all times except when adding or removing material/waste.



Do not store paints, stains, dumpsters or other building materials on or near storm drains.

Use a ground cloth, pail, drum, drip pan, tarp, or other protective device for activities such as paint mixing, painting and tool cleaning outside or where spills can contaminate stormwater.

Keep leftover paint, solvents, and other supplies for a later use, or deliver them to a solvent recycler with other plant wastes when you ship a batch.

Do not pour leftover paint down the storm drain or onto the ground. Do not clean brushes into the storm drain or pour buckets of clean up water into the drain.

Clean brushes and tools covered with non-water-based paints, finishes, or other materials indoor and in a manner that allows collection of used solvents (e.g., paint thinner or turpentine) for recycling or proper disposal.

Clean paintbrushes and tools covered with water-based paints in sinks connected to sanitary sewers or in portable containers that can be dumped into a sanitary sewer drain.

If storm drains are nearby, use a storm drain cover, filter fabric, or similarly effective runoff control device to prevent dust, grit, or other pollutants from escaping the work area and entering a catch basin. The containment device(s) must be in place at the beginning of the workday.

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**Public Works - Plumbing and Pipefitting,**  
Work Center PW-11 and PW-10

Location: Building 19

Operated by: NASCC Public Works

Work Center Description

Plumbing and pipefitting repairs plumbing inside buildings (e.g., leaking pipes and fixtures) and exterior piping (e.g., sewer and gas lines).

Work Center Processes

Plumbing and pipefitting

**Process Description: Plumbing and Pipefitting**

This shop repairs interior plumbing, inside and outside of the wall, on an as needed basis on the air station. Most of the repairs involve leaking pipes and replacing worn fixtures (e.g., new toilet



and faucets). Occasionally plumbing inside of a wall will need to be replaced, repaired, or a new fixture is installed (with the associated new plumbing).

The other major responsibility of this shop is to maintain and repair the underground pipes at NASCC (e.g., sewer, natural gas, water distribution).

KEY MATERIALS USED	ACTION PERFORMED	KEY WASTE PRODUCED
Solder Flux Glue Raw pipe	Pipe (Metal or Plastic) Installation	Scrap Pipe Metal Shavings
Caulk New Fittings (Copper, plastic, clay, polyvinyl chloride)	Leak Repairs	Scrap Metal/Fittings

### **Pollution Prevention Measures to Be Incorporated Into Scope of Work**

Keep the working area clean every day. Sweep up metal shavings, paint chips, and other residues every day, as well as a thorough cleanup at the end of the project.

If a chemical spills, clean up promptly using dry techniques.

Materials or dumpsters that are stored outside must be covered at all times except when adding or removing material/waste.

Ensure any sewage spills or leaks are properly remediated and reported to PW Environmental.

Do not store equipment, chemicals, or dumpsters on or near storm drains.

If storm drains are nearby, use a storm drain cover, filter fabric, or similarly effective runoff control device to prevent dust, grit, or other pollutants from escaping the work area and entering a catch basin. The containment device(s) must be in place at the beginning of the workday. Collect contaminated runoff and solids and properly dispose of such wastes before removing the containment device(s) at the end of the workday.

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## Public Works - Sheet Metal Shop, Work Center PW-13

Location: Building 19

Operated by: NASCC Public Works

### Work Center Description

Personnel in the sheet metal shop primarily install prefabricated metal parts (i.e., ductwork, gutters, roof flashings), but also fabricate parts such as drip pans or other small parts several times per month.

### Work Center Processes

Sheet metal shop

### Process Description: Sheet Metal Shop

Purchasing pre-fabricated pieces is more economical than custom fabrication by shop personnel, so most of the installation of new ductwork, gutters, and roof flashing is done with pre-fabricated supplies. Shop personnel also repair existing ductwork and gutters as needed.

KEY MATERIALS USED	ACTIONS PERFORMED	KEY WASTE PRODUCED
Sheet Metal Spray Galvanizing Color Paints	Fabricate Custom Metal Parts	Scrap Metal Empty Aerosol Cans
Caulk General Hardware	Repair Existing Metal/ Install Fabricated Parts	Scrap Metal Empty Caulk Tubes
GMA GTA Stick and TIG	Welding	Welding Scrap Gas Cylinders

### Pollution Prevention Measures to Be Incorporated Into Scope of Work

Keep the working area clean every day. Sweep up metal shavings, paint chips, and other residues every day, as well as a thorough cleanup at the end of the project.

If a chemical spills, clean up promptly using dry techniques. Dispose of waste materials properly.



Materials or dumpsters that are stored outside must be covered at all times except when adding or removing material/waste.

Do not store equipment, chemicals, or dumpsters on or near storm.

If storm drains are nearby, use a storm drain cover, filter fabric, or similarly effective runoff control device to prevent dust, grit, or other pollutants from escaping the work area and entering a catch basin. The containment device(s) must be in place at the beginning of the workday. Collect contaminated runoff and solids and properly dispose of such wastes before removing the containment device(s) at the end of the workday.

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### **Public Works - Transportation, Work Center PW-60**

Location: Building 20

Operated by: NASCC Public Works

#### Work Center Description

Work center personnel maintain Public Works' vehicles that are not included in the GSA program, including fire trucks, forklifts, heavy-duty machinery, construction equipment, and approximately three electric cars. Personnel also maintain the generators owned by NASCC. All major services and repairs beyond simple routine maintenance are performed by an off-site facility. GSA fleet vehicles (which accounts for approximately 85 percent of vehicles at NASCC) are sent off-site for service. Vehicle washing is no longer a task performed in this work center.

#### Work Center Processes

Repair and maintain vehicles

#### **Process Description: Repair/Maintain Vehicles**

Personnel perform simple, routine maintenance of non-GSA vehicles and generators. This maintenance includes oil changes, limited fluid servicing, minor paint touch-up with spray paints, and preventive maintenance. Used oil is collected for recycling. This work center has an anti-freeze recycling unit, but it is not used, and antifreeze is collected for offsite recycling. Vehicle batteries are maintenance-free and are exchanged by the supplier at time of replacement.



KEY MATERIALS USED	ACTIONS PERFORMED	KEY WASTE PRODUCED
Grease Lubricant Touch-Up Paint Antifreeze Transmission Fluid Engine Oil Oil Filters Lead-Acid Batteries Spray Paint Corrosion Control Substances	Maintain Vehicles and Generators	Used Antifreeze Used Oil/Oil Filters Spent Lead-Acid Batteries Contaminated Rags Aerosol Cans Waste Fuel Transmission Fluid

### **Pollution Prevention Measures to Be Incorporated Into Scope of Work**

Keep the working area clean every day. Sweep up metal shavings, paint chips, and other residues every day, as well as a thorough cleanup at the end of the project.

If a chemical spills, clean up promptly using dry techniques. Dispose of waste materials properly.

Materials or dumpsters that are stored outside must be covered at all times except when adding or removing material/waste.

Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers properly.

Immediately repair or replace leaking connections, valves, pipes, hoses and equipment that causes the contamination of stormwater. Use drip pans on the interim to prevent contaminants from dripping on the ground and contacting stormwater runoff.

Do not store equipment, leaking vehicles, or chemicals over or near storm drains.

If storm drains are nearby, use a storm drain cover, filter fabric, or similarly effective runoff control device to prevent dust, grit, or other pollutants from escaping the work area and entering a catch basin. The containment device(s) must be in place at the beginning of the workday. Collect contaminated runoff and solids and properly dispose of such wastes before removing the containment device(s) at the end of the workday.

## PW Maintenance Activities Pollution Prevention Inspection

General Information	
<b>Project Name</b>	
<b>Date of Inspection</b>	
<b>Shop Conducting Maintenance Activity:</b>	
<b>PW Contact:</b>	

	BMP/activity	Implemented?	Corrective Action Needed and Notes
1	Is work area clean (good housekeeping)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
2	Have waste materials been properly disposed of?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
3	Are materials and/or dumpsters covered except when adding or removing materials/waste?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
4	Are discharge points and receiving waters free of any sediment deposits?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
5	Are POLs and hazardous materials stored indoors or under cover?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
6	Are outdoor materials stored away from storm drain inlets and/or are storm drains properly protected?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
7	Have drips leaks and spills been cleaned using dry techniques?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
8	Is vehicle and equipment wash water directed away from storm drains?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
9	Was a ground cloth, pail, drip pan, tarp, or other protective device utilized for paint mixing, painting, and tool clean up?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
10	Was leftover paint properly disposed of?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
11	Were paint brushes and associated equipment properly cleaned and was the waste generated properly disposed of ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
12	Is grounds maintenance waste (leaves, clippings) properly disposed of (i.e., not into storm system)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

**Non-Compliance**

Describe any incidents of non-compliance not described above:

**Print name and title:** \_\_\_\_\_

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

# **APPENDIX I**

## **MCM and BMP Summary Spreadsheet**

(4 PAGES)

MCM	BMP ID	BMP Name	Key Requirement(s)	Previous BMP ID
MCM 1: Public Education & Outreach	PE-1	NASCC Environmental Support Website	NASCC's Environmental Support website shall include the SWMP, the most recent Annual Report, and instructions on public reporting of illicit discharges.	-
	PE-2	Social Media Post / Social Media Campaign	<u>Quarterly</u> posts will be placed on at least one of NASCC's social media pages.	PE-2
	PE-3	Stormwater Inlet Marking	Mark all stormwater inlets with reasonable potential to be impacted by illegal dumping or prohibited discharges. Inspect 15% of all known stormwater inlets each year and replace degraded makers, as needed.	PE-3
	PE-4	Stormwater Fact Sheets	Distribute at least one stormwater fact sheet each year via "all-hands" environmental email (fact sheets included in Appendix C).	PE-1
	PE-5	Permanent Stormwater Signage	The beach litter clean up kiosks and signage shall be installed by the end of the five-year permit term.	-
MCM 2: Public Involvement / Participation	PI-1	Watershed Clean Up Events	Coordinate two clean up events annually: one installation-wide Earth Day event and one targeted event coordinated with Command Chaplain (Earth Day clean up supporting documentation included in Appendix D).	PI-1
	PI-2	MS4 Area-Wide Stormwater Survey	Each year include a short survey with the all-hands email used to distribute the stormwater fact sheets (BMP PE-4) and/or with required stormwater training ECATTS (BMP PPGH-2).	-
	PI-3	Educational Display at Public Location	Develop and staff an educational display once per year at the NASCC Child Development Center.	-
	PI-4	Animal Bacteria Source Reduction	Periodically service and maintain all five pet waste stations throughout the permit term.	-

MCM	BMP ID	BMP Name	Key Requirement(s)	Previous BMP ID
MCM 3: Illicit Discharge Detection & Elimination	IDDE-1	Current MS4 Mapping	Maintain the stormwater geodatabase at or near 100% complete as soon as is feasible when physical changes are made to the MS4	ID-1
	IDDE-2	IDDE Training for PWD Personnel and Contractors	Include IDDE training in the annual environmental and stormwater ECATTS training (refer to BMP PPGH-2).	-
	IDDE-3	Potential Illicit Discharge Reporting Mechanism	Include illicit discharge reporting instructions in annual environmental and stormwater ECATTS training (refer to BMP PPGH-2) and all-hands environmental emails used to distribute fact sheets (refer to BMP PE-4) (reporting form included in Appendix E).	-
	IDDE-4	Dry Weather Outfall Inspections	Conduct dry weather inspection of at least 25% of outfalls each year (SOP, maps, etc. included in Appendix E).	ID-2
	IDDE-5	Source Investigation and Elimination	Identify the source of all suspected / potential illicit discharges as soon as possible after discovery and develop a removal plan and schedule within 120 days of illicit discharge confirmation (SOP included in Appendix E).	ID-3
	IDDE-6	Sanitary Sewer System Review and Inspections	Continue regular inspections of sanitary sewer lift stations. Conduct annual review of sanitary sewer infrastructure to identify potential improvements.	ID-5

MCM	BMP ID	BMP Name	Key Requirement(s)	Previous BMP ID
MCM 4: Construction Site Stormwater Runoff Control	CS-1	Construction Site Stormwater Regulatory Mechanism	Continue to implement NASCC NEPA process, which includes compliance review relative to the TCEQ CGP, EPPs, construction site SWPPPs, etc.	CS-1, CS-2
	CS-2	Site Plan Reviews	Ensure that all applicable construction plans undergo the PWD site plan review process (construction site stormwater / E&SC checklist included in Appendix F).	CS-3
	CS-3	Construction Site Inspections	Inspect all applicable active construction sites at least once per year (SOP for inspections and inspection checklist included in Appendix F).	CS-4
	CS-4	Construction Stormwater Training for PWD Personnel	Provide in-person E&SC-specific training annually to all PWD staff involved in maintaining compliance with this MCM including Seabee construction managers and environmental technicians.	-
MCM 5: Post-Construction Stormwater Management	PC-1	Post-Construction Stormwater Regulatory Mechanism	Require design and construction contractors to comply with EISA Section 438 and the technical criteria and requirements of UFC 3-210-10 Low Impact Development via standard installation specifications.	PC-1
	PC-2	Long-Term Operation and Maintenance (O&M) of Structural Stormwater Controls	Inspect each SCM annually (SCM inventory, map, and inspection checklist included in Appendix G). Submit work orders for maintenance, as needed.	PC-2

MCM	BMP ID	BMP Name	Key Requirement(s)	Previous BMP ID
MCM 6: Pollution Prevention / Good Housekeeping	PPGH-1	Municipal-Type Operations Inventory	Maintain a current inventory of municipal-type operations at NASCC (refer to Section 8.1 of the SWMP for the 2024 inventory).	-
	PPGH-2	Stormwater Pollution Prevention Training	Ensure all NASCC PWD personnel and contractors complete annual ECATTS training that covers stormwater pollution prevention at municipal-type operations (training materials included in Appendix H).	GH-1, GH-2
	PPGH-3	Disposal of Waste Material	Ensure all solid waste and hazardous waste are disposed of in accordance with 30 TAC 330 and 335, respectively.	GH-4
	PPGH-4	Contractor Requirements and Oversight	Continue to implement existing, enterprise-wide NAVFAC contractor oversight program.	-
	PPGH-5	Assessment of Municipal-Type Operations	Evaluate all routine and emergent O&M activities annually for stormwater pollution potential.	-
	PPGH-6	Pollution Prevention at Municipal-Type Operations	BMP is implemented through the training provided by BMP PPGH-2 and is verified via the inspections conducted under BMP PPGH-7.	GH-3
	PPGH-7	Municipal-Type Operations Inspections	Inspect municipal-type operations (refer to BMP PPGH-1) annually (inspection checklist provided in Appendix H).	GH-3
	PPGH-8	Structural Control Maintenance	Inspect all O/WSs at least once annually and conduct maintenance, as needed based on inspection results.	-